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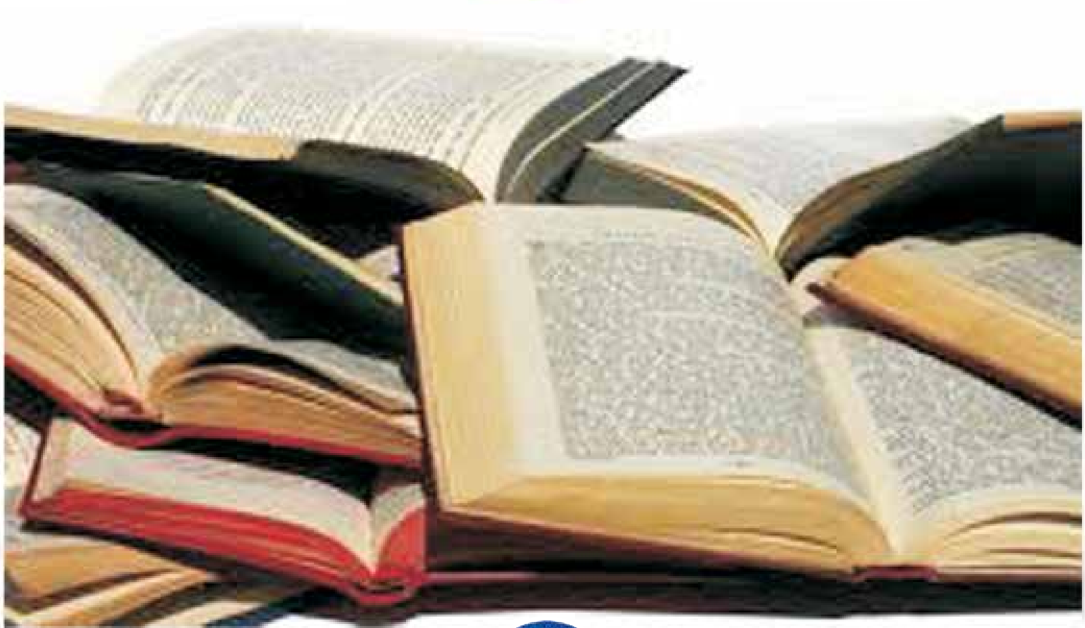

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Government College for Women

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EDITORIAL

Echoes of Research is a peer-reviewed multidisciplinary journal, with ISSN (print): 2348 – 2680, published annually by Government College for Women, Thiruvananthapuram. This edition holds special significance as it coincides with the quasquicentennial jubilee celebrations of our institution—125 years of academic excellence, empowerment, and intellectual evolution. Since its inception in 2012, Echoes of Research has been dedicated to fostering scholarly inquiry and interdisciplinary dialogue.

Government College for Women, Thiruvananthapuram, facilitates a strong academic foundation, with a thriving research community comprising approximately 300 research scholars and 120 dedicated research supervisors. With such a vast intellectual pool, we recognize our responsibility to uphold the spirit of research and scholarly publication. This relaunch of Echoes of Research is, therefore, an essential step in reaffirming our commitment to academic excellence. This issue is a combined volume of the last three editions, as two previous volumes were temporarily withheld due to the COVID-19 pandemic.

Reflecting its true multidisciplinary nature, the current issue features research contributions spanning thirteen diverse disciplines. The contributors include scholars from our own institution as well as researchers from colleges across India. The journal follows a single-blind peer review process, wherein each submitted manuscript is evaluated by three reviewers, whose decision determines the acceptance of the paper. Once accepted, the articles undergo professional content editing to ensure the highest standards of publication. The acceptance rate for this issue stands at 69%.

This volume presents a rich and diverse collection of research spanning science, social sciences and languages, addressing contemporary issues and emerging areas of academic interest. I extend my heartfelt gratitude to the authors for their valuable contributions and to the reviewers for their meticulous and dedicated evaluations.

This publication would not have been possible without the financial support sanctioned by Sri. Sudhir K IAS, Director, Department of Collegiate Education, Kerala which facilitated content editing and printing. The consistent guidance and encouragement from Smt. Anila JS, Principal, Government College for Women, Thiruvananthapuram have been the pillar of strength at every step. I also express my sincere appreciation to the Research Committee members of the college and other teaching and non-teaching staff for their continuous support in making this issue a reality.

As we move forward, we reaffirm our commitment to fostering a strong research culture and upholding the academic excellence that defines our institution. In the spirit of our quasquicentennial celebrations, let this issue of Echoes of Research stand as a tribute to our institution's enduring legacy and unwavering dedication to the pursuit of knowledge.

I invite our readers to engage with the insightful contributions in this volume and to continue their quest for knowledge with the same enthusiasm that has shaped our journey over the past 125 years.

Dr. Nisha NG
Editor

The Specificities of Female Experience: Revisiting the Feminist Consciousness in Alice Munro's 'The Beggar Maid'

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Abstract

This article investigates the intricacies of female experience and identity as depicted in Munro's 'The Beggar Maid'. Through her nuanced portrayal of characters, Munro emphasises the fragmented and multifaceted nature of female identity, shaped by class, power structures, and personal aspirations. The study challenges the homogenisation of female experience by highlighting the significance of individual narratives and the tensions between personal and societal dimensions. It employs material feminism and intersectionality as analytical lenses, exploring the role of space as both physical and intellectual constructs. This analysis underscores Munro's critique of class and gender hierarchies, contributing to ongoing discussions in feminist literature about the diversity and specificity of women's experiences.

Keywords: *Feminism, Material feminism, Intersectionality, Space, Female experience, Feminist consciousness.*

Introduction

Alice Munro's 'The Beggar Maid' offers a compelling exploration of female identity and experience, foregrounding the complexities of class, gender, and power. This article examines the specificities of female experience as portrayed in Munro's narrative, challenging the notion of a unified feminist consciousness. By employing material feminism and intersectionality as theoretical frameworks, the study highlights how Munro critiques class structures and patriarchal norms while presenting a nuanced portrayal of female self-awareness and agency. The article's primary objective is to reveal how Munro deconstructs the monolithic representation of womanhood by situating her characters' struggles within broader socio-cultural and historical contexts. Through a detailed textual analysis, this study seeks to contribute to feminist literary discourse by emphasising the importance of individual narratives in understanding the diversity of women's lives.

This study adopts a textual analysis approach to explore the representation of female identity. Through a close reading of the text, the analysis delves into key themes such as female experience, intersectionality, and class consciousness. The methodology is guided by feminist literary criticism, which emphasises the interplay of gender, class, and social norms in shaping individual narratives. By examining specific episodes and character arcs, the study aims to uncover how Munro's narrative challenges traditional feminist paradigms and provides fresh insights into the complexities of women's lives.

The discussion of feminist consciousness, intersectionality, and material feminism is critical to this article. To improve clarity, the section is divided into three subsections.

Defining feminist consciousness

Feminist consciousness is an awareness of the socio-political and economic inequalities faced by women, as well as the systematic nature of gender oppression. This framework acknowledges the socially constructed subordinate position of women while advocating for change. In the context of 'The Beggar Maid', Rose's awareness of societal inequities reflects the tension between traditional gender expectations and her aspirations for autonomy. The study positions feminist consciousness as existing between gender consciousness and feminist identity, allowing for critique without fully embracing feminist labels.

Intersectionality in theory and practice

Rooted in Black feminism and Critical Race Theory, intersectionality explores how social categories such as gender, race, class, and sexual orientation interact to create overlapping systems of oppression. Munro's portrayal of Rose highlights these intersections, particularly through her struggles with class mobility and gendered expectations. For instance, Rose's perception of her social position is shaped not only by economic factors but also by cultural narratives of femininity and ambition. By weaving these dynamics into Rose's story, Munro illustrates the complexities of navigating intersecting identities.

Material feminism as a lens

Material feminism emphasises the material conditions of women's lives, linking their experiences to broader socio-economic and historical contexts. In 'The Beggar Maid', Munro critiques the patriarchal and class-based structures that confine Rose's identity. Material feminism illuminates Rose's internal conflicts, as seen in her interactions with Patrick and her struggle to reconcile her ambitions with societal expectations. By connecting the personal to the political, Munro underscores the ways in which gender and class intersect to shape female identity and agency.

'The Beggar Maid'

The title reflects a deeper aspect of Rose's self-awareness as she perceives her yearning for love and social belonging not merely as a natural human desire, but as a pitiable form of supplication. Rose positions herself as a figure who is constantly beseeching the favour of a world that remains just out of reach.

Her confusions about her 'self' and position in the world reveals larger complications relating to the concept of the female identity, and how specific social factors sometimes urge or limit women to place themselves within the social structure in a certain way. Therefore the image of the beggar maid allows us to unravel the notions relating to women and love. Quoting from the text, "Rose did wonder why she always seemed to be on the wrong end of things, disapproved of by her own neighbours because she didn't pay enough attention to housework, and reproved by Jocelyn for being insufficiently tolerant of the natural chaos and refusal of life. She thought of love to reconcile herself. She was loved, not in a dutiful, husbandly way but crazily, adulterously, as Jocelyn and her neighbours were not. She used that to reconcile herself to all sort of things: to Patrick, for instance, turning over in bed with an indulgent little clucking noise that meant she was absolved of all her failings for the moment, they were to make love." (Munro, 1977, p. 128).

Through the character of Rose, Munro explores the nature of female desire, asserting through the narrative that Rose is not merely seeking charity, but the tender grace of true belonging. The narratives Rose constructs about herself reveal a self-fashioned identity situating herself as a marginalised figure yet not embodying a static image of hardship. Her intelligence and ambition reach beyond the confines of her social world, aspiring towards a life charged with flamboyant allure similar to the kind found in Flo's tales. Rose's self-conception does not easily reconcile with traditional expectations of femininity; she persistently disrupts and negotiates the roles and images a woman is expected to inhabit. This deliberate disruption and assertion of her difference is a subversive act, mirroring Munro's own storytelling techniques where she shifts from the boundaries of realism even while her narratives maintain a surface adherence to its conventions.

Rose's fantasy is not escapism from reality but rather an embedded dimension within it, illustrating how the roles of an actress and a dreamer are intricately woven into the texture of her daily life. This blending of imagination with the ordinary illuminates the specificities of female experience, where identity is fluid and constantly shaped by the intersecting forces of class, gender, and social exclusion. It challenges the static notion of feminist consciousness by presenting identity as something that is constantly contested, navigating multiple layers of social expectations and personal longing.

Class Consciousness in 'The Beggar Maid'

"It was a story by Katherine Mansfield, called "The Garden Party". There were poor people in that story. They lived along the lane at the bottom of the garden. They were viewed with compassion. All very well. But Rose was angry in a way that the story did not mean her to be. She could not really understand what she was angry about, but it had something to do with the fact that she was sure Katherine Mansfield was never obliged to look at stained underwear, her relatives might be cruel and frivolous but their accent might be agreeable; her compassion might was floating on clouds of good fortune, deplored by herself, no doubt, but despised by Rose. Rose was getting to be a prig about poverty, and would stay that way for a long time" (Munro, 1977, p. 50).

The aforementioned excerpt from the text would provide one with a clear insight into how the whole issue of 'class' is perceived by Rose in the novel. For Rose, her identity is one that is never independent of her position in the class hierarchy. This awareness she has, about her social position is one that is echoed throughout the novel. Her intellect, her emotions, and the very way she functions all seem to be reflective of her social status.

Even when she moves out of Hanratty, for her higher education, the whole case of class consciousness follows her. Her actions and the way she conduct herself all seem to be developed in a way that she resists anyone from knowing her social position. Her stay at Dr Henshawe's home further deepens the class consciousness in her. The luxury she was exposed to in Dr Henshawe's house makes her question the so-called comfort her house used to provide her with. "Dr Henshawe's house had done one thing. It had destroyed the naturalness, the take- for- granted background of home. To go back there was to go quite literally into a crude light" (Munro, 1977, p. 70). Her acquaintance with luxury and pompousness also made her realise the crudity of things that she could call her own.

Her association with Patrick never made things better either. Patrick was someone who belonged to the upper strata of the society, which pre-conditioned his intellect in a way that, he could only view with scorn, anything inferior to his. His sense of superiority and arrogance towards anything beneath his status accentuates Rose's insecurities about her own social position. Although Patrick desires to 'rescue' Rose from her lower status through marriage, Rose is keenly aware that this dynamic carries its own power imbalances. His wealth and social status make Rose feel indebted, and his condescending attitudes serve as a reminder of her place in the class hierarchy. This realisation creates a persistent tension in their relationship, making it difficult for Rose to fully embrace the upward mobility that Patrick offers.

Ultimately, Rose's association with Patrick reinforces the theme that class is not simply a matter of economic standing but also shapes one's worldview, aspirations, and sense of self. While Rose navigates the social boundaries that separate her from Patrick's world, she remains conflicted, unable to escape the consciousness of her origins. This ongoing struggle illustrates how deeply ingrained class identity is, affecting her relationships and her perception of herself.

The Paradox of Performance

The acceptance of a role often aligns with the societal norms and expectations that permit or even encourage power imbalances. By embracing one's part in the performance, the characters illustrate how social roles can be internalised and then manifested in harmful behaviours, perpetuating cycles of violence. "The belt is coming off, not hastily. It is being grasped at the necessary point. All right you. He is coming over to Rose. He pushes her off the table. His face, like his voice, is quite out of character. He is like a bad actor, who turns a part grotesque. As if he must savour and insist on just what is shameful and terrible about this. That is not to say he is pretending, that he is acting, and does not mean it. He is acting, and he means it. Rose knows that, she knows everything about him." (Munro, 1977, p. 18).

Rose's relationships and familial dynamics are saturated with the performative aspects of identity. Munro illustrates how social roles are internalised and enacted, often perpetuating cycles of power imbalance. For instance, Rose's father's behaviour during violent confrontations mirrors a grotesque theatricality, revealing the ritualised nature of domestic violence. As Munro writes, "He is acting, and he means it", encapsulating how power is both performed and internalised within patriarchal structures. This scene critiques societal norms that normalise violence while exposing Rose's complicit role in maintaining these dynamics. Her exaggerated responses, described as "grossness", underscore how victims, too, navigate their prescribed roles in power hierarchies.

"He throws Rose down. Or perhaps she throws herself down. He kicks her legs again. She has given up on words but is letting out a noise, the sort of noise that makes Flo cry, Oh, what if people can hear her? The very last-ditch willing sound of humiliation and defeat it is, for it seems Rose must play her part in this with the same grossness, the same exaggeration, that her father displays, playing his. She plays his victim with a self-indulgence that arouses, and maybe hopes to arouse, his hinal, sickened contempt." (Munro, 1977, p. 19).

The text points to Rose's own complicity in the beating, not as a willing participant but as someone who enacts her role with the same exaggeration and "grossness" that her father exhibits. This complicity speaks to the internalisation of abuse, where the abused may come to see their role as part of a ritual or performance that must be carried out. The theatricality of the abuse highlights its ritualistic aspect, transforming the private sphere into a stage where power is asserted, roles are performed, and violence is both personal and social.

Who Do You Think You Are?

'The Beggar Maid' allows for the exploration of the societal forces that shape female identity, particularly in terms of how women's capabilities, aspirations, and self-worth are often constrained by cultural expectations. "Rose did have to stay after four, of course, raging and writing while Miss Hattie got out her crocheting. When Rose took the copy to her desk Miss Hattie said mildly enough but with finality, "You can't go thinking you are better than other people just because you can learn poems. Who do you think you are?" (Munro, 1977, p. 200).

"Flo speaks of Rose's smart-aleck behaviour, rudeness and sloppiness and conceit. Her willingness to make work for others, her lack of gratitude. She mentions Brian's innocence, Rose's corruption. Oh, don't you think you're somebody, says Flo, and a moment later, 'Who do you think you are'?" (Munro, 1977, p. 15).

The repeated question, "Who do you think you are?" functions as a mechanism to regulate Rose's aspirations, serving as a subtle yet powerful reminder to stay within socially prescribed limits. This refrain, which recurs throughout her life, suggests

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that a woman, no matter how capable, must continuously question her worth and prove that she deserves acknowledgment. The fact that Rose has encountered this question repeatedly throughout her life highlights a persistent cultural effort to regulate female identity and ambition. This question functions not only to diminish individual achievement but also to enforce a broader cultural norm that women should not feel entitled to stand out. Miss Hattie's insistence that the lesson is more important than any poem forces Rose to internalise the notion that she should not appear to challenge others or occupy spaces of prominence. It highlights the broader struggle for women to assert their abilities and expands on how the concept of female identity is continually negotiated against cultural expectations. Balancing the pursuit of their potential with the constraints imposed on how they can express their capabilities and define their worth is a continuing struggle. Miss Hattie's reprimand underscores the pervasive notion that women must be modest about their abilities, reinforcing a belief that confidence or exceptional skill, if not accompanied by compliance, poses a threat to the established order.

The punishment Rose receives serves as a symbolic reassertion of boundaries, reminding her (and women in general) that success must come within the confines of sanctioned norms. Rose's inability to entirely understand and embrace her identity and her identification with failure is due to this reason. She is unable to accept herself as deserving of anything at all and this is not just specific to Rose; this can provide glimpses into the tendencies that women in general develop due to certain expectations and norms imposed on them with regards to gender. "Who do you think you are" is a question that can expand into the understandings of who do you think you could be; how far can you stretch your dreams to be something and how deserving you are to do that.

The Dual Narrative Structure: Fantasy vs. Realism

Munro's style articulates the way she understands the world. The author intertwines the real and the imagined. She experiments with her form inviting intimacy, offering confidences, often in a playful way which on the outset might be challenging. Her writing compellingly challenges the notion that women write solely about their experiences, as if imagination is a male prerogative. She counters this idea by demonstrating the power of the experiential, highlighting the political dimensions within the personal. For instance, the private narratives, such as Flo's gossipy tales in 'The Beggar Maid', provide deeper insights into the female psyche than any theoretical analysis on the same ever can. The novel has a dual narrative structure that juxtaposes Rose's fantasies with the rawness of real life. The romantic plot represents Rose's ongoing struggle with submission, where she allows love and relationships to dictate her self-worth. Her recognition of this pattern, however, is gradual and often delayed by her tendency to see herself through clichés of female helplessness.

Internalising Submission: The Pattern of Rose's Relationships

The narrative explores Rose's experiences with men and how her relationships often revolve around the themes of fantasy, submission, and power. These relationships reflect a pattern where Rose oscillates between fantasies of romantic rescue and realisations of harsh reality. Her interactions with men, notably Patrick and Simon, serve as stages upon which she enacts various roles that conform to societal expectations and her own internalised notions of femininity, power, and vulnerability.

"She would look at herself in the glass and think 'wife', 'sweet heart'. Those mild lovely words. How could they apply to her? It was a miracle; it was a mistake. It was what she had dreamed of; it was not what she wanted" (Munro, 1977, p. 81).

Her decision to marry Patrick reveals her conflicting desires. On one hand, she is drawn to the notion of being "a beggar maid", longing for love and adoration. On the other hand, the marriage represents a desire for social prestige and upward mobility. Rose's engagement with Patrick is not merely a submissive act but a power fantasy where she assumes control through deception. Rose's relationship with Simon provides a contrasting experience to her marriage with Patrick. Now in her late thirties, she carries the baggage of a failed marriage and unfulfilling relationships. The relationship with Simon revisits the fantasy of rescue, but without the same elements of power seen with Patrick. Instead, it exposes Rose's deeper fears of loneliness, humiliation, and the inevitability of aging. Her desire for Simon is intertwined with a longing for validation and forgiveness, indicating how her internalised submission has evolved into a more profound sense of vulnerability. Munro is capturing the reasons behind the internalisation of the imperative to be submissive. She decodes how generations of insidious violence and coercion have led women to accept their submissive roles in society. They continue to transfer the lessons from their reality to their next generation. This acceptance highlights the social and moral masochism to which they have submitted themselves to.

Conclusion

This study demonstrates that female experience, as depicted in Alice Munro's 'The Beggar Maid', is inherently complex and shaped by intersecting factors such as class, gender, and personal aspirations. Through the character of Rose, Munro critiques societal norms and hierarchies, illustrating how individual narratives challenge the homogenisation of female identity. The analysis reveals that Rose's struggles with class mobility, relationships, and self-perception disrupt the notion of a monolithic feminist consciousness, instead highlighting the diversity and contradictions inherent in women's lives.

By employing material feminism and intersectionality as theoretical lenses, this article emphasises the significance of examining individual stories to understand broader societal structures. Munro's work not only enriches feminist literary discourse but also invites further exploration of the interplay between personal and political dimensions in women's narratives. Future research could expand on these findings by comparing Munro's portrayal of female experience with other feminist literary works, thereby deepening our understanding of the multiplicity of feminist consciousness.

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Proairetic Code as Narrative Technique: An Analysis of Dan Brown's *The Da Vinci Code*

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Abstract

The proairetic code introduced by Roland Barthes can be explained as a series of events and actions that are linked with each other, creating an action-cause effect that advances the plot, keeping the reader in suspense. Dan Brown, an American author of several best-seller novels, skilfully uses the proairetic code in The Da Vinci Code to create a fast-paced mystery thriller. The action-driven, clue-driven narrative, along with the cause-effect chain in narration, proves the use of Barthesian proairetic code in the novel. An analysis of the structure of the novel by breaking down the important scenes enables one to find out the mechanics of the narration of the novel, which makes it very intriguing. The study emphasises how Brown's use of the proairetic code not only heightens suspense but also maintains a rhythm, both of which add to the novel's mystery. The study concludes that The Da Vinci Code's popularity as a mystery-thriller novel can be linked to the employment of the proairetic code.

Keywords: Proairetic, Post-structuralist, Narrative, Code, Fiction

Introduction

All forms of art, from the complex brushstrokes on a canvas to the notes of a musical piece, aim to captivate and motivate their recipients, engage their audience differently, and provide a window into feelings, ideas, and realms outside of everyday reality. Literature is also an art form, which uses language as a medium to captivate readers. Literature engages readers in similar ways to visual arts, music, dance, and theatre, despite its differences in form and technique, which include arousing one's emotions, provoking imagination, and delving into intricate issues while offering novel perspectives. Each form of art has specificities in structural, theoretical, and aesthetic aspects, which makes individual works stand out among many. When it comes to literature, the narrative structure, literary devices and techniques, thematic depth and philosophical inquiry, emotional resonance, imagery and symbolism, among others, determine how a reader finds a particular work more captivating. Among all these aspects, the narrative structure of a work is of great importance.

According to H. Porter Abbott (2008), "Narrative is the representation of an event or a series of events". The narrative structure, being the framework with which an author structures and presents a creative piece of writing, includes the chronology, the plot development, and the tempo of narration, which play a key role in how the work impacts the reader. The narrative structure is crucial in storytelling because it organises the events in a way that captures and holds the readers' attention while having a clear start, progression, and an end, ensuring that the tale flows organically and logically. It adds to the character growth, the suspense, and a conclusion that aids in the cohesion of the plot. Understanding narrative structure is essential for writers to create compelling, well-written stories that successfully engage their audience.

Since narratives and the art of narration have had an implicit role in literature, the same has been an area of study for centuries. The New Critics encouraged 'close reading' to determine the inherent meaning of the text without taking external influences into account. The goal of structuralists, on the other hand, was to identify the world in terms of structures. Based on linguistics, particularly in the works of Ferdinand de Saussure, structuralists examined literature as a component of larger systems that were regulated by common patterns and laws rather than as individual works. They held on to the idea that meaning was determined by these structures rather than by personal interpretation. Roland Barthes, on the other hand, applied structuralist analysis and semiology to broad cultural phenomena and turned to poststructuralism in the latter half of his career through his book *S/Z* which sits in between structuralism and post-structuralism.

Post-structuralism emerged as a philosophical and literary movement in the mid-20th century, challenging the ideas of structuralism, which emphasised universal structures and stable meanings. Poststructuralist thinkers like Jacques Derrida and Michael Foucault emphasised that each text can have multiple meanings and that the idea of a stable meaning is impossible. Poststructuralism is defined as "a fuller working-out implication of structuralism" (Selden et al., 2005). *S/Z* of Roland Barthes is considered his first post-structuralist work in which he analyses Honoré de Balzac's 'Sarrasine' by dividing the text into 561 units of meaning or 'lexis' and classifying them using five 'codes'. A 'code' in structuralism denotes "a culture's system of signification through which the reality is mediated" (Cuddon, 1999). Barthes considered the Hermeneutic, proairetic, cultural, semantic and symbolic code as the basic underlying structure of all narratives. The semantic code adds depth by incorporating symbols, images, or specific details that suggest meanings beyond their literal sense. Similarly, the symbolic code uses contrasts and oppositions to create layered thematic meaning. The cultural code connects the text to broader cultural, historical, or social contexts. The Hermeneutic code introduces elements of mystery by presenting questions or unresolved enigmas.

The proairetic code, according to Barthes, helps create suspense in the readers about what happens next hand in hand with the Hermeneutic code, which is clear from Barthes' words: "tonal unity is dependent on two sequential codes: the revelation of truth and the coordination of the actions represented: there is the same constraint in the gradual order of melody and in the equally gradual order of the narrative sequence" (Barthes, 1990). It stands out due to its focus on the narrative's sequential events, using action and cause-and-effect relationships to push the plot forward and maintain momentum. The proairetic code describes the way a series of actions are constructed and arranged for the reader, which is "the sequential logic of action and behaviour" (Cuddon, 1999).

Dan Brown is an American author whose *The Da Vinci Code* is a bestseller mystery thriller novel published in 2004. The novel creates a fast-paced and thought-provoking narrative by blending themes of art, religion, suspense, and historical intrigue. The narrative follows cryptologist Sophie Neveu and symbologist Robert Langdon as they battle against time to solve several mysteries and clues buried in famous artwork, antiquated writings, and religious symbols. The book challenges long-held notions about history and Christianity as it takes them across Europe to uncover mysteries connected to the legendary Holy Grail.

The Da Vinci Code's narrative repeatedly challenges established historical and religious interpretations, asking the reader to question what they accept as 'truth', a hallmark of post-structuralist thought. For example, the Mona

Lisa, a seemingly straightforward painting, becomes a text that contains layers of hidden significance, as its enigmatic smile invites endless speculation which is an example of Barthesian 'connotation' or second-order signification. This reinterpretation of iconic symbols destabilises their assumed meanings and opens them to an infinite variety of interpretations. In *The Da Vinci Code*, the style of the narrative can be explained using the proairetic code as "an all-encompassing lexia with multidimensional purposes that substantiates interdisciplinary reading of a text" (Amireh, 2022) where each action not only results in the next but an array of actions and meanings. The proairetic code functions in the *Da Vinci Code* differently in different situations, starting with posing a chain of events and actions. There is always a sense of curiosity as the proairetic code functions as a sequence of occurrences that must be resolved.

One of the key concepts of post-structuralism is that the reader creates meaning rather than the author putting it in a work. This concept is demonstrated in *The Da Vinci Code*, which places its readers in the role of collaborators of meaning. Readers are encouraged to actively engage in the process of interpretation by the novel's complex riddles, enigmatic symbols, and unclear hints. In post-structuralist thought, texts are made up of systems of signs that constantly relate to other signs, forming a meaning chain with no ultimate centre. Every hint, relic, and historical allusion in *The Da Vinci Code* points to something bigger than itself. The book opposes established authority, especially institutionalised religion. Grand explanations of reality and history are always criticised by post-structuralism. By breaking down the quest for knowledge into smaller, contingent actions, *The Da Vinci Code's* proairetic code challenges these narratives.

The Da Vinci Code challenges conventional linear storytelling by including temporal shifts like flashbacks, historical digressions, and real-time episodes into its proairetic framework. By emphasising how stories are created and reconstructed across various temporal contexts, this fragmentation of time reflects the post-structuralist critique of fixed chronology. The narrative swings between the present, where Robert Langdon and Sophie Neveu solve a murder investigation, and the past, which gives their findings additional background. For instance, the story regularly switches to evidence of the Priory of Sion or the Council of Nicaea as the characters figure out the mysterious messages of Jacques Saunière, the curator of the Louvre. These asides produce a multi-layered story in which the past influences the present while yet being incomplete and ambiguous.

The proairetic code in *The Da Vinci Code* has vast intertextual connections, historically and culturally. Every incident or hint that the protagonists discover is dependent upon allusions to other books, turning the book into a patchwork of borrowed meanings and symbols. This narration aligns with post-structuralist ideas and highlights the ambiguity and diversity of meaning. For example, most of the action in the novel revolves around the works of Leonardo da Vinci, like *The Last Supper* and *The Vitruvian Man*. The novel's use of intertextuality produces an infinite chain of signifiers. For instance, a key proairetic sequence that frequently changes meaning is the hunt for the Holy Grail. The Grail, which is first seen as a physical item, eventually becomes a symbol of Mary Magdalene and spiritual wisdom. The reader is forced to negotiate layers of interwoven meanings as each clue raises new questions rather than providing a solution which adds to the poststructuralist thought.

The suspenseful, action-packed plot of *The Da Vinci Code* is one of its defining features, keeping readers eagerly turning pages as the story unfolds at a rapid pace. From the beginning of the plot to the end is a series of actions where its effects trigger the oncoming action. This makes it an apt work in which the narrative can be studied by employing Roland Barthes' proairetic code. For instance, when Jacques Saunière is found murdered at the beginning of the novel, it triggers a series of actions. Robert Langdon, the protagonist, is summoned to the crime scene due to the previous action of leaving clues by Saunière before his murder, thus ensuring the mystery solving. Every clue they discover, such as the cryptic messages left behind by Saunière, sets the stage for the next action. When Langdon reaches the site of the murder, the audience is kept in confusion as to why the 'effect', which is the summoning of Robert Langdon, a "Harvard University professor of Religious Iconology and Symbology" (Brown, 2004), has happened without a 'cause'. The cause is revealed when Sophie Neveu explains that it was due to a cryptic message her grandfather, Jacques Sauniere, left, of which the last line read, "P.S. Find Robert Langdon" (Brown, 2004). The proairetic narrative of *The Da Vinci Code* is thus action-time oriented, which gives each piece of the plot a clear relation to the past and oncoming action. It "governs the reader's construction of the plot" in *The Da Vinci Code* also, which is the main reason for the cohesion of its plot, although it is made rich and complex with elements that have ample potential for confusion (Cuddon, 1999).

The actions in *The Da Vinci Code* have an immediate and far-set effect in introducing the characters. As mentioned above, the summoning of Robert Langdon was triggered by the death of the curator, which in turn triggers the introduction of yet another character, detective Bezu Fache, a high-ranking officer in the French police. Fache suspects Langdon as the killer in Saunière's murder. Fache's suspicion, which is clear from the start, although unaware to Langdon, and his insistence to resolve the matter swiftly and forcefully, regardless of Langdon's innocence, develops the tension between them. The importance of the character of Fache is deeply rooted in his belief that Langdon is guilty, which leads to the next character, Leigh Teabing, who believes that Langdon is innocent. The action of one character causes the effect of adding pressure, which ensures the importance of the next action, which in this case is the introduction of Teabing, whose actions are tied to the discovery of the Holy Grail that happens eventually.

The adherence to logic and the logical explanation of each incident is one of the novel's specialities, keeping the complexity of the plot as an element that creates tension. The cause-and-effect chain is linked at some point in time, leaving no doubts, thus enabling the readers to construct an unreal and unnatural fictional reality which almost appears natural and real. At the beginning of the novel, Brown claims that all the descriptions are historically and factually accurate (Brown, 2004). Each clue provided for the reader becomes part of the intrigue in the narrative due to the conviction of its actual occurrence. The fictionalised pieces of mythology are done as a retelling with a modern touch. For instance, he depicts Magdalene differently by presenting old interpretations from a new angle. He explains as such on his website: "Many historians now believe, as do I, that in gauging the historical accuracy of a given concept, we should first ask ourselves a far deeper question: How historically accurate is history itself ?" (Brown, 2003).

The factual accuracy of the Grail legend has been questioned multiple times and even been criticised for smearing Christian beliefs (Ehrman, 2004). However, the doubts caused by the fictional reinterpretations do motivate the readers to wait for the oncoming explanation that ensures a fictional yet logical solution, which urges the reader to forget that the history explained in the book is fictional. For example, in one instance, the readers are left in confusion when he introduces Sir Isaac Newton through a clue which leads them to his tomb. The doubt is then clarified when Langdon deduces the code from the tomb to open the cryptex, which is part of another clue. Brown uses what Farner (2014) says is the "extra-textual label of fiction" to make the plot interlinked with elements, thus enabling him to "mix reality and imagination at his will" (Farner, 2014), thus urging the readers through each action to believe the fictional facts to be factually true as Farner says about the narrative act of the novel: “Although the novel often contains unrealistic elements that reveal its fictionality, it claims intertextually to recount events from the empirical world, paradoxically denying that it is fiction.” Brown thus employs the proairetic code to create an intertwined paradoxical reality through linked events.

The Holy Grail legend is associated with Christianity, in which it is a relic that was used by Jesus Christ in the Last Supper and holds the divine power of divinity. In Dan Brown’s retelling of the Grail legend, the tale diverts from the traditional belief to a presentation of a hidden truth involving Christ’s divinity and a historical bloodline involving the feminine divine. The plot focuses on the struggle between the ancient Christian secret society, The Priory of Sion and Opus Dei to achieve the keystone that may help find the Holy Grail. Although Dan Brown tries to show that there was no ‘Holy’ Grail and that the real Holy Grail was Mary Magdalene’s womb using the painting of the ‘Last Supper’ by Leonardo da Vinci, art scholars and historians say that the figure is not Mary Magdalene rather the apostle John and that Jesus was not married to her (Ehrman, 2004). This “is simply part of the narrative fiction of *The Da Vinci Code*, it has no part in historical reality”, which acts as a link in pushing the plot forward, thus revealing the actual legend of the Grail in the novel (Ehrman, 2004).

The revelation of the Grail legend is first made by Langdon, but the retelling is made through Sir Leigh Teabing. Sir Leigh Teabing, presented as an obsessive Grail scholar whose “life passion is the grail”, is adamant in believing the legend to be true and in finding the lost Grail or, in this case, believed to be the living descendant of Jesus Christ (Brown, 2004). The initial association of friendship between Langdon and Teabing presents a fake sense of security and trust, which is later broken. This sense of support, which was provided at the beginning of the relationship, is raised to another standard when it is shown as Teabing aiding the fugitives from the law, risking his life and reputation. Langdon also believes that “Teabing could be a powerful ally” (Brown, 2004). Brown substantiates the belief by giving reasons such as his wealth, hatred towards the French police due to the heavy taxes imposed on him for buying a historical landmark, and his never-ending thirst to uncover Grail secrets. Teabing’s change from an aide to the main opponent produces a plot twist that takes readers, as well as the characters, by surprise. By exposing that Langdon and Sophie have been inadvertently put into danger by someone they considered a friend, the author ensures the treachery and the sudden shift force the readers to reconsider their assumptions, creating an intense emotional turmoil in the readers because the once helpless Langdon and Neveu were aided by Teabing, only to be left helpless again. This is, once again, the cause-and-effect relation that causes the tension in the plot.

The *Da Vinci Code* is an excellent illustration of a clue-driven story in which the plot develops as characters follow a series of symbols and riddles that point them towards the truth. By allowing readers to decipher information with the protagonists, this narrative structure increases tension and keeps the readers interested. The death of Jacques Sauniere leads the protagonist to a series of cryptic clues, which he leaves at the last minute. The code “O, Draconian devil! Oh, lame saint! P.S. Find Robert Langdon!” was first thought of as “cryptographic gibberish” by Langdon (Brown, 2004). The author later reveals it as an anagram and also gives the reason why the well-learned protagonist does not realise it because “only a few people recognise anagrams” (Brown, 2004). The anagram is then solved and read as “Leonardo da Vinci’s The Mona Lisa” (Brown, 2004). The notes lead them to the Mona Lisa painting, which leads to Langdon solving the next puzzle. The cryptex is also introduced, which is a “portable container that could safeguard letters, maps, diagrams, anything at all. Once the information was sealed inside the cryptex, only the individual with the proper password could access it” (Brown, 2004). All the clues and clues within a clue are solved at some point in the novel, ensuring plot progression. Each decoded clue initiates a series of subsequent actions, creating a sense of anticipation of what each symbol will reveal next, thus making it essential to the proairetic code's function of leading from one action to the next. Every time Langdon and Sophie figure out a mystery, they are taken to the next place, where they face further difficulties and perils, like finding the cryptex and the big reveal at Rosslyn Chapel. These sequences are part of the code, guaranteeing that one event follows another without stagnation.

According to poststructuralist thought, meanings are always generative where "everything signifies ceaselessly and several times, but without being delegated to a great final ensemble, to an ultimate structure" (Barthes, 1990). Thus, the meaning is never resistant to closure. The readers of *The Da Vinci Code* are always left in a state of deducing the oncoming action before actually revealing it. The author makes the code a tool to design the plot in such a way that it progresses by giving space for the readers to script the possible oncoming related action and then revealing it to cause tension in the plot. For example, when Langdon senses treachery, the readers immediately point towards Bezu Fache due to his affiliation with Opus Dei. The thought being subconscious in the reader since it is also a doubt posed by Langdon is left as such and only cleared when Fache finds that out himself from Bishop Aringarosa. Such shifts in the plot also strengthen the observable use of the proairetic code employed in *The Da Vinci Code*. Dan Brown employs the proairetic code in the novel to enable a continuous flow of actions with a seamless mix of turbulence in between, providing next to no room for stagnation as "reading should simply be a process of movement, among and between the signifying particles of the text" (Connor, 2003).

Conclusion

The novel's proairetic scenes emphasise how unpredictable narrative authority can be. New information is revealed as a result of every action, but these revelations frequently undermine rather than support the protagonists' worldview. Each action is connected to the next through puzzles, action-packed sequences, suspense-driven shifts in action, and clues. Thus, *The Da Vinci Code* offers a clear and useful framework for analysing the tension and narrative dynamics that characterise the book, justifying the proairetic code as the primary analytical emphasis for the novel. This code enables a thorough analysis of how action scenes essential to the plot's development build and maintain tension and propel the narrative ahead with relentless intensity and provides insights into why *The Da Vinci Code* is a gripping, action-packed thriller by highlighting the sequence of events and the anticipatory logic that underlies them. Therefore, the proairetic code not only reveals the novel's tense structure but also emphasises how well it draws in and holds the reader's interest, confirming its key place in the action-packed narrative of *The Da Vinci Code*.

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A Multimodal Approach to English Language Laboratories in the Context of Professional Communication for Engineering Students

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Abstract

A multimodal approach in English language teaching (ELT) utilises different modalities and resources in ways that match the needs and requirements of the learners. Technology has always been a catalyst in pedagogic innovation as seen through the dynamic changes in instructional strategies for language acquisition. The need for equipping learners with an individualised learning space without compromising peer group interaction becomes the mandate of the hour. Clinging on to conventional learning spaces can make the process monotonous for the learner. In this study, we analyse professional communication as a pre-requisite in English language proficiency for engineering students fundamentally through the changing concept of 'language laboratory' in the wake of diachronic changes in ELT.

Keywords: Multimodal, ELT, Language laboratory, Professional communication, Engineering,Technology.

Introduction

Multimodality incorporates different modes of communication and divergent means of personalised-learning toolkits in English language teaching (ELT) including digital resources, hand-made instructional modules, e-resources, printed texts, and audio-visual aids. Hence, it encompasses verbal communication, non-verbal communication, visual communication, and different forms of implicit communication. For instance, a teacher as a techno-pedagogue may engage in an intrapersonal mode of silent communication before delivering a cue-card-based presentation strategy in teaching grammar using smart classrooms. Thus, each and every form of communication matters in a multi-modal language ecosystem. It diversifies the teaching-learning process and expands the process through the integration of technology, pedagogy, and content. It is in this context that a revaluation of the traditional conception of 'language laboratory' takes place. In leveraging technology for facilitating foreign Language Acquisition as well as achieving milestones in pedagogic innovation, language laboratories have shifted gears from 'computerized instructional aids' to more, comprehensive tools for crafting language learning platforms. The complex machine-operated systems typical of a computer lab have been replaced by the customised toolkits like trainer's self-made materials catering to the language needs of the learners. Thus, the trainer becomes a handyman with different artefacts or materials that can be seamlessly integrated with technological tools like Duolingo, Babbel, Hello Talk, and such like.This emphasises the evolving intersectionality between computerised systems of language learning and the hybrid forms of flexible learning opportunities aided by pedagogic innovation in ELT. This becomes particularly significant for students in professional disciplines like engineering where technical English and professional communication hold equal relevance.

Methodology

Bateman (2008) defines a multimodal document as a combination of artefacts, which are a variety of visually-based modes that are deployed simultaneously to fulfil an orchestrated collection of interwoven communicative goals (p.1). Hence, the need to view the language lab as a combination of such different forms of distinct semiotic modes of communication or artefacts becomes crucial in understanding English language learning as a subconscious act of acquisition than a conscious act of learning (Krashen, (-1982). This is because Stephen Krashen has rightly remarked that second language acquisition becomes more effective through a wide exposure to comprehensible input and free interaction than through the strict adherence to rules. The novel conception of language lab as suggested in this article envelops such an environment that is stress-free, and less binding on students through strict monitoring from the trainer. Thus, it offers an engaging experience for learners. It is adapted to meet the present language needs without holding distinctions in terms of its hardware component and software component. The 'lab' as a concept gains an understanding in a new light here as even mobile-assisted language learning, flipped classroom interactions, role playing exercises with the assistance of any form of technology, virtual moot courts, a traditional language laboratory concept with the student cubicles and trainer's console, and everything becomes a part and parcel of the language-learning space or a hybrid ecosystem that nurtures research and development in the context of the 'evolving' spaces under the label of 'lab'.

We have traversed a long way from what language laboratories were meant to be in the past. Listening to audio tapes repeatedly and reinforcing habitual transformations in language learning tendencies happens in a deliberate, conscious manner. Language acquisition should be a subconscious act enabled by flexible spaces of communication. It should integrate pedagogic innovation in foreign language acquisition with human intelligence by leveraging technology. In this dynamic concept of 'language lab', machine intelligence, and computational linguistics are founded on equal levels of significance with human intelligence. One cannot be held above the other. Critical thinking and creative thinking from a techno-pedagogue or trainer can upgrade the machine learning in a move to expose the students towards English or any foreign language in a productive and reinvigorating means of acquisition. Noam Chomsky, Ian Roberts, and Jeffrey Watumull (2023) point out in their essay that machine-learning programmes are "stuck in a prehuman or nonhuman phase of cognitive evolution. Their deepest flaw is the absence of the most critical capacity of any intelligence: to say not only what is the case, what was the case and what will be the case- that's description and prediction- but also what is not the case and what could and could not be the case. Those are the ingredients of explanation, the mark of true intelligence"(p.3). Thus, in the wake of large language models triggered by artificial intelligence, it shouldnot be forgotten that they are based on probabilities and human thinking differs in widely unpredictable capacities that cannot be compared with machine intelligence.

The multimodal approach as per the needs of the given context facilitates a combination of the usual practice aided by Listening-Speaking-Reading-Writing (LSRW) models in the conventional form with the new definitions of verbal, visual , spatial, and other modes of communication in the target language through different genres as they best define the multimodality (Bateman (-2008) in tagging certain labels such as 'genre of websites', 'genre of newspapers', and 'genre of homepages' (p.10). Here, John A. Bateman strives to contend that multimodality as a confluence of different genres like hypertext, e-newspapers, printed newspapers, web-resources, and different forms of 'genres' or documents best defines the approach towards adopting a suitable methodology in solving a problem by adopting a theoretical foundation.

Data Collection/Materials

Several technological universities have evolved curricula with professional communication, being an integral paper, aiming chiefly at developing English language competency. For instance, Kerala Technological University, (2019) specifies the intended course outcomes of its paper titled 'Professional Communication' in its syllabus as follows:

Table 1

Course Outcomes

CO 1	Develop vocabulary and language skills relevant to engineering as a profession
CO 2	Analyse, interpret and effectively summarise a variety of textual content
CO 3	Create effective technical presentations
CO 4	Discuss a given technical/non-technical topic in a group setting and arrive at generalisations/ consensus
CO 5	Identify drawbacks in listening patterns and apply listening techniques for specific needs
CO 6	Create professional and technical documents that are clear and adhering to all the necessary conventions

Note-: Adapted from "Professional Communication", (Kerala Technological University, 2019, p.1).

Furthermore, the different activities that are to be conducted inside the language laboratory have been listed as follows:

"**Written:** Letter writing, CV writing, Attending a meeting and Minute Preparation, Vocabulary-Building.

Spoken: Phonetics, MMFS (Multimedia Feedback System), Mirroring, Elevator Pitch, telephone-etiquette, qualities of a good presentation with emphasis on body language and use of visual aids.

Listening: Exercises based on audio materials like radio and podcasts. Listening to Song. Practice and exercises.

Reading: Speed Reading, Reading with the help of Audio Visual Aids, Reading Comprehension Skills.

Mock interview and Debate/Group Discussion: concepts, types, Do's and don'ts- intensive practice" (Kerala Technological University, 2019, p.2).

Analysis/Methods

Thus, professional communication has been included as part of the curriculum for the engineering discipline to attain desirable outcomes in English language proficiency with a careful suggestion of necessary 'language laboratory-oriented' activities for enhancing the same. It is in this context that the above-mentioned pedagogic interventions become practically inevitable, whereby- the language lab as a multipurpose space can incorporate teaching along with research and design. For a discipline like engineering, this can be inclusive of the different scopes of exploring technical communication such as verbal and non-verbal communication, engineering English in the practical context of application, professional communication as well as general purpose communication.

Results and Discussion

Thus, the general purpose of communication like writing letters can be further elevated to the level of engineering English for writing technical reports at easy, medium and advanced levels. Another case may be an elaborate perusal of engineering jargon which can be later applied on contextual scenarios and situation-based activities to help the students gain an understanding of discipline-specific language purposes. Hence, like any professional discipline, engineering can make use of activities in employing English for subject-specific communicative purposes similar to a moot courtroom scenario of interlocution that employs legal English. For instance, as an activity, language lab can be treated as an active space with manipulation of technology as per the individual's taste in pitching a project proposal, adhering to the specific branch of engineering, before the audience. But it shouldnot be forgotten that the same can be implemented through online and offline modes of additional modules dealing with subject-specific purposes suiting English language learning, being developed as in-built features of language lab software. Thus a fluid construction of 'lab' in pedagogic practices in ELT may use either of the two or a combination of both strategies according to the needs of the learner. Professional communication or forms of exchanges in target language that are intended to be reflecting an individual's personality in ways most conducive to the dynamic ethos of workplaces, academic spaces, and even in unforeseen circumstances that demand the same even if they categorically befits - "informality"- in its nature requires an active process of acquiring proficiency in English language that solves the practical purposes of academicians, students, scholars, and other stakeholders. Its significance can be attributed to what Miller (1989) defines in terms of technical writing which is an important facet of professional communication as employing the high sense of being practical, derived from the Aristotelian concept of praxis, underlying the modern philosophical pragmatism, concerning human conduct in those activities that maintain the life of the community (p.62). Thus, dexterity in professional communication can make or mar the repute of an individual in different fields. It is not just the communication but communication that happens in the most clear and concise manner, the one which binds a group or community together through the brief and succinct form of verbal communication with the slight suggestion of unsaid meanings, explicit in non-verbal cues that can guide a workplace, academic place, or any space where language plays a key role. Thus, individuals gain leadership qualities by improving their communication skills professionally. There is a close affinity between professional communication and the use of language laboratory in enhancing the same as this has been closely aligned with the syllabus of several professional disciplines. But for the convenience of study, only engineering students have been considered here.

Conclusion

In their phenomenal work on the need to redesign language laboratory space, Patrick Brugh and Meghan Nichols undertook a case study on the need to rethink the language laboratory at the Language Learning Center of Loyola University Maryland (Brugh & Nichols, n.d.). In the light of its transformation as a robust, technology-integrated learning space, they trace the evolution of this space from "where students now easily spread out was restricted by thirty computer carrols, divided into rows separated by eighteen-inch walls"-(p.1). Further, their study found that "between September 2015 and May 2018, usage of all spaces in the LLC grew by 470% to over 7,300 visits in the 2017-2018 academic year" (p. 5). Tobias Heinrich (2023) conducted a study on language lab in this digital age with special focus on video conferencing, feedback and self-correction (pp.87-108). The scope of online learning spaces and their integration with language laboratories were taken for study. It highlights the need for new strategies in pedagogy, especially on the face of the Pandemic era when the education system as a whole was challenged by the limitations of physical learning spaces. In this context, the author presents certain activities that were carried out from 2020 to 2021 that helped to broaden the pedagogical application of language learning in shifting spaces. This was elaborated through platforms for video conferencing as well as feedback-giving, opening new possibilities in learner autonomy through self-correction. The above case studies prove that the language labs can be transformed into multipurpose 'language lab centres"- by expanding the possibilities of pedagogical tools which can make the language-learning process effective, interactive, and entertaining.

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Precarious Pandemic and the New World Order in Ling Ma's *Severance*

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Abstract

Severance is a critique of globalised consumerism riding high on 'pandemic orientalism'/ 'epidemic orientalism'. The novel, with its uncanny resemblance to the Covid pandemic, tries to unveil the shifting contours of experience, both private and public, in a society afflicted by Shen Fever, a fictional mysterious fever. A disease that is symptomatic of ritualized routines and is possibly triggered by memories may have origins beyond the rigours of medical discourse. The paper explores how the individual vis-à-vis society tries to negotiate the disintegration of the self amidst a new world order.

Key words: Pandemic orientalism, Loneliness, Nostalgia, Consumerism, Late capitalism, Chinese literature

Introduction

Ling Ma's *Severance* (2018) has been garnering eyeballs globally, especially post-covid. Ominously prescient about the coronavirus pandemic, the novel depicts the global spread of *Shen Fever*, a mysterious contagion, and chronicles the disintegration of New York City *circa* 2011. This paper attempts to read *Severance* as a critique of global consumerist trends that feverishly grip individuals beyond the pandemic.

Methodology

The paper first examines the modalities of representation of the pandemic in the narrative. By a close reading of the text, Shen Fever - the fictional epidemic in the narrative - is explored in all its dimensions. Secondly, the paper interrogates the narrative of the pandemic by examining it as a by-product of precarious global consumerism. Lastly, it uses the framework of 'epidemic orientalism' to explore the Western capital interests, racism and xenophobia, and political power that regulate and perpetuate the international spread of infectious diseases.

Analysis

The novel's opening lines, 'After the End came the Beginning', conveys an eerie sense of foreboding *apropos* 'the new normal'. The novel opens with Candace Chen, the protagonist, joining a gang of survivors who leave behind vacant cities full of fevered people infected by the Shen Fever virus and subsequently flitting between the present, the recent past, and the far past and her childhood memories. The time jumps in the narrative are symptomatic of the fevered frenzy that the novel tries to uncover. With the fevered turning into zombie-like beings and being trapped in a loop of routine, where they continually and unconsciously repeat habits, the epidemic wreaks havoc in New York City. Cadance is a typical millennial whose lack of connections to anyone around her makes her uniquely immune in this new world. The novel is remarkably modern in its setting with a millennial at its centre trying to find meaning or rather the lack of it in the banality of her experiences. Shen Fever being a fever of repetition, of routine, and significantly also a disease of remembering, afflicts the individual by trapping them in their memories. All the main characters at some point in their lives sever ties with their past. Memories or relationships are cut loose *sans* guilt trips. With no clear resolutions in sight, the reader is forced to review the narrative of the pandemic undercut by a new world order

Severance is a scathing critique of modern capitalist culture and the monotony and banality of work. Ling Ma, the author, has a personal investment in the title as she was on severance pay while working on this novel. Cadance's role as the Senior Product Coordinator of the Bibles Division at the publishing firm Spectra is her all-consuming identity. Spectra, a typical multinational company with eyes only on sales and caring two hoots about exploiting labour, is at the capitalist core of the novel. *Severance* can be read as a social commentary on the late-stage capitalism that has gripped the world and alienated individuals from society. The market economy and consumerist concerns of Western society driven by its rampant exploitation of Chinese labour may have contributed to the Chinese origins of the pandemic. The distressed and fatigued workforce are considered as mere cogs in the wheel of rising Chinese capitalism. The Chinese government in its eagerness to engage as a global economic player considers the unsatisfied labour force as collateral damage. As economic risks and global politics animate responses to contagion and affect health priorities, the novel is as much about the capitalistic discourse that undercuts the narrative as the racial essentialism that guides it.

Alienation and monotony are hallmarks of modern capitalist soul-killing labour. The fevered's repetition of an activity or pattern of behaviour in the novel is not very different from ordinary human behaviour. People latch on to some activity to lessen the alienation that is typical of the new world order. Candace, like most millennials, seeks a semblance of comfort in the routine that work provides despite its banality and monotony. Extremely dissatisfied with her job, she nonetheless holds onto it because it is the pivot of her patterned life. With her parents dead, no relatives around, zero friends, and a boyfriend who has just left, it is only her job at Spectra that gives some meaning to her existence. The job is probably the only thing that makes her feel useful; her role as the Bible sales coordinator somehow takes precedence over all her other identities. It is her loneliness, routine, and her past that shape her identity as an individual. Using the Zombie apocalypse as a trope, Ling Ma conveys an acute sense of otherness and alienation through her characters. The loneliness that the character experiences is not evocative or nostalgic - it is just presented matter-of-factly. Loneliness is not romantic anymore - it is mundane, common, and everywhere. Loneliness is not exotic; it is ordinary.

The narrative on the immigrant experience of Candace's Chinese parents depicts their attempts at complete assimilation into the American capitalist system. The father till his dying day kept working overtime, putting in hours after hours of work.

"My father had worked hard his whole life, taking late hours at the office, coming home to cold leftovers in the fridge. He received promotion after promotion, in part because he went into the office on weekends too. His work ethic was like that of many other immigrants, eager to prove their usefulness to the country that had deigned to adopt them. He didn't get to enjoy his life nearly enough." (158)

Her mother finds respite from homesickness by becoming a compulsive addict of the cosmetic industry. A deliriously happy consumer of the market economy - her Clinique cosmetics, dinner parties, beige Lexus car, and her blue split-level home on mortgage, her happy days involved driving on freeways and shopping at supermarkets. But the happiness was short-lived, as she would again wallow in her past, reminiscing about her life in China. Her parents despite their earnest attempts could not make meaningful relationships in America. They put on a veneer of success, especially before their relatives on their visit to Fujian but they failed to impress. China's surging geopolitical and economic power had taken their American sheen away. They could at best be successful, but they never could be happy. The only way forward for Candace was to become completely absorbed in American consumerism. She plunges headlong into work and has no qualms about recklessly spending money. She describes her shopping at an upmarket mall, a potent symbol of listless consumerism, in Hong Kong:

"I kind of liked to shop, and we shopped so much that I thought I was losing my mind. … There was an insatiable frenzy to shopping in Hong Kong, to using a foreign currency that felt like play money. There was no guilt. I couldn't calculate the exchange rate fast enough." (85)

The City as a metaphor for cultural *cul-de-sac* finds poignant expression in the narrative as Candance soon realises that her wistful illusions of New York have faltered. Zombie stories typically reflect the cultural milieu that they are set in. The all-consuming materialist culture of the much-celebrated New York hits hard. With booming rents and crowded public spaces, the city gives in to the consumerist clamour. However, the irony of having a fat bank balance and being unable to spend any of it during the pandemic is epiphanic for Cadance. Her love for the city is rekindled when she resumes working on her blog NY Ghost. With Spectra down, Candace focuses on documenting the city during the pandemic: - "I have always lived in the myth of New York more than in its reality. It is what enabled me to live there for so long, loving the idea of something more than the thing itself. But toward the end, in those weeks of walking and taking pictures, I came to know and love the thing itself" (215). The city had always been a consolation for the *flaneur* in her. There was an anonymity that the city professed. To be unknown and unpossessed of other's knowledge of her. That was the ultimate freedom for Candace as it had been for her father on officially severing all ties from his homeland.

Edward Said (1978) in *Orientalism* observes that Orientalism is a sign of European–Atlantic power over the Orient. Orientalist discourse shares close ties with the socio-economic and political institutions. The power exuded by the Western corporates over the Chinese economy comes to the forefront in *Severance*. Candace's publishing firm Spectra could not care less about the plight of workers in China as it deflects competition from other firms.

"We worked with publishers who paid us to coordinate book production that we outsourced to printers in Southeast Asia, mostly China…The company had huge collective buying power, so we offered even cheaper manufacture rates than individual publishers could achieve on their own, driving foreign labor costs down even further." (13)

Even when Spectra's office in Hong Kong reported that they could not get the gems required for the Gemstone Bible as many factories around the Guangdong region were being closed due to spreading pneumoconiosis, the client refused to budge.

"We're committed to the Gemstone Bible. We placed the order with you guys as the Gemstone Bible. We're not reconceiving this entire project on the basis of one supplier failing… Everyone says placing jobs in China is a risk. There are no rules, no enforcement. But that's why we used an intermediary like Spectra, because you guys are supposed to eliminate the risk." (24)

Against her better judgement and inclination, Candace is pressured to find another supplier to meet the client's demand. With the demand finally being met, she also unwittingly becomes a cog in the exploitation machinery. The company visit to the printers/suppliers in Shenzhen leaves Candace with impressionable thoughts regarding the true nature of her work. Visiting the factories and interacting with the local workers exposes the rust under the glittering production boom in China.

The Grand Shenzhen Moon Palace Hotel, where she stays, catered exclusively for the Western business class who come to make cheap deals with the local production industries. The difference between the hotel and its immediate surroundings was stark. There was nothing remotely Chinese in the hotel or Hong Kong, which just sold everything American in Asian flavours - "It didn't feel I was in China. It didn't feel I was anywhere" (69). In a race to cater to the demands of the Western economy, China was stripping itself of its cultural identity. There were no originals anymore; only copies of culture. The Culture industry was working double-time in China as it relied on repetitions rather than the real. The novel's focus on repetitions, as embodied in the fevered's affliction of repeating routines *ad infintum* until they die, is an extended metaphor for modern consumerist culture.

There was no end in sight for the exploitation and subjugation of its workers. What made matters worse for the workers was the on-and-off tacit support the power economies got from the Chinese government. As long as the factories played it by the political book, they were free to increase their production by any available means - unpaid overtime, unsanitary working conditions, absent health/legal care, etc. The woes of the workers could go neglected for a very long time - first resulting in pneumoconiosis, then Shen Fever. The prophetic tone of the narrative seems to suggest that aggressive consumerism may well be the nemesis of the world as we know it.

The exploitation of labour by rampant consumerism is an understated yet powerful subtext of *Severance*. Even the title is a reminder of the corporate layoffs due to staffing issues. What happens when economies fail, cities disintegrate, tech consumerism falls, and there is no grid in place? How does one escape routine and memory - the two major triggers of Shen Fever? Or more importantly, does one need to escape routine and memory?

Layered histories of colonial and imperial power reproduce myriad forms of racial and xenophobic anxieties. Belinda Kong (2018), in "Totalitarian Ordinariness: The Chinese Epidemic Novel as World Literature", coins the term 'pandemic orientalism' to describe how pandemic discourse following the 2005 SARS epidemic gets entangled with long-standing orientalist tropes of a despotic and exotic China (139):

"Nineteenth - and early twentieth-century orientalism persistently configured Chinese bodies as pollutants, as sources of filth and disease (R. Lee 1999; Shah 2001), and international media coverage of SARS in 2003 readily exploited these motifs. Menacing images of masked Asian faces fueled yellow peril fears of the inscrutable, contagious oriental hordes…In effect, what the pandemic discourse around SARS implied was that China's entry into a modern capitalist world system brings with it a new type of threat to global life, as its entrenched cultural and political practices prove fertile breeding ground for emergent deadly viruses. Post-SARS, pandemic discourse comes to exceptionalize China as the world's disease ground zero." (140)

Shen Fever, the global epidemic that leaves a trail of destruction in *Severance*, has Chinese origins in the narrative. Though reliable information remained sketchy at best, it was widely believed to have originated in the special economic zones (SEZs) in and around the Shenzhen province. The uncontrolled emission of a certain mix of chemicals was said to have triggered the microbial fungal spores which rapidly spread through the air. It was conjectured that one-third of the Chinese population were purportedly affected by this deadly pandemic. The spores traveled along with manufactured goods from China to all the leading economies of the world. The official narrative on the origin and spread of the pandemic garnered unanimous sanction. Even the apocalypse was 'Made in China'. In her essay, "Pandemic as Method" she denaturalises the idea of infectious disease by reframing it as an assemblage of multiple histories of American geopower and biopower. Examining cultural concentrations of orientalism and bio power, she examines how Asia and Asian bodies have been targeted by U S discourses of infections and biosecurity as frontiers of bioterrorism and the diseased other. One of the first control measures adopted by the American government in view of the pandemic of Shen Fever in the novel was to enforce travel bans to China.

Alexandre I.R White (2023) in *Race, Capital and the Governance of Infectious Disease* puts forward the concept of 'Epidemic Orientalism' - a discursive framework in international infectious disease response that organises how epidemics are understood and responded to at a global scale. It is an expansive project of Eurocentrism that explains the durability of Western standardised regulatory logic for disease control which emerged from the complex intersection of orientalism, imperialism, and capitalism. Using Edward Said's theory of Orientalism, he examines how colonial legacies of race, xenophobia, political power, and production of knowledge continue to govern global responses to epidemic control following the Covid -19 epidemic. With the US blaming China for spreading the disease, the regulations that governed global responses to the pandemic, centered on the objective of protecting the West from the Rest. To illustrate this Western-centric perspective, White refers to how a Danish newspaper published a satirical image of the Chinese flag with the characteristic yellow stars replaced by the recognisable image of the corona virus.

The myth of 'positional superiority' of the West is busted in the novel when New York City becomes an epicenter of Shen Fever. With an increasing number of its citizens turning into Zombies, the myth of the West transcending the era of pandemic vulnerability gets shattered. Forced to wear N95 masks, work from home, and fumigate their homes, the Western bodies are as susceptible to the virus as others. The novel also exposes the weakness of supposedly overhyped Western public health systems that in fact were understaffed, underfunded, and ill-equipped to manage a pandemic of this scale.

Conclusion

The novel powerfully anticipates the post-pandemic world order alarmingly. And there are no resolutions in sight either. Instead, one takes home the message that Pandemics do not specifically have national identities. They are the flip side of unprecedented and unrestrained global consumerism at play. *Severance* espouses Belinda Kong's (2019) concept of 'Pandemic Resilience' with Candance navigating the Shen Fever epidemic and trying to create meaning amid the crisis. The readers root for her as she escapes the Facility for survivors and embraces her precarious freedom. The resilience and humanity of those surviving the pandemic juxtapose the crumbling social order at the end of the day.

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Wrong Place, Wrong Time: Reconfigured Notions of Nation and Nationalism in *Riot*

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Abstract

Shashi Tharoor's Riot (2001) explores the complexities of nationalism, citizenship, and identity within the framework of India's celebrated yet contested ideal of "unity in diversity." The novel centres on the tragic death of Priscilla Hart, a young American volunteer in a women's healthcare programme in Zalilgarh, Uttar Pradesh, during the communal unrest of 1989. Through its multi-layered narrative, Riot interrogates how entrenched socio-political tensions between Hindus and Muslims transform perceived spaces of inclusion into volatile arenas of exclusion, reconfiguring notions of belonging, citizenship, and the dignity of life. The novel's polyphonic structure, incorporating diverse perspectives—ranging from secular officials to Hindutva fanatics—foregrounds the contested histories and fractured realities of postcolonial India. This paper examines how Riot problematises the constructs of -"right" and "wrong"- spaces and times within the nationalist imagination. The oft-repeated explanation for Priscilla's death, "being in the wrong place at the wrong time," is critically unpacked to reveal its complicity in homogenising space and displacing responsibility. The novel resists simplistic binaries by presenting clashing narratives that reflect diverse social, religious, and political ideologies. By juxtaposing historical events like the Ayodhya conflict and Partition, Tharoor highlights the fragility of India's pluralistic identity and questions the privileges promised by the nation-state. This paper argues that the shifting definitions of space, time, and citizenship in Riot challenge dominant nationalist discourses and emphasise the need for reimagining collective coexistence in contemporary India.

Key words: Nationalism, Identity politics, Polyphonic, Communalism, Spatial dynamics

Introduction

"Ms. Hart simply may have been in the wrong place at the wrong time" (Tharoor, 2001, p. 5).

In his novel *Riot* (2001), Shashi Tharoor foregrounds spatial dynamics by addressing certain crucial questions relating to the clash between the perceived space and the lived experience of being an Indian. The death of Priscilla Hart in the 1992-1993 Mumbai riots serves as the pretext for a thoughtful, sociologically precise novel about the religious tensions racking the subcontinent. In the novel, one of the possible reasons for the death of Priscilla Hart is attributed to being 'in the wrong place at the wrong time" (Tharoor, 2001, p. 5). The convolutions of such a naive statement are exposed when the district magistrate Mr. Lakshman questions the notion of the wrong place and the wrong time.

A search for answers obviously take us to some of the most protracted and serious conflagrations in post-independent India – the 1992 Mumbai riots. An analysis of lived experience demands pertinent insights into the typical dynamics of spatial intrusion.

Shifting of spaces within a place emerges as an unresolved riddle when one analyses the contours of communal violence. A clutch of social and material practices including kinship, affinity, rules of residence, endogamy, intricate cultural complexes of ethnic and historical devotions, and intertwined memories are some of the elements which define a social space. This has fascinating resonances with the investigations of power and knowledge. Space thus emerges, not as a backdrop or setting for events or as an empty container to be filled with actions or movements; but both as a product and a productive force. This paper discusses how the floating signifier 'India' attains multiple significations in accordance with the multi-sited responses to notions about nationalism and the nation-state.

Methodology

The study analyses the narrative perspectives within the novel, focusing on the character dynamics surrounding Priscilla Hart's death and the historical context of the 1992-1993 Mumbai riots. This paper employs Critical Discourse Analysis to interrogate power-laden discourses within the text, analysis of the spatial dynamics to explore the shifting constructs of space and belonging, and textual analysis to ground these theoretical approaches in a close reading of the novel's polyphonic narrative.

Discussion

Shashi Tharoor is a distinguished author and orator whose works span both fiction and nonfiction, reflecting his deep engagement with India's history, politics, and culture. His nonfiction books, such as *India: From Midnight to the Millennium* (1997), *Nehru: The Invention of India* (2003), and *Pax Indica: India and the World of the 21st Century* (2012), offer insightful analyses of India's socio-political evolution and its role on the global stage. In fiction, Tharoor employs wit and satire to explore societal and political issues, as seen in *The Great Indian Novel* (1989), a political allegory based on the *Mahabharata*, and *Riot* (2001), a poignant examination of communal violence and identity. His writing is characterised by erudition, narrative finesse, and a balance of intellectual depth with accessibility, making him a pivotal figure in contemporary Indian literature and thought. In both fiction and nonfiction, Tharoor's works are a testament to his deep understanding of India's history, politics, and culture, as well as his global outlook. His literary contributions continue to provoke thought and inspire dialogue on issues of national and international significance.

At the heart of *Riot* lies the story of young American student Priscilla Hart, a Christian idealist who comes to India to volunteer in a women's healthcare programme. The story is set in 1989 in Zalilgarh, a dusty town in Uttar Pradesh, where Hart becomes a victim of Hindu-Muslim riots that explode over a Ram Shila Poojan. In the course of her work in the small town of Zalilgarh, Priscilla meets an attractive, married, government official Lakshman. An instant affinity is felt by both of them and a stifling, secret love affair is carried on. While both are conflicted by their feelings for each other, neither wants to end the relationship. Priscilla's parents and a newspaper reporter visit Zalilgarh in an attempt to find out exactly what happened to her. Through interviews with the police, government officials, and co-workers of Priscilla, we learn of the Muslim-Hindu conflict that is brewing in northern India. The conflict turns into a riot which results in the death of eight people in this small town. Except Priscilla Hart others who were dead were Indians.

Public space is commonly understood in urban studies, sociology, and political science as a socially constructed area regulated by the state, where ownership, access, participation, and use are intended to be accessible to the general public. Mitchell (2003) defines public space as a contested arena where rights are negotiated and struggles over access and ownership often arise. Similarly, Lefebvre's (1996) concept of the "right to the city" emphasises the importance of public space as a site of inclusion, participation, and collective belonging, a space that is not owned privately and a space in which the general public can claim its stake. India as a nation has been imagined primarily through the forces of one particular type of power relation, the hierarchies of knowledge in a Centre which diffuses to the state and its components.

Every society and mode of production generates its own spatial configuration, with the key coordinates of this social space being culture, policy, ideology, and economy. Among these, culture and ideology emerge as the most pivotal elements. The state apparatus, through its disciplinary power and policing mechanisms, is reinforced by the bio politics of infrastructure and development, ensuring the implementation of the constitutional principles (Foucault, 1977). This is where the significance of an ideological state apparatus becomes apparent, as it has the capacity to reshape spatial and temporal configurations (Althusser, 1971).

Space is the recognition of territory through social practice, and spatial practice is configured through social and material practices. Constitutionally, public spaces in India are conceived in such a manner that no one can have a stake in it on the grounds of any individual choices. Communal violence is a contested history in the public space as much as it is a contested space in public history. It creates right spaces and wrong spaces, coupling it with the notion of right time and wrong time. An archive on communal violence offers both textual and social spaces. What is peculiar about communal violence is that as the textual space unfolds, we see social spaces shrinking. It results in radical spatial configurations and reconfigurations in the lived experience, as manifested in the possible reason for the death of Priscilla Hart as "being in the wrong place at the wrong time."

Riot emerges as a multi-layered narrative that sheds light on many contentious issues on history, politics and culture in contemporary India which makes it a contested space. The novel is structured in such a way that it helps to achieve multiple realities rather than one definitive unchanging meaning imported by the novelist. The novel uses multiple voices and fragmented narratives to address communal violence, making it a compelling example of polyphony. This is clear when there are different points of view presented by different social classes regarding the history of India. These different speeches represented by different social classes often clash with each other. It is difficult to appreciate the novel without taking into account the historical perspective. History is treated as fiction. Tharoor seems to have a wonderful understanding of the history of India as well as the present political system. Thus we have clashing points of substantiation by an upholder of secular values, Mr Lakshman, who is the district magistrate, Ramcharan Gupta, a Hindutva fanatic, Muhammed Sarwar, a Muslim professor, Randy Diggs, a foreign newspaper reporter and Gurinder Singh, a Sikh IPS officer. Being well educated and thoroughly informed of what is happening around, each of them put forward equally convincing arguments.

Tharoor has also accepted the fact that he has included different points of view in this novel as he writes in a column of The Hindu: "The story of Riot was a story of various kinds of collisions – of people, of cultures, ideologies, loves, hatreds - and it could not be told from just one point of view. The challenge I set myself in writing this book was not just to imagine a dozen different characters but to try and enter their imaginations, in other words to see the world through their eyes... Similarly I sought to depict four or five different people's views of the Ram Janmabhoomi/ Babri Masjid controversy; despite my own strong feelings about it, I tried honestly to empathize with each of them individually." Thus he dexterously creates in the mind of the readers a feeling of empathy for those who end up as victims of a vicious imagination. Power politics, rather than embodying the art of governance, has increasingly transformed into a masterful exercise in misgovernance. This is accomplished through the selective reinterpretation of history, often employing religious imagery. Among such constructs, the myths surrounding the deity Ram and his birthplace hold particular significance, showcasing how religion is utilized to reshape historical narratives for political gain.

The dialogues between Ramcharan Gupta and Randy Diggs serve to highlight pre-existing ideological differences while generating new perspectives on these issues. For instance, Ramcharan Gupta contends that the Kashi Vishwanath temple was destroyed by Muslims and replaced with the Gyan Vyapi mosque, reflecting his perspective on historical and religious conflicts. Through his perspective, Tharoor tries to show how religion and faith are often wielded as instruments to achieve political goals. In Indian politics, religiosity has become a strategic tool in a power game devoid of moral considerations. Politicians manipulate collective psychology in the name of religion, exploiting emotional and cultural sentiments to further their agendas.

In *Riot* (2001), Ramcharan Gupta's views are frequently contradicted by the secular minded Lakshman, who argues that Hinduism has no place for fundamentalism, describing it as a religion without fundamentals: "So I'm not embarrassed to say I'm a believing Hindu. But I don't have anything in common with these so-called Hindu fundamentalists. Actually, it's a bit odd to speak of 'Hindu Fundamentalism,' because Hinduism is a religion without fundamentals: no organized church, no compulsory beliefs or rites of worship, no single sacred book..." (Tharoor, 2001, p. 143).

Sarwar, a professor of History, defends the cause of Muslims, emphasizing the spirit of composite culture and tolerance. He highlights the enduring reverence Hindus have for Muslim saints such as Nizamuddin Auliya, Moinuddin Chishti, and Khwaja Khizr. However, Sarwar acknowledges the prejudice faced by Indian Muslims, noting, "Yes, there is prejudice in this country... Indian Muslims suffer disadvantages, even discrimination, in a hundred different ways that I may never personally experience…" (Tharoor, 2001, p. 112). He also critiques the Shiv Sena leaders for undermining India's secular fabric, citing the words of German theologian Pastor Martin Niemöller to underscore the dangers of silent complicity: "...At first they came for the Jews, and I did not speak out, because I was not a Jew. Then they came for the communists, and I did not speak out, because I was not a communist. Then they came for the trade unionists, and I did not speak out, because I was not a trade unionist. Then they came for me—and there was no one left to speak for me" (Tharoor, 2001, p. 184).

Tharoor has not only spoken about the communal riot between Muslims and Hindus, but also spoken about the communal strife between the Sikhs and the Hindus. There is "riot" inside *Riot.* It makes the readers realise that communal disharmony has always been a big challenge to the secular face of India. He has included another important voice of Gurinder Singh, a Sikh, whose brother-in-law and nephew were also killed in the riot between Hindus and Sikhs.

Lakshman's explanation of different cultural, religious and linguistic aspects of Indian society conveys Indian identity to the West. He explains how a homogenised secular space was imagined for Indians by intersection of various attributive identities. Lakshman details to Priscilla about the various aspects of Indian society which reveal the polyphonic voices of India, and how it is defined through identities of caste, class, gender and religion. Tharoor also attracts attention towards the polyglot nature of the Indian society in these lines: "It's worked, Priscilla. We have given passports to a dream, a dream of an extraordinary, polyglot, polychrome, polyconfessional country. Democracy will solve the problems we're having with some disaffected Sikhs in Punjab; and democracy, more of it, is the only answer for the frustrations of India's Muslims too." (Tharoor, 2001, p. 45).

Tharoor uses Ramcharan Gupta's rhetoric, as documented in Randy Digg's notebook, to expose how manipulated historical narratives and Indo-nostalgia are wielded to incite communal tensions for political gain. Gupta's inflammatory claims about the Ramjanmabhoomi issue and his condemnation of the government's neutrality reflect the dangerous exploitation of religious sentiments to mobilise support for certain ideologies. In response to their commitment of rebuilding the temple, bricks from every village were brought to be taken to Ayodhya. He also spoke of the excitement of young men and women making flag, placards and posters, and preparing 'pennants in holy saffron' on the eve of the great procession to Ayodhya. He intermingled his narration with a volley of abuses against the Muslims.

Ramcharan Gupta critiques the loyalty of Muslims in India, accusing them of being more loyal to Islam than to the country itself. He argues that Muslims, despite being converts from Hinduism, refuse to acknowledge their ancestral roots, instead identifying as descendants of foreign conquerors. He states, "You have to understand their mentality. They are more loyal to a foreign religion, Islam, than to India. They are all converts from the Hindu faith of their ancestors, but they refuse to acknowledge this, pretending instead that they are all descended from conquerors from Arabia and Persia or Samarkand" (Tharoor, 2001, pp. 54–55). Gupta further expresses regret over the partition of India, claiming that it led to the creation of "Accused Pakistan" and laments the loss of significant cultural sites in the new country, including Harappa, Mohenjo-daro, and the Indus River, which he argues are now in a foreign land: "The ancient sites of Harappa and Mohenjo daro, the world's oldest university of Takshashila, even the river Indus from which India gets its name…are all now in a foreign country" (Tharoor, 2001, p. 55).

Unlike typical postmodern texts, *Riot* fluidly traverses time, space, and authenticity, employing myth to delineate Indo-nostalgic narratives. The multifaceted nature of culture, as seen in the social constructs of traditions and institutions, emerges as dynamic and historically contingent. The residual elements of the past are selectively retained, reinterpreted, and incorporated through subtle acts of inclusion, exclusion, dilution, and projection, reflecting the complex interplay of historical continuity and change.

Through the death of Priscilla and the ensuing chaos in Zalilgarh, *Riot* underscores the human cost of communal violence, aligning with Gyanendra Pandey's (1990) assertion that communalism is a modern construct used for political gain. Moreover, the novel's exploration of silence as complicity deepens its critique. By presenting silence as a passive endorsement of violence, Tharoor challenges the ethical responsibility of individuals and institutions to actively resist communal ideologies, which in turn parallels with Hannah Arendt's (1963) concept of the "banality of evil," where inaction perpetuates systemic violence. This multiplicity resonates with Partha Chatterjee's (1993) argument that Indian nationalism often suppresses subaltern voices to construct a unified identity, thereby neglecting the realities of pluralism and diversity.

Conclusion

By presenting the fragmented stories of characters like Priscilla Hart, Lakshman, and Ramcharan, the novel exposes the fractures within Indian nationalism and subtly critiques nationalism, secularism, and communalism in India through its polyphonic narrative. The novel calls for a reimagining of nationhood that embraces diversity as its core strength, echoing Amartya Sen's (2005) view that India's heterodoxy and tradition of dialogue are central to its cultural identity. Tharoor's depiction of a nation defined by "multiple truths and multiple realities" (Tharoor, 2007, p. 46) suggests that any attempt to impose uniformity undermines the essence of Indian pluralism. It critiques communalism as a politically orchestrated phenomenon rather than a natural consequence of religious differences and subverts attempts of homogenising tendencies of nationalism by emphasising that India's identity is inherently polyphonic.

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ഭൂതകാലത്ത് നടന്ന സംഭവവികാസങ്ങളുടെ പരമ്പരയാണ് രേഖപ്പെടുത്തപ്പെടുന്ന ചരിത്രം. ഈ സംഭവപരമ്പരകളുടെ വസ്തുനിഷ്ഠമായ ആഖ്യാനമായും ചരിത്രത്തെ പരിഗണിക്കാം. കഴിഞ്ഞ കാലത്ത് അരങ്ങേറിയ സംഭവങ്ങൾ കോർത്തിണക്കി ചരിത്രകാരൻ ലിഖിതരൂപത്തിൽ ചരിത്രനിർമ്മിതിക്ക് മുതിരുന്ന രചനാസമ്പ്രദായത്തെ ഹിസ്റ്റോറിയോഗ്രഫി (Historiography) എന്നു വിശേഷിപ്പിക്കുന്നു. സാങ്കേതികമായ ചരിത്രരചനാസമ്പ്രദായത്തോടൊപ്പം കലാസാഹിത്യരൂപങ്ങളിലൂടെയും ചരിത്രത്തിന്റെ പുനർനിർമ്മാണങ്ങൾ യഥേഷ്ടം നടന്നുവരുന്നുണ്ട്. ചരിത്രത്തിന്റെ രേഖപ്പെടുത്തൽ എഴുത്തിലൂടെ മാത്രമല്ല സാധ്യമാകുന്നത്. ഓഡിയോഗ്രഫി, വീഡിയോഗ്രഫി മുതലായ രൂപത്തിലും ചരിത്രം രേഖപ്പെടുത്തി വരുന്നു. ഭാവിയെ കരുതി ചരിത്രവസ്തുതകളുടെ സമാഹരണം എന്ന രീതിയിൽ സൂക്ഷിച്ചു വരുന്ന ഓഡിയോ, വീഡിയോ ഡോക്യുമെന്റേഷന്റെ പരിധിയിലേക്ക് സിനിമ എന്ന ദൃശ്യവിനിമയമാധ്യമത്തെ കൂടി ഉൾപ്പെടുത്താവുന്നതാണ്. ചരിത്രസിനിമകൾ (Historic Cinema) എന്നു വിളിക്കുന്ന ഇത്തരം സിനിമകളിലൂടെ വസ്തുതാപരമായ ചരിത്രാവിഷ്ക്കാരം സാധ്യമാണോ എന്ന് ഹിസ്റ്റോറിയോഫോട്ടിയുടെ (Historiophtoy) സൈദ്ധാന്തിക സങ്കേതങ്ങളെ അടിസ്ഥാനമാക്കി പരിശോധിക്കുന്നു. ഇതിനായി അമൽ നീരദ് സംവിധാനം ചെയ്ത് 2014ൽ പുറത്തിറങ്ങിയ 'ഇയ്യോബിന്റെ പുസ്തകം' എന്ന സിനിമയെ വിശദപഠനത്തിനായി തിരഞ്ഞെടുത്തിരിക്കുന്നു.

താക്കോൽവാക്കുകൾ: ഹിസ്റ്റോറിയോഫോട്ടി (Historiophtoy), ഹിസ്റ്റോറിയോഗ്രഫി (Historiography), ചരിത്രം (History), ചരിത്രസിനിമ (Historic Cinema).

ആമുഖം

ചലച്ചിത്രത്തിന് നമ്മുടെ ജീവിതത്തിലും സംസ്കാരത്തിലുമുള്ള സ്വാധീനം വളരെ വലുതാണ്. ഒരു സംഘടിത കലയായ സിനിമ ഒരാഖ്യാനമാധ്യമമാണ്. സാങ്കേതിക വികാസത്തിന് അനുസൃതമായി നിരന്തരം പുതുക്കപ്പെടുന്ന മാധ്യമമാണിത്. സാഹിത്യത്തിൽ വാക്കുകളുടെ ചിട്ടയായ കോർത്തിണക്കലുകൾകൊണ്ട് ഭാഷയിലൂടെ സാധ്യമാകുന്ന ആശയ സമ്മേളന പ്രക്രിയ സിനിമയിൽ ശബ്ദ സംഭാഷണങ്ങളുടെ അകമ്പടിയോടെ ചലനചിത്രങ്ങൾ വെള്ളിത്തിരയിൽ (Silver Screen) സാധ്യമാക്കുന്നു.

ഒരു കലാസൃഷ്ടി പ്രത്യേക കാലഘട്ടത്തിലെ ജീവിത മൂല്യങ്ങളുടെയും സാമൂഹിക രാഷ്ട്രീയ സവിശേഷതകളുടെയും ഭാവനയ്ക്കപ്പുറത്തുള്ള ജീവിതാവിഷ്കാരം കൂടിയാണ്. ഇതിന്റെ അടിസ്ഥാനത്തിൽ പരിശോധിച്ചാൽ ഓരോ ദേശത്തും കാലത്തും ഇറങ്ങുന്ന സിനിമകൾ അവിടുത്തെ ചരിത്രത്തിന്റെ കൂടി അടയാളപ്പെടുത്തലാണ്. അവതരിപ്പിക്കപ്പെടുന്ന പ്രമേയപശ്ചാത്തലത്തിൽ സിനിമയെ വ്യത്യസ്ത ഴാനറുകളായി തരം തിരിക്കാവുന്നതാണ്. ഇതിൽ പ്പെടുന്നവയാണ് ചരിത്രസിനിമകളും. ചരിത്രത്തിന്റെ പുനരാവിഷ്കാരമായി പുറത്തിറക്കുന്ന ഇത്തരം സിനിമകൾ പ്രേക്ഷകരുമായി വളരെ വേഗം സംവദിക്കാൻ കഴിയുന്ന ഒരു ചരിത്രാഖ്യാനരീതിയാണ്.

ചരിത്ര സിനിമകളാൽ സമ്പന്നമാണ് മലയാള സിനിമാ മേഖല. നവമലയാളസിനിമയിലേക്ക് വന്നാൽ റിയലിസ്റ്റിക് സിനിമാ നിർമ്മാണ രീതിയിൽ കഥ പറയുന്ന നവ മലയാളസിനിമകൾ ആഖ്യാനപരമായും പ്രമേയപരമായും നടത്തി വരുന്ന പരീക്ഷണങ്ങൾ വൈവിധ്യമാർന്ന ചലച്ചിത്രാഖ്യാനശൈലികൾ രൂപപ്പെടുത്തിയെടുത്തു. ഇത്തരം നവീന ശ്രമങ്ങൾ പീരിയഡ് ചലച്ചിത്ര

ങ്ങളുടെ (Period Films) ആവിഷ്കാരത്തിലും പ്രകടമാണ്. ഏതാണ്ട് കഴിഞ്ഞ പത്ത് വർഷക്കാലത്തിനിടയ്ക്ക് മലയാളത്തിൽ പുറത്തിറങ്ങിയ നവസിനിമകളുടെ ഗണത്തിൽപ്പെടുത്താവുന്ന ചലച്ചിത്രങ്ങൾക്ക് സാമൂഹികവും രാഷ്ട്രീയവും ചരിത്രപരവുമായ അടിത്തറയ്ക്കുള്ളിൽ നിന്നുകൊണ്ട് പ്രമേയ സ്വീകരണം നടത്താൻ സാധിച്ചിട്ടുണ്ട്. ഒരു കലാരൂപമെന്ന നിലയിൽ അവ സമൂഹത്തെ പ്രതിഫലിപ്പിക്കുന്നു. സ്വാഭാവികമായും പോയ കാലസംഭവങ്ങളും ഈ ശ്രേണിയിൽപ്പെടുന്നു.

ലോകത്താകമാനം കലാവിഷ്കാരങ്ങളെയും അതിൽ അടങ്ങിയിരിക്കുന്ന സാമൂഹികസാംസ്കാരിക ചരിത്ര ബന്ധത്തെയുംകുറിച്ചുള്ള പഠനങ്ങൾ വികസിച്ചുകൊണ്ടിരിക്കുകയാണ്. ചരിത്രാവിഷ്കാരത്തിന്റെ നവീന ജ്ഞാനനിർമ്മിതി മേഖലകളുടെ കണ്ടെത്തലുകളുമായി ബന്ധപ്പെട്ട് നടത്തിയ അന്വേഷണമാണ് സിനിമയെ ചരിത്രാഖ്യാനത്തിന്റെയും അതിന്റെ പഠനത്തിന്റെയും മേഖലകളിലേക്ക് എത്തിച്ചത്. ലിഖിതരൂപത്തിലുള്ള രേഖകളിൽനിന്ന് ഡോക്യുമെന്ററിയുടെ മാതൃകയിൽ സൂക്ഷിക്കുന്ന ചരിത്ര ഏടുകളുടെ ആധികാരികത കൂടുതലാണ്. മാത്രമല്ല ഇവയിൽ നിന്നുള്ള ചരിത്രോല്പാദനത്തിലെ അനായാസത ചരിത്രപഠനം കൂടുതൽ ലളിതമാക്കി. രൂപപരമായി ഡോക്യുമെന്ററിയോട് അടുത്തുനിൽക്കുന്ന മറ്റ് കലാരൂപങ്ങളുടെ സാധ്യതകളും കൂടുതൽ അന്വേഷിക്കപ്പെട്ടു. അതോടെ തീർത്തും വിനോദമാധ്യമമായ സിനിമ ചരിത്രപഠനത്തിനുള്ള ഉപാധിയായും പരിഗണിച്ചു തുടങ്ങി. എന്നാൽ ഡോക്യുമെന്ററിപോലെ വസ്തുനിഷ്ഠമായ ആഖ്യാനരീതി പിന്തുടരാത്ത സിനിമയിലൂടെയുള്ള ചരിത്രാവിഷ്കാരത്തിന്റെ ആധികാരികത സംബന്ധിച്ച ആശയക്കുഴപ്പം നിലനിൽക്കെ സിനിമയെ ഹിസ്റ്റോറിയോഫോട്ടി (Historiophtoy) എന്ന ആവിഷ്കാര സങ്കേതവുമായി ബന്ധപ്പെടുത്തി വിലയിരുത്താനാരംഭിച്ചു. ഈ അന്വേഷണത്തിന്റെ പരിണിതഫലമാണ് സിനിമയെ മുൻനിർത്തിയുള്ള ചരിത്രപഠനം.

നവമലയാളസിനിമകളെ കേന്ദ്രീകരിച്ച് പഠനം നടത്തുന്ന ഈ പ്രബന്ധത്തിൽ ഒരു ദൃശ്യവിനിമയ മാധ്യമമായ സിനിമയെ മുൻനിർത്തി എപ്രകാരം ചരിത്രാവിഷ്ക്കാരം സാധ്യമാക്കുന്നുവെന്നു പരിശോധിക്കാം.

ചരിത്രം (History)

ഭൂതകാലത്തെ വിസ്മരിച്ചുകൊണ്ടുള്ള ജീവിതം മനുഷ്യന് സാധ്യമല്ല. അവന്റെ വർത്തമാനകാല ജീവിതത്തിൽനിന്ന് ഭാവിയിലേക്കുള്ള തുടർച്ചയിൽ ചാലകശക്തിയായി വർത്തിക്കുന്നത് ഭൂതകാലത്തിൽനിന്നും സ്വീകരിക്കുന്ന ഊർജ്ജമാണ്. അതുകൊണ്ടുതന്നെ ഭൂതകാലത്തിൽനിന്ന് വർത്തമാന കാലത്തിലൂടെ ഭാവിയിലേക്ക് നീളുന്ന സംഭവപരമ്പരകളുടെ ശാസ്ത്രീയവും വസ്തുനിഷ്ഠവുമായ ആഖ്യാനമാണ് ചരിത്രം എന്നുപറയാം. ചരിത്രത്തിന് സമാനമായി ആഗംലേയഭാഷയിൽ ഹിസ്റ്ററി (History) എന്ന വാക്കാണ് ഉപയോഗിക്കുന്നത്. അന്വേഷണം എന്നർത്ഥം വരുന്ന ഹിസ്റ്റോറിയ (Historia) എന്ന ഗ്രീക്ക് പദത്തിൽ നിന്നാണ് ഹിസ്റ്ററി (History) എന്ന പദം രൂപപ്പെട്ടത്. പിന്നീട് പ്രതിപാദനം എന്നൊരർത്ഥം കൂടി ഇതിന് ലഭിച്ചു.

ചരിത്രം എന്ന സംജ്ഞയെ രണ്ട് അർത്ഥതലത്തിൽ പരിഗണിക്കാം. പരിവർത്തന രഹിതമായ ഭൂതകാലത്തിന്റെ വസ്തുനിഷ്ഠവിവരണങ്ങൾ തെളിവുകളുടെ അടിസ്ഥാനത്തിൽ കൃത്യമായ കാലഗണനയുള്ള സംഭവപരമ്പരകളായി രേഖപ്പെടുത്തുന്നതിനെ ചരിത്രം എന്നു വിളിക്കാം. ഇങ്ങനെ രേഖപ്പെടുത്തിയ ചരിത്രത്തിന്റെ വിശദപഠനവും പുനരന്വേഷണവും ഉൾപ്പെടുന്ന അക്കാദമിക വിഷയമായും ചരിത്രത്തെ നിർവചിക്കാം. ചരിത്രത്തെ ഒരു അക്കാദമിക പഠനവിഭാഗമായി വികസിപ്പിക്കുന്നതിന് ചരിത്രകാരന്മാർ ഉപയോഗിക്കുന്ന രീതികളെക്കുറിച്ചുള്ള പഠനമാണ് ഹിസ്റ്റോറിയോഗ്രഫി (Historiography). മനുഷ്യന്റെ അനുഭവപാഠങ്ങളെ സമഗ്രതയുടെ അടിസ്ഥാനത്തിൽ അടുക്കും ചിട്ടയോടും കൂടി അവതരിപ്പിക്കുന്ന ചരിത്രത്തിന് രണ്ട് തലങ്ങളുണ്ട്. ഒന്നാമതായി ചരിത്രവസ്തുക്കൾ ശേഖരിക്കുക. ശേഖരിച്ച വസ്തുക്കളെ ആവിഷ്കരിക്കുക എന്നത് രണ്ടാമത്തേത്. വസ്തുതകളെ സത്യസന്ധമായി ശേഖരിക്കുന്ന ആദ്യഭാഗത്ത് ചരിത്രം ഒരു ശാസ്ത്രവും, ആവിഷ്കരണം എന്ന രണ്ടാമത്തെ ഭാഗത്ത് കലയുമായി മാറുന്നു. ചരിത്രനിർമ്മാണ കലയെന്നു വിശേഷിപ്പിക്കാവുന്ന ആഖ്യാന തലം ചരിത്രത്തിന്റെ രേഖപ്പെടുത്തലുമായി ബന്ധപ്പെട്ടു നിൽക്കുന്നു. ചരിത്രാഖ്യാനം ലിഖിത രൂപത്തിൽ മാത്രമല്ല സാധ്യമാകുന്നത് ദൃശ്യരൂപത്തിലും സാധ്യമാണ്.

ഹിസ്റ്റോറിയോഫോട്ടി (Historiophtoy)

അമേരിക്കൻ ഹിസ്റ്റോറിക്കൽ പ്രൊഫസറും പണ്ഡിതനുമായ റോബർട്ട് എ. റോസെൻസ്റ്റോൺ (Robert A. Rosenstone) ദി അമേരിക്കൻ ഹിസ്റ്റോറിക്കൽ റിവ്യൂവിൽ (The American Historical Review) പ്രസിദ്ധീകരിച്ച History in images/ History in words: Reflections on the possibiltiy of really putting history onto Film എന്ന പണ്ഡിതോചിതമായ ലേഖനത്തിലാണ് സിനിമയിൽ ചരിത്രാവിഷ്ക്കാരത്തിന്റെ വസ്തു

താപരമായ പഠന പദ്ധതി മുന്നോട്ടുവെച്ചത്. തുടർന്ന് ചരിത്രകാരനും സാഹിത്യനിരൂപകനുമായ ഹെയ്ഡൻ വൈറ്റ് (Hayden White) 1988ൽ ദി അമേരിക്കൻ ഹിസ്റ്റോറിക്കൽ റിവ്യൂവിൽ റോബർട്ട് എ. റോസെൻസ്റ്റോണിന്റെ ഈ ആശയ പദ്ധതിയ്ക്കുള്ള മറുപടി എന്ന തരത്തിൽ ഹിസ്റ്റോറിയോഗ്രഫിയും എന്ന ലേഖനത്തിൽ ചരിത്രത്തിന്റെ പ്രതിനിധാനം ദൃശ്യങ്ങളിലും ചലച്ചിത്ര വ്യവഹാരങ്ങളിലും വിവരിക്കുന്നതിന് ഹിസ്റ്റോറിയോഫോട്ടി (Historiophtoy) എന്ന പദം ഉപയോഗിച്ചു. അദ്ദേഹത്തിന്റെ അഭിപ്രായപ്രകാരം വാക്യചിത്രങ്ങളിലും രേഖാമൂലമുള്ള പ്രഭാഷണങ്ങളിലും ചരിത്രത്തെ പ്രതിനിധീകരിക്കുന്ന ഹിസ്റ്റോറിയോഗ്രഫിയിൽ (Hayden White,1988:1193) നിന്ന് വ്യത്യസ്തമാണ് ഹിസ്റ്റോറിയോഫോട്ടി. സിനിമയിലൂടെയുള്ള ചരിത്ര പരിവേക്ഷണത്തിന്റെ വിവരണം എന്നനിലയ്ക്ക് സൃഷ്ടിച്ച ഹിസ്റ്റോറിയോഫോട്ടി ചരിത്രത്തെ പ്രതിനിധാനം ചെയ്യുന്നതാണെന്നും അതിനെക്കുറിച്ചുള്ള നമ്മുടെ ചിന്ത ദൃശ്യ ചിത്രങ്ങളിലും ചലച്ചിത്ര സംഭാഷണങ്ങളിലുമാണെന്നും അദ്ദേഹം വ്യക്തമാക്കി (Hayden White,1988:1193).

വർത്തമാനകാലത്ത് അരങ്ങേറുന്ന പല രാഷ്ട്രീയ പ്രശ്നങ്ങളുടെയും പൊതുയിടപെടലുകളുടെയും യാഥാർത്ഥ്യം മനസ്സിലാക്കാൻ ഇത്തരം പ്രശ്നങ്ങളുടെ ആരംഭമറിയേണ്ടത് അനിവാര്യമാണ്. ഇങ്ങനെയുള്ള അന്വേഷണങ്ങളുടെ ഏറ്റവും വലിയ പരിമിതി എഴുതപ്പെട്ട ചരിത്ര രചനാരീതിയേക്കാൾ ആധികാരികത ഡോക്യുമെന്ററി രൂപത്തിൽ സൂക്ഷിക്കുന്ന തെളിവുകൾക്കാണ്. എന്നാൽ ചരിത്ര ഡോക്യുമെന്ററി തെളിവുകളുടെ അഭാവം ഡോക്യുമെന്ററിയോട് ഏറ്റവും അടുത്ത് നിൽക്കുന്ന മറ്റ് ഉപാദാനമാതൃകകളെ ആശ്രയിക്കേണ്ട സാഹചര്യം ഉണ്ടാക്കുന്നു. ഇവിടെയാണ് ഫീച്ചർ ഫിലിമുകളെ ചരിത്രാഖ്യാന മാതൃകയായി പ്രയോജനപ്പെടുത്താം എന്ന ആശയം ഉടലെടുക്കുന്നത്. അതോടെ രാഷ്ട്രീയസിനിമ, ചരിത്രസിനിമ എന്നീ ഴാനറുകളിലുള്ള ചലച്ചിത്രങ്ങളും ചരിത്രപഠനത്തിന് ആധാരമാകുന്നു.

സാധാരണ സിനിമയ്ക്ക് പുറത്തുള്ള ഒരു അച്ചടക്കമനുസരിച്ചാണ് ചരിത്രസിനിമ നിർവചിക്കപ്പെട്ടിരിക്കുന്നത്. അപരിചിതമായ ഒരു സിനിമ കാണുന്ന പ്രേക്ഷകന് മിനിറ്റുകൾക്കുള്ളിൽ അത് ഏത് രീതിയിൽ നിർമ്മിച്ചിരിക്കുന്ന ചലച്ചിത്രമാണെന്ന് മനസ്സിലാക്കാൻ കഴിയും. അത്തരത്തിൽ സമീപിച്ചാൽ ചിത്രം നടക്കുന്നത് അവ്യക്തമായ ഒരു ഭൂതകാലത്തിലല്ല ചരിത്രമായി കണക്കാക്കപ്പെടുന്ന ഒരു ഭൂതകാലത്തിലാണ്. ഏതൊരു രാജ്യത്തിന്റെയും ഏതൊരു സമൂഹത്തിന്റെയും സാംസ്കാരിക പൈതൃകത്തിൽ ആ സമൂഹത്തിലെ എല്ലാ അംഗങ്ങൾക്കും അറിയാവുന്ന തീയതികളും സംഭവങ്ങളും കഥാപാത്രങ്ങളും ഉൾപ്പെടുന്നുണ്ട്. സിനിമ ഈ സംഭവങ്ങളുടെ ചരിത്രപരമായ സ്വഭാവം വ്യക്തമായി ഊന്നിപറയേണ്ടതുണ്ട്. ഈ രീതിയിൽ ഓരോ ചരിത്രസിനിമയും ഒരു രാജ്യത്തിന്റെ അടിസ്ഥാന ചരിത്ര സംസ്കാരത്തിന്റെ സൂചകമാണ്. ചരിത്രരേഖകളെയോ ഡോക്യുമെന്ററികളെയോ അടിസ്ഥാനപ്പെടുത്തി ചരിത്രസിനിമകൾ ചരിത്രത്തിന്റെ പുനരാഖ്യാനമാണ് നിർവ്വഹിക്കുന്നത്. പ്രതിനിധീകരിക്കുന്ന കാലഘട്ടത്തിലെ ദൃശ്യങ്ങളും വസ്തുങ്ങളും ചിത്രങ്ങളുമെല്ലാം വസ്തുതാപരമായി അതിലൂടെ പുനർനിർമ്മിക്കപ്പെടുന്നു.

സിനിമയുടെ പ്രമേയതലവുമായി ബന്ധപ്പെട്ട് കടന്നുവരുന്ന ചരിത്ര സംഭവങ്ങളോ, ചരിത്രപുരുഷൻമാരുടെ ജീവിതമോ, അവരുമായി ബന്ധപ്പെട്ട ചരിത്രത്തിന്റെ പ്രധാനപ്പെട്ട ഏടുകളോ ആണ് സിനിമയുടെ പിറവിക്ക് കാരണമെങ്കിൽ അത്തരം ചലച്ചിത്രങ്ങളെ ചരിത്ര സിനിമ എന്ന വിഭാഗത്തിൽപ്പെടുത്താം. ചരിത്രസിനിമയുടെ നിർമ്മാണത്തിൽ യാഥാർത്ഥ്യത്തിന് കോട്ടം തട്ടാത്ത രീതിയിൽ വസ്തുതാപരമായി ദൃശ്യങ്ങളുടെ തുടർച്ചയായ സന്നിവേശത്തിലൂടെ ചരിത്രബോധം ഒട്ടും നഷ്ടപ്പെടാതെ പ്രേക്ഷകരിൽ എത്തിക്കുകയാണ് ചരിത്രസിനിമകളുടെ ലക്ഷ്യം. ചരിത്രസിനിമയിൽ യാഥാർത്ഥ്യം അതേപടി ക്യാമറയ്ക്ക് വിഷയമാവുകയില്ല. മറിച്ച് സിനിമയെ കാഴ്ചയുടെ കലയാക്കി മാറ്റുന്ന ചേരുവകളെയെല്ലാം ഉൾക്കൊള്ളിച്ച് എന്നാൽ ആസ്വാദകരിൽ തെറ്റായ ചരിത്രബോധം നൽകാത്ത രീതിയിൽ ആവിഷ്ക്കരിക്കുകയാണ് ചെയ്യുന്നത്.

ഹിസ്റ്റോറിയോഫോട്ടി എന്ന നിലയിൽ സിനിമ

ഭൂതകാലസംഭവങ്ങളുടെ പ്രതിനിധാനമായ സിനിമകളെ മുൻനിർത്തിയുള്ള ചരിത്രവിശകലനത്തിന് ശ്രമിച്ചാൽ ചരിത്രസിനിമകൾ ചരിത്രത്തിന്റെ പുനരാവിഷ്ക്കാരമാണ്. ഈ പുനരവതരണം കഥ (Story), ചരിത്രം (History), ഭാവന (Imagination) എന്നിവയുടെ സങ്കലനരൂപമാണ്. കൃത്യമായി എഴുതി തയ്യാറാക്കിയ ഒരു തിരക്കഥക്കുള്ളിൽ നിർമ്മിക്കപ്പെടുന്ന ചരിത്രസിനിമയുടെ കഥാപശ്ചാത്തലം പോയകാലത്തിൽ അരങ്ങേറിയ ഏതെങ്കിലും പ്രശ്നങ്ങളോ സംഭവങ്ങളോ ആകാം. സ്വാഭാവികമായും കഥയ്ക്ക് അടിസ്ഥാനമായ ചരിത്രപശ്ചാത്തലത്തെ മുൻനിർത്തി നിർമ്മിക്കപ്പെടുന്ന തിരക്കഥയുടെ കഥാതന്തുവിന് അടിസ്ഥാനവും അതേ ചരിത്രപ്രശ്നം തന്നെയാണ്. ഈ ചരിത്രസംഭവം തെളിവുകളുടെ അടിസ്ഥാനത്തിൽ വസ്തുതാപരമായി വിലയിരു

ത്തി എഴുതി സൂക്ഷിച്ചിരിക്കുന്ന ചരിത്രരേഖകളെ (Textual History) ആധാരമാക്കി നിർമ്മിക്കുന്ന വയാണ്. അടിസ്ഥാനപരമായി ആസ്വാദനോപാധിയായി പരിഗണിക്കാവുന്ന സിനിമ എന്ന മാധ്യമം അതിന്റെ എല്ലാ നിർമ്മാണച്ചേരുവകളും ഉൾപ്പെടുത്തിയാണ് ചരിത്രാഖ്യാനം നിർവഹിക്കുന്നത്. ഫിക്ഷന്റെ മാതൃകയിൽ ചരിത്രാവിഷ്കാരം നിർവഹിക്കുന്ന സിനിമകൾ വൈകാരികമായാണ് പ്രേക്ഷകരുമായി സംവദിക്കുന്നത്.

ജീവിതത്തിന്റെ ആവിഷ്കാരമായ കലാ സാഹിത്യരൂപങ്ങൾ വളർന്നു വികസിച്ചത് ദേശകാല ചരിത്രങ്ങളോട് ചേർന്നുനിന്നാണ്. സിനിമയും ഇതിൽനിന്നു വ്യത്യസ്തമല്ല. എന്നാൽ നഗരവൽക്കരണവും, മാധ്യമ സാക്ഷരതയും രൂപപ്പെടുത്തിയെടുത്ത നവസിനിമയുടെ വിപണന തന്ത്രങ്ങളിൽ പ്രധാനമാണ് പ്രാദേശികത, ദേശീയചരിത്രം എന്നിവ. ചിത്രീകരിക്കപ്പെടുന്ന ദേശീയത, ചരിത്രം എന്നീ പ്രമേയങ്ങൾ മലയാള സിനിമയുടെ ആദ്യകാലം മുതൽക്കേ ഉണ്ട്. പക്ഷെ ചരിത്രസിനിമ എന്ന മേഖല പ്രസക്തമാകുന്നത് നവ മലയാളസിനിമകളിലൂടെയാണ്. റിയലിസ്റ്റിക്കായി കഥ പറയുന്ന നവമലയാളസിനിമകളുടെ എല്ലാ പ്രത്യേകതകളും ഉൾക്കൊണ്ട് പുറത്തിറങ്ങുന്ന നവചരിത്രസിനിമകൾ ചരിത്രാഖ്യാനത്തിന്റെ പുതുവഴികൾ തുറന്നു നൽകുന്നവയാണ്.

നവസിനിമയുടെ അവതരണ തന്ത്രത്തിൽപ്പെടുന്ന ചരിത്രാവിഷ്കാര മാതൃകകളുടെ ഘടനാപരമായ പ്രത്യേകതകൾ പീരിയഡ് സിനിമാ വിഭാഗത്തിൽപ്പെടുത്താവുന്ന ഇയ്യോബിന്റെ പുസ്തകം എന്ന സിനിമയെ കേന്ദ്രീകരിച്ച് താഴെക്കാണുന്ന രീതിയിൽ വിലയിരുത്താം.

ഇയ്യോബിന്റെ പുസ്തകം

2014 നവംബറിൽ പുറത്തിറങ്ങിയ ഒരു മലയാളം പീരിയഡ് ത്രില്ലർ ചലച്ചിത്രമാണ് ഇയ്യോബിന്റെ പുസ്തകം. അമൽ നീരദ് സംവിധാനവും ഛായാഗ്രഹണവും നിർവഹിച്ചിരിക്കുന്ന ചിത്രത്തിന്റെ കഥ ഗോപൻ ചിദംബരവും തിരക്കഥ ഗോപൻ ചിദംബരവും ശ്യാം പുഷ്കരനും ചേർന്നും തയ്യാറാക്കിയിരിക്കുന്നു. ഇരുപതാം നൂറ്റാണ്ടിന്റെ മധ്യത്തിൽ ഇടുക്കിയുടെ ഹൈറേഞ്ചിൽ നടന്ന ചരിത്രസംഭവ പരമ്പരകളിലൂടെയാണ് ചിത്രം മുന്നേറുന്നത്. 1976ലെ അടിയന്തരാവസ്ഥക്കാലത്തു നിന്നുകൊണ്ട് ഒരു കമ്മ്യൂണിസ്റ്റ് സഖാവ് തന്റെ ജീവിതാനുഭവങ്ങൾ പറയുന്ന രീതിയിൽ ഫ്ലാഷ് ബാക്ക് (Flashback) സങ്കേതത്തിലാണ് ചിത്രം അവതരിപ്പിച്ചിരിക്കുന്നത്.

കഥ ആരംഭിക്കുന്നത് 1900ങ്ങളിലെ ബ്രിട്ടീഷ് ഭരണത്തിൻ കീഴിലായിരുന്ന ഇന്ത്യയിലെ മൂന്നാർ പരിസരത്തിലാണ്. ബ്രിട്ടീഷുകാരന്റെ തണുത്ത ജീവിതത്തിന് ഉന്മേഷം പകർന്ന തേയിലയുടെ വരവ് ചൈനയിൽ നിന്ന് ഇല്ലാതായപ്പോൾ അവർ സ്വന്തം നിലയ്ക്ക് തേയില ഉത്പാദിപ്പിക്കാൻ മാർഗങ്ങൾ ആരാഞ്ഞു. അങ്ങനെ ആസാമിലും നീലഗിരിയിലും മൂന്നാറിലും തേയിലകൃഷിക്കായി സായിപ്പന്മാർ എത്തിത്തുടങ്ങി. (ഇയ്യോബിന്റെ പുസ്തകം, 2014:5.02) ഇതിനെത്തുടർന്നാണ് ഹാരിസൺ സായിപ്പ് എന്ന വ്യവസായി മൂന്നാറിലേക്ക് വരുന്നത്. തേയിലകൃഷിക്കായി കാടും റോഡും വെട്ടിത്തെളിക്കാനും ആവശ്യമായ തൊഴിലാളികളെ അടിമാലി, തേനി എന്നിവിടങ്ങളിലെ ആദിവാസി ഊരുകളിൽ നിന്നും എത്തിച്ച് കങ്കാണിമാർ സായിപ്പിനുവേണ്ടി അവരെക്കൊണ്ട് പണിയെടുപ്പിച്ചു. തന്റെ ജോലികൾ ചെയ്യാൻ ഹാരിസൺ കൂറുള്ള ഒരു നാട്ടുകാരനെ കണ്ടെത്തി. അദ്ദേഹമാണ് ഇയ്യോബ്. പതിയെ ഇയ്യോബ് സായിപ്പിന്റെ വിശ്വസ്തനായി മാറുന്നു. സായിപ്പിന്റെ നിർദ്ദേശപ്രകാരം ഇയ്യോബ് അന്നമ്മ എന്ന സ്ത്രീയെ വിവാഹം കഴിക്കുന്നു. മൂന്നാർ മട്ടുത്ത് ഹാരിസണിന്റെ മദാമ്മ തിരിച്ച് ഇംഗ്ലണ്ടിലേക്ക് പോയപ്പോൾ തോടന്മാർ ഊരു വിലക്കിയ കഴലി മദാമ്മയുടെ വേഷംകെട്ടി സായിപ്പിനൊപ്പം കഴിയുന്നു. ഒന്നാം ലോകമഹായുദ്ധകാലത്ത് ഹാരിസൺ സായിപ്പിന്റെ തേയിലപ്പെട്ടികൾ ലക്ഷ്യസ്ഥാനത്ത് എത്താത്തതിനെ തുടർന്ന് ബിസിനസ്സിൽ നഷ്ടം നേരിട്ട സായിപ്പ് ബ്രിട്ടനിലേക്ക് മടങ്ങിപ്പോകുന്നു. എന്നാൽ മടക്കയാത്രയിൽ കൊച്ചിയിൽ വച്ച് മരണമടഞ്ഞ സായിപ്പ് തന്റെ സ്വത്ത് ജനിക്കാൻ പോകുന്ന കുഞ്ഞിന്റെ പേരിൽ മരണപത്രം തയ്യാറാക്കിയിരുന്നു. എല്ലാം അറിഞ്ഞ ഇയ്യോബ് തിരികെ മൂന്നാറിലെത്തിയത് ഉറച്ച ചില തീരുമാനങ്ങളോടെയായിരുന്നു. കഴലിയെ ഇറക്കിവിട്ട് സ്വത്തെല്ലാം സ്വന്തമാക്കി തൊഴിലാളിയായ ഇയ്യോബ് മുതലാളിയാകുന്ന കഥ അവിടെ തുടങ്ങുന്നു.

ഇയ്യോബിന് മൂന്നു മക്കൾ. ദിമിത്രി, ഐവാൻ, അലോഷി. സായിപ്പ് തന്റെ ഇഷ്ടനോവലിലെ കഥാപാത്രങ്ങളുടെ പേര് വിളിച്ച ഇയ്യോബിന്റെ മക്കളിൽ ആദ്യത്തെ രണ്ടുപേർ അപ്പനെപ്പോലെ കാടത്തം നിറഞ്ഞ സ്വഭാവമുള്ളവരായിരുന്നു. അലോഷി അമ്മയുടെ മകനും. അതുകൊണ്ടുതന്നെ അമ്മയുടെ മരണശേഷം അലോഷി കൊച്ചിയിലേക്ക് നാടുവിടുന്നു. ബ്രിട്ടീഷ് ഇന്ത്യയുടെ റോയൽ നേവിയിൽ ചേർന്ന അലോഷി പിന്നീട് ബ്രിട്ടീഷ് വിരുദ്ധ പ്രവർത്തനങ്ങളിൽ പങ്കെടുത്ത് ജോലി നഷ്ടപ്പെട്ട് തിരികെ കൊച്ചിയിൽ സഖാവ് അലോഷിയായി കപ്പലിറങ്ങുന്നു.

രണ്ടാം ലോക മഹായുദ്ധത്തോടെ വെള്ളക്കാർ മലയിറങ്ങുന്നു. അവർ അഴിച്ചുവച്ച കുപ്പായം കെട്ടി നാടൻ സായിപ്പ് എന്നൊരു പുതിയ വർഗ്ഗം ഉയരുന്നു. 1946ൽ മൂന്നാറിൽ തിരിച്ചെത്തിയ അലോഷിയിൽ അപ്പന്റെയും ചേട്ടന്മാരുടെയും പ്രവൃത്തികൾ നിരാശയുണ്ടാക്കുന്നു. ഇളയ മകന്റെ ജോലി ബ്രിട്ടീഷ് വിരുദ്ധ പ്രവർത്തനത്തിന്റെ ഭാഗമായി നഷ്ടപ്പെട്ടെന്ന വാർത്ത അറിയുന്ന ഇയ്യോബ് അലോഷിയെ വീട്ടിൽ നിന്ന് പുറത്താക്കുന്നു. ശേഷം കഴലിയുടെ മകൾ മാർത്തയെ കണ്ട് തിരികെ വരുമെന്ന് ഉറപ്പുനല്കി ഹൈറേഞ്ച് ഇറങ്ങുന്ന അലോഷിയെ മൂത്ത സഹോദരങ്ങൾ ആക്രമിച്ച് കൊക്കയിലേക്ക് വലിച്ചെറിയുകയാണ്. എന്നാൽ ചെമ്പൻ എന്ന സുഹൃത്ത് അലോഷിയെ രക്ഷപ്പെടുത്തുന്നു. അപ്പന്റെ ആരോഗ്യം ക്ഷയിച്ചുതുടങ്ങിയപ്പോൾ മൂത്തമക്കൾ ഭരണം ഏറ്റെടുക്കുകയും ഇയ്യോബ് വേണ്ടെന്ന വച്ച അങ്കൂർ റാവുത്തറുമായുള്ള കച്ചവടം ദിമിത്രിയും ഐവാനും ചെയ്യാൻ തീരുമാനിക്കുകയും ചെയ്യതോടെ ഇയ്യോബും രണ്ട് മക്കളും തമ്മിൽ സ്വരചേർച്ചയില്ലാതാകുന്നു. അതോടെ മക്കൾ ഇയ്യോബിനെ കൊല്ലാൻ ശ്രമം നടത്തുകയും മൂത്തമകൻ ദിമിത്രിയെ രണ്ടാമത്തെ മകൻ ഐവാനും ദിമിത്രിയുടെ ഭാര്യ റാഹേലും ചേർന്ന് കൊല്ലപ്പെടുത്തുകയും ചെയ്യുന്നു.

രക്ഷപ്പെട്ടു തിരിച്ചെത്തിയ അലോഷി ഇയ്യോബിനെ അവിടെ നിന്ന് രക്ഷപ്പെടുത്തി സുരക്ഷിത കേന്ദ്രത്തിലേക്ക് മാറ്റുന്നു. അവിടെവച്ച് ഇയ്യോബ് അലോഷിയോട് ഹാരിസൺ സാഹിബിന്റെ മരണപത്രത്തെക്കുറിച്ച് വെളിപ്പെടുത്തുന്നു. എല്ലാം നഷ്ടപ്പെടുമെന്നുറപ്പിച്ച് ഐവാൻ അങ്കൂർ റാവുത്തറുമായി ചേർന്ന് ഇയ്യോബിനെയും അലോഷിയെയും കഴലിയുടെ മകൾ മാർത്തയെയും വകവരുത്താൻ കാട്ടുകയറുന്നു. ഇതേ അവസരത്തിൽ റാഹേൽ റാവുത്തറുമായി ഒരുടമ്പടി വയ്ക്കുന്നു. അതുപ്രകാരം പോയവരാരും തിരികെ വരാതിരുന്നാൽ സകല സ്വത്തും റാഹേലും, റാവുത്തറിന് സ്വന്തമാകും. സിനിമയുടെ ഒടുവിൽ ഐവാനും, ഇയ്യോബും, റാവുത്തറും മരിക്കുകയും റഹേൽ ആത്മഹത്യ ചെയ്യുകയും ചെയ്യുന്നു. പിന്നീടാരും അലോഷിയെയും മാർത്തയെയും മൂന്നാറിൽ കണ്ടിട്ടില്ല.

സിനിമ അവസാനിക്കുന്നത് 1957ൽ കേരളത്തിലെ ആദ്യത്തെ കമ്മ്യൂണിസ്റ്റ് മന്ത്രിസഭ അധികാരത്തിൽ എത്തുന്നതും മൂന്നാറിലെ അക്കാലത്തെ കമ്മ്യൂണിസ്റ്റ് വക്താക്കളായ റോസമ്മ പൊന്നൂസ് ദേവികുളത്ത് നിന്നും നിയമസഭയിലേക്കും പി. ടി. പൊന്നൂസ് ലോകസഭയിലേക്കും എത്തുന്ന രാഷ്ട്രീയ സാമൂഹിക പരിതസ്ഥിതിയിലാണ്. സിനിമയ്ക്ക് ഒടുവിൽ സിനിമയുടെ കഥ പറഞ്ഞ സഖാവിനെ പോലീസ് അറസ്റ്റ് ചെയ്യുന്നു. അലോഷിയെപ്പോലുള്ള ലോകം സഞ്ചരിച്ച, സഹിഷ്ണതയുള്ള മനുഷ്യർ ഒരുനാൾ ഈ നാടിനെ മാറ്റിമറിക്കും (ഇയ്യോബിന്റെ പുസ്തകം, 2014: 02.29.42') എന്ന വാചകത്തിൽ ഇയ്യോബിന്റെ പുസ്തകം എന്ന ചലച്ചിത്രം പൂർണമാവുന്നു.

ഇയ്യോബിന്റെ പുസ്തകത്തിലെ ചരിത്രപശ്ചാത്തലം

അമൽ നീരദ് ഛായഗ്രഹണവും സംവിധാനവും നിർവഹിച്ചിരിക്കുന്ന ഇയ്യോബിന്റെ പുസ്തകത്തിലെ ഓരോ ദൃശ്യവും കണ്ണുകൾക്ക് വിരുന്നാവുന്ന അപൂർവ്വമായ ഒരു ചരിത്രാവിഷ്കാരമാണ്. ഇയ്യോബിന്റെ പുസ്തകത്തിലെ കഥാ പരിസരം ഇടുക്കിയാണ്. കേരളത്തിന്റെ ഹൈറേഞ്ച് മേഖലയായ മൂന്നാർ, വാഗമൺ, ദേവികുളം പ്രദേശങ്ങളുടെ ചരിത്രഭൂമിക ആവിഷ്ക്കരിച്ചിരിക്കുന്ന ഈ സിനിമയെ ഒരു പീരിയഡ് ചലച്ചിത്രവിഭാഗത്തിൽ ഉൾപ്പെടുത്താം. ഇരുപതാം നൂറ്റാണ്ടിന്റെ തുടക്കം മുതൽ ബ്രിട്ടീഷ് കൊളോണിയൽ അധികാര സ്ഥാപനങ്ങളുടെ പ്രവർത്തനവും, തേയിലത്തോട്ട വികസനവും, അടിമപ്പണിയും, കങ്കാണിമാരുടെ വളർച്ചയും, സ്വാതന്ത്ര്യാനന്തരം വെളുത്ത സായിപ്പന്മാർ നാടൻ സായിപ്പന്മാർക്ക് വഴിമാറുന്നതുമെല്ലാം ഒരു കുടുംബ ചരിത്രത്തോടൊപ്പം പ്രതിപാദിക്കപ്പെടുന്നു. കൊളോണിയൽ അധിനിവേശം, സ്വാതന്ത്ര്യസമരം, നാവിക കലാപം, തൊഴിലാളി പ്രസ്ഥാനത്തിന്റെ ഉദയം തുടങ്ങി 1975ലെ അടിയന്തരാവസ്ഥ വരെയുള്ളതാണ് ഈ ചിത്രത്തിൽ അവതരിപ്പിച്ചിരിക്കുന്ന കാലഘട്ടം.

പശ്ചിമഘട്ടമലനിരകളിൽ കയ്യേറ്റം നടത്തി വാണിജ്യമൂല്യമുള്ള തേയിലക്കൃഷി ചെയ്യുന്ന, മൂന്നാർ കാട്ടിലെ മരംവെട്ടി കച്ചവടം നടത്തുന്ന, കാട്ടുമൃഗങ്ങളെ വേട്ടയാടി പിടിക്കുന്ന, തുടങ്ങി പ്രകൃതിക്കുമേലുള്ള മനുഷ്യന്റെ കയ്യേറ്റത്തിന്റെ ചരിത്രം കൂടി ചിത്രം പറയുന്നു. പ്രകൃതിയിൽ നിന്നും മനുഷ്യാധ്വാനം കൊണ്ട് രൂപപ്പെട്ട, ഇടുക്കി ഉണ്ടായ കഥയാണ് ഇയ്യോബിന്റെ പുസ്തകത്തിലെ പ്രമേയം. സിനിമയിൽ പരാമർശിക്കപ്പെടുന്ന മൂന്നാർ പ്രദേശം ഉൾപ്പെടുന്ന ഇടുക്കിയുടെ ചരിത്ര പശ്ചാത്തലത്തിൽ ആവിഷ്കരിച്ചിരിക്കുന്ന സംഭവപരമ്പരകളുടെയും ചരിത്രസൂചനകളുടെയും നിജസ്ഥിതി ഇടുക്കിയുടെ എഴുതപ്പെട്ട ചരിത്രം മുൻനിർത്തി ഇനി പരിശോധിക്കാം.

ഇടുക്കി ചരിത്രപശ്ചാത്തലം

ഇടുക്കിയുടെ ചരിത്രം സമ്മിശ്രമാണ്. തർക്കമേഖലയായ മലയോരമണ്ണിന്റെ രാഷ്ട്രീയചരിത്രത്തിന് നൂറ്റാണ്ടുകളുടെ പഴക്കമുണ്ട്. ശിലായുഗവും, മഹാശിലായുഗവും, ഗോത്രസംസ്കാരവും, തമിഴ്

ജീവിതവും, ബ്രിട്ടീഷ് അധിനിവേശവും, തോട്ട വളർച്ചയും, കർഷക കുടിയേറ്റവുമെല്ലാം ചേർന്ന് രൂപപ്പെടുത്തിയ സങ്കര സംസ്കാരം മലയോര മണ്ണിന്റെ ചരിത്ര പശ്ചാത്തലം രൂപപ്പെടുത്തി. ഇയ്യോബിന്റെ പുസ്തകത്തിലെ പ്രമേയ പരിസരം പ്രാധാന്യം നൽകുന്നത് ആദിവാസി ഗോത്രസമൂഹങ്ങൾ, തോട്ടവ്യവസായം, ബ്രിട്ടീഷ് അധിനിവേശം മുതലായ മേഖലകളെ കേന്ദ്രീകരിച്ചാണ്.

പശ്ചിമഘട്ട മല നിരകളിലും താഴ്വാരങ്ങളിലും ആരംഭിക്കുന്നതാണ് ഗോത്രജീവിതചരിത്രം. മണ്ണും മനുഷ്യനും പ്രകൃതിയും തമ്മിലുള്ള സുദീർഘമായ ബന്ധത്തിന്റെ കഥയാണ് ആദിവാസി ഗോത്രജീവിതം അടയാളപ്പെടുത്തുന്നത്. ഇടുക്കിയിലുള്ള ഗോത്രവിഭാഗങ്ങൾ ശിലായുഗ സംസ്കാരത്തിനുശേഷം അയൽനാട്ടുകളിൽ നിന്നും കിഴക്കൻ മലയോരത്തെത്തി താമസമാക്കിയവരാണ് (രാജീവ് കെ.ടി., 2007:27). കുടിയേറ്റത്തിന്റെ ഈ ചരിത്രം ബ്രിട്ടീഷ് ഭരണകാലത്ത് തമിഴ്നാട്ടിലെ വിവിധ ആദിവാസി ഊരുകളിൽ നിന്നും തോട്ടം മേഖലയിൽ പണി എടുക്കുന്നതിനായി മൂന്നാറിലെത്തി സ്ഥിര താമസമാക്കിയതു വരെ നീളുന്നു.

കോളനിവാഴ്ചയുടെയും അധിനിവേശത്തിന്റെയും ഭാഗമായി ഇംഗ്ലീഷുകാർ പത്തൊമ്പതാം നൂറ്റാണ്ടിൽ കാപ്പിയും തേയിലയും കൃഷി ചെയ്യാൻ തുടങ്ങിയതോടെ ഹൈറേഞ്ചിലെ തോട്ട വ്യവസായചരിത്രം ആരംഭിക്കുന്നു (രാജീവ് കെ.ടി., 2007:71). തേയില സ്വന്തമായി ഉത്പാദിപ്പിക്കുന്നതിനുള്ള മാർഗ്ഗങ്ങൾ തിരഞ്ഞ ഈസ്റ്റ് ഇന്ത്യ കമ്പനിയ്ക്ക് മൂന്നാർ, പീരുമേട് പ്രദേശങ്ങളിലെ വ്യവസായ സാധ്യതകൾ മനസിലായി. അതോടെ വ്യാവസായികാടിസ്ഥാനത്തിൽ തേയിലക്കൃഷി ആരംഭിക്കാനുള്ള ശ്രമങ്ങൾ തുടങ്ങി. ഇരുപതാം നൂറ്റാണ്ടിന്റെ തുടക്കം മുതലാണ് തോട്ടവ്യവസായം കൂടുതൽ കരുത്താർജ്ജിക്കുന്നത്. അതോടെ മൂന്നാറിലെ കണ്ണൻദേവൻ മലനിരകളിലും പീരുമേട് പ്രദേശങ്ങളിലുമായി വ്യാപകമായി തേയിലക്കൃഷി ആരംഭിച്ചു. ഇതിന്റെ ഭാഗമായി റോഡും മറ്റു വികസനങ്ങളും മൂന്നാറിൽ എത്തിക്കാൻ ശ്രമിച്ചപ്പോൾ നാട്ടുകാർക്കും പതിന്മടങ്ങ് ചൂഷണങ്ങൾ അനുഭവിക്കേണ്ടിവന്നു. തേയിലക്കൃഷിക്കായി തൊഴിലാളികളെ വേണ്ടിവന്നപ്പോൾ തമിഴ് മേഖലയിലെ ആദിവാസി ഗോത്രവിഭാഗങ്ങളെ വൻതോതിൽ മൂന്നാറിലേക്ക് എത്തിച്ചു. തോട്ടം തൊഴിലാളികളെ മാട്ടുകളെപ്പോലെ പണിയെടുപ്പിക്കുവാനും ചൂഷണം ചെയ്യുവാനും മുതലാളിമാർ കങ്കാണിമാരെ ചുമതലപ്പെടുത്തി.

തൊഴിലാളികളുടെ അവകാശ സംരക്ഷണത്തിനായി തൊഴിലാളി സംഘടനകളുടെ നിരന്തര പോരാട്ടഫലമായി സ്വാതന്ത്ര്യാനന്തരമാണ് ട്രേഡ് യൂണിയനുകളുടെ വളർച്ചയും പ്രവർത്തനങ്ങളും ശക്തമാകുന്നത്. റോസമ്മ പുന്നൂസ്, ശങ്കരൻകുട്ടി, പി.എ. ചാണ്ടി, കെ.പി. ശേഖരൻ, പി.ടി. സൈമൺ തുടങ്ങിയവർ സംഘടനയെ ശക്തിപ്പെടുത്താൻ പ്രയത്നിച്ചവരാണ്.

എഴുതപ്പെട്ട ചരിത്രത്തിന്റെയോ, ഉപദാന സാമഗ്രികളുടെയോ, ചരിത്രസാക്ഷികളായ ആവേദകരുടെയോ അടിസ്ഥാനത്തിൽ രൂപപ്പെടുത്തുന്ന ചരിത്ര രചനാമാതൃക തന്നെയാണ് ചരിത്രസിനിമകളുടെ നിർമ്മാണത്തിനും അവലംബമാകുന്നത്. ഇടുക്കിയുടെ ചരിത്രപശ്ചാത്തലം മുൻനിർത്തി ഇയ്യോബിന്റെ പുസ്തകം എന്ന പീരിയഡ് സിനിമയെ തട്ടിച്ചുനോക്കിയാൽ, ഒരേസമയം കലാവിഷ്കാരവും മാധ്യമധർമ്മവും നിർവഹിക്കുന്ന സിനിമയുടെ പ്രമേയപരിസരം ഏച്ചുകെട്ടുകൾ ഒന്നുമില്ലാതെ 1900ങ്ങളിൽ മൂന്നാറിൽ അരങ്ങേറിയ ചരിത്ര സംഭവങ്ങളെ വസ്തുതാപരമായി രേഖപ്പെടുത്തിയിരിക്കുകയാണെന്ന് മനസ്സിലാക്കാം. ഇതിൽ നിന്ന് ചരിത്രത്തെ വീഡിയോ ഓഡിയോ ഡോക്യുമെന്റേഷൻ രൂപത്തിൽ അവതരിപ്പിക്കുന്ന ചരിത്രാഖ്യാന രീതിയായി പരിഗണിക്കുന്ന ഹിസ്റ്റോറിയോഫോർട്ടിയുടെ ഒരു മികച്ച മാതൃകയാണ് സിനിമകൾ, പ്രത്യേകിച്ച് ചരിത്രസിനിമകൾ എന്ന് മനസിലാക്കാം. ചരിത്രപശ്ചാത്തലത്തിൽ പുറത്തിറങ്ങുന്ന ഇത്തരം സിനിമകളിൽ നിന്നും ചലച്ചിത്രം രേഖപ്പെടുത്തിയിരിക്കുന്ന ചരിത്രപശ്ചാത്തലം പുനർനിർമ്മിക്കാൻ കഴിയുന്നു.

സിനിമകളിൽ പ്രമേയപരമായി ആവർത്തിച്ചു വരുന്നത് സ്ഥലപരമായതും, ചരിത്രം, സ്വത്വം, സംസ്കാരം തുടങ്ങിയ കാലപരമായതുമായ പ്രശ്നങ്ങളാണ്. ദേശചരിത്രം പ്രതിപാദിക്കുന്ന സിനിമകളിൽ അവിടുത്തെ പൊതുസ്ഥിതി അവതരിപ്പിക്കാൻ നവചലച്ചിത്രങ്ങൾ പ്രകടമായ രാഷ്ട്രീയ പ്രസ്താവനകളോ, സൂചനകളോ, മുദ്രാവാക്യങ്ങളോ, സൈദ്ധാന്തിക വിശകലനങ്ങളോ, പ്രഭാഷണങ്ങളോ, സാരോപദേശ പ്രഖ്യാപനങ്ങളോ ഒന്നും പ്രയോജനപ്പെടുത്തുന്നില്ല. പകരം പുതുസിനിമയുടെ അവതരണരീതി ജനപ്രിയ ചേരുവകൾക്ക് ഉള്ളിൽ നിന്നുകൊണ്ട് തന്നെ ചരിത്രം പറയുന്നതാണ്.

ഇയ്യോബിന്റെ പുസ്തകം എന്ന ചലച്ചിത്രം സ്വാതന്ത്ര്യപൂർവ്വ മൂന്നാറിന്റെ ചരിത്രത്തോടൊപ്പമുള്ള സഞ്ചാരമാണ്. ബ്രിട്ടീഷ് ഇന്ത്യയുടെ അവസാനാളുകളാണ് കഥാകാലം. സിനിമ ഒരു ദീർഘ കാലയളവിലെ സംഭവങ്ങളിലൂടെയുള്ള ചരിത്രാവിഷ്ക്കാരമാകയാൽ സൂക്ഷ്മ ജീവിതങ്ങളിലല്ല ശ്രദ്ധ കേന്ദ്രീകരിച്ചിരിക്കുന്നത്. മറിച്ച് കഥ നടക്കുന്ന കാലത്തെ ദേശചരിത്രത്തിൽ കേന്ദ്രിതമാണ്.

അതുകൊണ്ടുതന്നെ ചിത്രത്തിൽ പരാമർശിച്ചിരിക്കുന്ന കാലത്ത് ഇടുക്കി എന്ന പേരുള്ള ഒരു ഭരണപ്രദേശത്തിന്റെ ഭാഗമല്ല മൂന്നാർ. പോലീസും ഭരണകൂടവും സമൂഹത്തിന്റെ അധികാരകേന്ദ്രങ്ങളും അടങ്ങിയ ഒരു ഭരണനിർവഹണ വിഭാഗത്തിന്റെ സാമൂഹികവും രാഷ്ട്രീയവുമായ കഥയായിരിക്കെ അവർക്കധീനപ്പെട്ടവരുടെ ഏറെ വിവരിക്കപ്പെടാത്ത ജീവിതവും ചിത്രത്തിൽ അടക്കം ചെയ്തിരിക്കുന്നു.

ഉപസംഹാരം

വിവിധ ജനസമൂഹങ്ങൾക്കിടയിൽ സംരക്ഷിക്കപ്പെടുന്ന ചരിത്രപാരമ്പര്യത്തിന്റെ തുടർച്ചയാണ് വർത്തമാനകാലത്തിൽ അരങ്ങേറുന്ന സംഭവവികാസങ്ങൾ. അതിനാൽ ഒരു സമൂഹത്തിൽ നിലവിലുള്ള പ്രശ്നങ്ങളെക്കുറിച്ചുള്ള പിന്നാമ്പുറചിത്രങ്ങൾ അറിയുന്നതിനും അതിന്റെ ഭാവിയെക്കുറിച്ചുള്ള ഒരു ചിത്രം മനസ്സിലാക്കുന്നതിനും വേണ്ടിയുള്ള ഉപകരണമാണ് ചരിത്രം. ചരിത്രപഠനത്തിന് ഏറ്റവും അനുയോജ്യമായ രീതിയാണ് ചരിത്രത്തിന്റെ ചരിത്രമായ ചരിത്രരചന. വാക്കുകളിലൂടെ നിർമ്മിക്കുവാൻ കഴിയുന്ന ഹിസ്റ്റോറിയോഗ്രഫി (Historiography) രീതിയ്ക്കപ്പുറമാണ് ഓഡിയോഗ്രഫി, വീഡിയോഗ്രഫി രൂപത്തിൽ ഡോക്യുമെന്റേഷൻ ചെയ്യപ്പെടുന്ന ഹിസ്റ്റോറിയോഫോട്ടി (Historiophtoy). ഈ രീതിയോട് സമാനമായി ആവിഷ്കരിക്കപ്പെടുന്ന ചരിത്രസിനിമയെ ആധാരമാക്കിയുള്ള ചരിത്രാഖ്യാനത്തിന്റെയും തുടർപഠനത്തിന്റെയും സാധ്യത മനസിലായതോടെ ചലനചിത്രങ്ങളുടെ ദൃശ്യശബ്ദമികവിൽ സിനിമ സാധ്യമാക്കുന്ന ആവിഷ്കാരമാതൃക പ്രയോജനപ്പെടുത്തി ചരിത്രസിനിമയെ അധികരിച്ച് അക്കാദമികമായി ചരിത്രപഠനങ്ങളാരംഭിച്ചു. അതോടെ ചരിത്രസിനിമകളെ ചരിത്രപഠന മേഖലയിലെ പ്രാഥമിക ഉപാദാന സാമഗ്രിയായി (Primary Source) പ്രയോജനപ്പെടുത്തി വരുന്നു.

സിനിമ എന്ന മാധ്യമത്തെ ഉപയോഗിച്ചുള്ള ചരിത്രപഠനം ഹിസ്റ്റോറിയോഫോട്ടി (Historiophtoy) എന്ന വിശേഷിപ്പിക്കുന്ന സാങ്കേതിക സംജ്ഞയുള്ളിൽപ്പെടുന്നു. പ്രാഥമികമായി സിനിമ ഒരു ദൃശ്യവിനോദമാധ്യമാണ്. സിനിമയുടെ വിവിധ ഴാനറുകളിൽ ഒന്നു മാത്രമായ ചരിത്രസിനിമകൾ പ്രമേയപരമായി ചരിത്രത്തിന്റെ വസ്തുനിഷ്ഠമായ എന്നാൽ സിനിമാറ്റിക് പുനരാഖ്യാനമാണ്.

കുറിപ്പുകൾ

'The representation of history in verbal images and written discourse' (Hayden White, 1988:1193).

'The representation of history and our thoughts about it in visual images and filmic discourse' (Hayden White, 1988:1193).

ഗ്രന്ഥസൂചി

കരുണാകരൻ നായർ ഇ.എം., ഇടുക്കിയുടെ കഥ, നാഷണൽ ബുക്ക് സ്റ്റാൾ, കോട്ടയം, 1974.

ഗോപാലകൃഷ്ണൻ മലയിൻകീഴ്, കേരളം ലോകചരിത്രത്തിലൂടെ, കേരള ഭാഷാ ഇൻസ്റ്റിറ്റ്യൂട്ട് തിരുവനന്തപുരം, 2014.

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സാമൂഹികയാഥാർത്ഥ്യങ്ങളെയും ജീവിതപ്രശ്നങ്ങളെയും തീവ്രതയോടുകൂടി ആവിഷ്കരിക്കാൻ സാധിക്കുന്നു എന്നതിനാൽ ആധുനികതയിൽ നിന്നും വ്യത്യസ്തമായി നാടോടിക്കഥന സമ്പ്രദായങ്ങളും പുരാവൃത്തം, പ്രേതകഥകൾ, നാടോടിവിശ്വാസാചാരങ്ങൾ തുടങ്ങിയ ആഖ്യാനമാതൃകകളും സമകാലിക കഥാകൃത്തുക്കൾ സവിശേഷമായി ഉപയോഗപ്പെടുത്തുന്നതായി കാണാം. കേരളത്തിന്റെ സമ്പന്നമായ നാടോടിസംസ്കാരത്തിൽ നിന്നുള്ള ദത്തങ്ങളെ, പുരാവൃത്തങ്ങളെയും ഐതീഹ്യങ്ങളെയും പ്രാദേശിക വിശ്വാസാചാരങ്ങളെയുമെല്ലാം പുതിയ അർത്ഥതലങ്ങൾ നൽകിയും പുനർനിർമ്മിച്ചും സമകാലികകഥാകൃത്തുക്കൾ പുതിയകാലത്തിന്റെ രാഷ്ട്രീയ സാമൂഹിക സാംസ്കാരിക പ്രശ്നങ്ങളെയും, പലകാലങ്ങളിൽ പുലർത്തിപ്പോന്നിട്ടുള്ള ഇരട്ടത്താപ്പുകളെയും സൂക്ഷ്മമായി അടയാളപ്പെടുത്തുന്നു.

'സ്വകാര്യമായതെല്ലാം രാഷ്ട്രീയം കൂടിയാണ്' (The Personal is Political) (Carol, 2006:1) എന്ന് സ്ത്രീവാദത്തിന്റെ രണ്ടാം തരംഗവുമായി ബന്ധപ്പെട്ടുയർന്നു വന്ന രാഷ്ട്രീയ മുദ്രാവാക്യത്തെ അതിന്റെ മുഴുവൻ സത്തയുമുൾക്കൊണ്ട വിധത്തിൽ, നിത്യേന ഇടപെടുന്ന ജീവിതപരിസരങ്ങളിലും ശീലങ്ങളിലും നോട്ടങ്ങളിലുമടക്കം പ്രായോഗികമാക്കുന്ന പുതുകാലകഥകളുടെ പഠനങ്ങൾ അതിനാൽ തന്നെ സമകാലിക സാമൂഹികപരിസരത്തിൽ പുതിയൊരു ജ്ഞാനോല്പാദനത്തിനുള്ള സാധ്യതകൂടിയൊരുക്കുന്നു. അത്തരത്തിൽ മുദ്ദുൽ വി എമ്മിന്റെ കുളെ എന്ന കഥയെ മുൻനിർത്തി, സമകാലികമായ രാഷ്ട്രീയ/ സാമൂഹിക സമസ്യകളെ പ്രധാനമായി കീഴാളപ്രതിരോധത്തെയും ജാതിയുടെ രാഷ്ട്രീയത്തെയും ഒപ്പം ഉത്തരാധുനികഭാവുകത്വത്തിന്റെ ആഖ്യാനസവിശേഷതകളെയും ഒരു പ്രാദേശികവിശ്വാസത്തിന്റെ പശ്ചാത്തലത്തിൽ എപ്രകാരം അടയാളപ്പെടുത്തിയിരിക്കുന്നു എന്ന് വിശകലനം ചെയ്യാനാണ് ഈ പഠനത്തിലൂടെ ശ്രമിക്കുന്നത്.

താക്കോൽ വാക്കുകൾ: ആഖ്യാനതന്ത്രം (Narrative Tool), നാടോടി സംസ്കാരം (Folklore), ലിംഗപദവി (Gender), കീഴാളപ്രതിരോധം, പുരാവൃത്തം (Myth)

ആമുഖം

നൂതനമായ പ്രമേയപരീക്ഷണങ്ങളാലും ആഖ്യാനതന്ത്രങ്ങളാലും നിരന്തരം പരിഷ്കരിക്കപ്പെട്ടുകൊണ്ടിരിക്കുന്ന ഒന്നാണ് സമകാലിക ചെറുകഥയുടെ ഭൂമിക. സ്ത്രീ, ദളിത്, പരിസ്ഥിതി, തുടങ്ങി ഇരുപത്തൊന്നാം നൂറ്റാണ്ടിലെ ചെറുകഥ കൈകാര്യം ചെയ്തിരുന്ന പ്രധാന വിഷയങ്ങളെ കുറേക്കൂടി സൂക്ഷ്മവും സമഗ്രവുമായി അവതരിപ്പിക്കാൻ പുതുതലമുറയിലെ എഴുത്തുകാർ ശ്രമിക്കുന്നു. കേവല ജിജ്ഞാസയ്ക്കപ്പുറത്ത് സൂക്ഷ്മമായൊരു സംവാദ മണ്ഡലത്തിന്റെ സാധ്യത കൂടി പുതിയ കഥകൾ സൃഷ്ടിച്ചെടുക്കുന്നുണ്ട്. പറഞ്ഞുപോയ കാര്യങ്ങളുടെ ആവർത്തനമായിട്ടല്ല, കൈകാര്യം ചെയ്യുന്ന വിഷയത്തിലെ, അതുവരെ ആഖ്യാനം ചെയ്യപ്പെട്ടിട്ടില്ലാത്ത പ്രശ്നമേഖലകളെക്കൂടി തുറന്നുകാട്ടി സൂക്ഷ്മഗ്രാഹിയായി (Microscopic) അവതരിപ്പിക്കാനുള്ള ശ്രമങ്ങളാണ് അവർ നടത്തുന്നത്.

ഇരുപത്തൊന്നാംനൂറ്റാണ്ടിൽ ചെറുകഥ ചർച്ച ചെയ്ത പ്രധാന വിഷയങ്ങൾ തന്നെയാണ് പുതുകാല എഴുത്തുകാരും വിഷയമാക്കുന്നതെന്ന് സാമാന്യമായി പറയാമെങ്കിലും പ്രമേയത്തെ ഓരോ എഴുത്തുകാരും കൈകാര്യം ചെയ്യുന്നതിലെ നൂതനത്വം, ആഖ്യാനത്തിൽ പുലർത്തുന്ന പരീക്ഷണങ്ങൾ, ഭാഷയിലും രൂപശില്പത്തിലുമുള്ള സൂക്ഷ്മത എന്നിവ കഥയെയും എഴുത്തുകാരെയും വ്യതിരിക്തമാക്കുന്നു. കേവലമായ അവതരണരീതി എന്നതിൽ നിന്നു മാറി സവിശേഷമായ വ്യവ

ഹാര മണ്ഡലങ്ങളെക്കൂടി ഉൾക്കൊള്ളുന്ന ഒന്നായി ആഖ്യാനം മാറുന്ന പുതിയകാലത്ത് സ്ഥലത്തേയും കാലത്തേയും കൃത്യമായി ആവിഷ്കരിക്കുന്നതിനുള്ള വ്യത്യസ്ത ഉപാധികളും പലതരത്തിലുള്ള ആഖ്യാനതന്ത്രങ്ങളും വീക്ഷ ണസ്ഥാനങ്ങളും (Point of view), ചിത്രകല, സിനിമ തുടങ്ങിയ ഇതര കലാരൂപങ്ങളിൽ നിന്ന് സ്വീകരിക്കുന്ന നൂതന സങ്കേതങ്ങളുമെല്ലാം ചെറുകഥ സ്വീകരിക്കുന്നതായി കാണാം.

അതിൽത്തന്നെ മുഖ്യധാരയിലുള്ള ആഖ്യാനസാധ്യതകളെ അപേക്ഷിച്ച് ജനങ്ങളെ വളരെയധികം സ്വാധീനിക്കുന്ന, സാമൂഹിക യാഥാർത്ഥ്യങ്ങളെയും ജീവിതപ്രശ്നങ്ങളെയും തീവ്രതയോടുകൂടി ആവിഷ്കരിക്കാൻ സാധിക്കുന്ന നാടോടിക്കഥന സമ്പ്രദായങ്ങളും പുരാവൃത്തം, പ്രേതകഥകൾ, നാടോടിവിശ്വാസാചാരങ്ങൾ തുടങ്ങിയ ആഖ്യാനമാതൃകകളും സമകാലിക കഥാകൃത്തുക്കൾ സവിശേഷമായി ഉപയോഗപ്പെടുത്തുന്നു എന്നത് ശ്രദ്ധേയമാണ്. കേരളത്തിന്റെ സമ്പന്നമായ നാടോടിസംസ്കാരത്തിൽ (Folk Culture) നിന്നുള്ള ദത്തങ്ങളെ, പുരാവൃത്തങ്ങളെയും ഐതീഹ്യങ്ങളെയും പ്രാദേശിക വിശ്വാസാചാരങ്ങളെയുമെല്ലാം പുതിയ അർത്ഥതലങ്ങൾ നൽകിയും പുനർനിർമ്മിച്ചും സമകാലിക കഥാകൃത്തുക്കൾ പുതിയകാലത്തിലേക്ക് വിനിമയം ചെയ്യുന്നുണ്ട്.

ഉറക്കെപ്പറയുക, മുദ്രാവാക്യശൈലി പിന്തുടരുക തുടങ്ങിയ സാമ്പ്രദായികരീതികളിൽ നിന്നുമാറി ഇത്തരം നാടോടിക്കഥനരീതികളെ സ്വീകരിച്ച്, പറയാനുള്ള കാര്യങ്ങളെ സൂക്ഷ്മവും സ്വഭാവികവുമായി അവതരിപ്പിക്കാനുള്ള ശ്രമങ്ങളാണ് പുതുകാലകഥകളിലുള്ളത്. കേരളത്തിലെ പൊതുമണ്ഡലം കാലാകാലങ്ങളായി പുലർത്തിപ്പോരുന്ന പലതരം ഇരട്ടത്താപ്പുകളെ – ജാതി, ലിംഗപദവി (Gender), കുടുംബം, വിവാഹം തുടങ്ങിയവയുമായി ബന്ധപ്പെട്ട് ചോദ്യം ചെയ്യുകയും പ്രശ്നവത്കരിക്കുകയും ചെയ്യുകയെന്ന രാഷ്ട്രീയപ്രവർത്തനം കൂടി സമകാലിക ചെറുകഥ സാധ്യമാക്കുന്നുണ്ട്. ഇത്തരത്തിൽ മനുഷ്യരുടെ ഒറ്റപ്പെടലുകളെയും വേദനകളെയും, തിരസ്കാരങ്ങളെയും പ്രതിരോധങ്ങളെയും, സാധാരണ ജീവിതാവസ്ഥകളെയും, അതിലെ അസാധാരണത്വങ്ങളെയും സൂക്ഷ്മമായി അടയാളപ്പെടുത്തുന്ന സമകാലിക ചെറുകഥാകൃത്തുക്കളിൽ ശ്രദ്ധേയനാണ് മുദ്ദൽ വി. എം. എഴുത്തിനെ രാഷ്ട്രീയപ്രവർത്തനമായി കാണാനും തന്റെ കഥകളിലൂടെ മനുഷ്യ പക്ഷത്തിന്റെ രാഷ്ട്രീയത്തെ കൃത്യമായി അടയാളപ്പെടുത്താനും അദ്ദേഹം ശ്രമിക്കുന്നു.

ക്യാപ്ചെറിങ് വെള്ളംതെളിപ്പൻ, നീലനഖം, മരിച്ച വീട്ടിലെ മൂന്നുപേർ, എഡി, കുളെ തുടങ്ങിയ കഥകളിലൂടെയും അർബൻ നാടോടിക്കവിതകൾ എന്ന കവിതാപരമ്പരയിലൂടെയും മലയാള സാഹിത്യത്തിൽ തന്റേതായ ഇടം സൃഷ്ടിച്ച മുദ്ദൽ വി എമ്മിന്റെ കുളെ (മുദ്ദൽ, 2022:44) എന്ന കഥയെ മുൻനിർത്തി, സമകാലികമായ രാഷ്ട്രീയ/ സാമൂഹിക സമസ്യകളെ – പ്രധാനമായി കീഴാള പ്രതിരോധത്തെയും ജാതിയുടെ രാഷ്ട്രീയത്തെയും ഒപ്പം ഉത്തരാധുനിക ഭാവുകത്വത്തിന്റെ ആഖ്യാന സവിശേഷതകളെയും ഒരു പ്രാദേശികവിശ്വാസത്തിന്റെ പശ്ചാത്തലൽ എപ്രകാരം അടയാളപ്പെടുത്തിയിരിക്കുന്നു എന്ന് വിശകലനം ചെയ്യാനാണ് ഈ പഠനത്തിലൂടെ ശ്രമി ക്കുന്നത്.

നാടോടിവിജ്ഞാനത്തിന്റെ ദത്തങ്ങളെ സ്വീകരിച്ചുകൊണ്ട് സമകാലിക സമൂഹത്തിലെ കീഴാള പ്രതിരോധത്തിന്റെ സംവാദമണ്ഡലങ്ങളെ അടയാളപ്പെടുത്താനുള്ള ശ്രമങ്ങൾ എല്ലാക്കാലത്തും സാഹിത്യത്തിൽ ഉണ്ടായിട്ടുണ്ട്. മിത്തുകളെയും യക്ഷിക്കഥകളെയും ചില പ്രത്യേക പ്രദേശങ്ങളുമായി ബന്ധപ്പെട്ട വിശ്വാസങ്ങളെയും മറ്റും സമകാലിക സന്ദർഭത്തിന് യോജിച്ച വിധത്തിൽ പുനരാഖ്യാനം ചെയ്യപ്പെടുമ്പോൾ ജാതി, മതം, ലിംഗം തുടങ്ങിയ നവസാമൂഹികതയുടെ രാഷ്ട്രീയ ബോധ്യങ്ങളെ സങ്കീർണതകളൊഴിവാക്കി ലളിത സമവാക്യത്തിൽ വായനക്കാരിലെക്കെത്തിക്കാൻ എഴുത്തുകാരന് സാധിക്കുന്നു. വി. എം ദേവദാസ്, അംബികാസുതൻ മാങ്ങാട്, സന്തോഷ് ഏച്ചിക്കാനം, എസ് ഹരീഷ്, പി. വി ഷാജികുമാർ, അഖിൽ കെ, യമ, തുടങ്ങി നിരവധിയായ ഉത്തരാധുനിക എഴുത്തുകാർ നാടോടിസംസ്കാരത്തിന്റെ ആഖ്യാനസാധ്യതകളെയും കീഴാള പ്രതിരോധങ്ങളെയും പലവിധത്തിൽ തങ്ങളുടെ കഥകളിൽ ഉപയോഗപ്പെടു ത്തിയിട്ടുണ്ട്. കേരളീയ പൊതുസമൂഹത്തിന്റെ പ്രശ്നപരിസരങ്ങളെയും, രാഷ്ട്രീയ/ സാംസ്കാരിക സമസ്യകളെയും തുറന്നുകാട്ടാനുള്ള ശ്രമങ്ങളാണ് ആ കഥകളെല്ലാം തന്നെ ലക്ഷ്യം വെച്ചിട്ടുള്ളതും.

ഉത്തരകേരളത്തിൽ പ്രചാരത്തിലുള്ള 'പ്രേതക്കല്യാണം' എന്ന ആചാരത്തെ മുൻനിർത്തി രചിക്കപ്പെട്ട 'കുളെ' എന്ന കഥയിൽ കേരളത്തിന്റെ സംവാദമണ്ഡലത്തിൽ കീഴാള ഭാവുകത്വത്തിന്റെ യഥാർത്ഥ നിലയെന്താണെന്നും കുടുംബം, വിവാഹം മുതലായ സാമൂഹികസ്ഥാപനങ്ങളുമായി ബന്ധപ്പെട്ട് അതെങ്ങനെ നിലകൊള്ളുന്നുവെന്നും സവിശേഷമായ സാംസ്കാരികഭാവുകത്വം എന്നനിലയിൽ നാമുയർത്തിപ്പിടിക്കുന്ന പുരോഗമന മുഖംമൂടികളോടുള്ള പ്രതിരോധശ്രമങ്ങൾ യഥാർത്ഥത്തിൽ സാധ്യമാക്കപ്പെടുന്നത് എങ്ങനെയാണെന്നുമുള്ള അന്വേഷണങ്ങളാണ് നടക്കുന്നത്.

കുളെ എന്ന തുളു വാക്കിന് പ്രേതം എന്നാണർത്ഥം (https://tuludictionary.in/ dictionary/cgibin/ web/frame.html). വിവാ ഹത്തിന് മുമ്പ് മരിച്ചു പോയ ആൺകുട്ടിയെയും പെൺകുട്ടിയെയും അവർക്ക് വിവാഹപ്രായമെത്തുന്ന സമയം കണക്കാക്കി സങ്കല്പികമായി ചേർത്തുനിർത്തി വിവാഹം കഴിപ്പിക്കുന്ന, അതിലൂടെ അവരുടെ ആത്മാക്കളെ സ്വാന്തനിപ്പിക്കുന്ന ചടങ്ങിനെയാണ് പ്രേതക്കല്യാണം എന്ന് പറയുന്നത്. കാസറഗോഡ് ജില്ലയിൽ കർണ്ണാടകത്തോട് ചേർന്നുകിടക്കുന്ന ഭാഗങ്ങളിൽ ഇപ്പോഴും ഇത്തരം പ്രേതവിവാഹങ്ങൾ നടത്തപ്പെടുന്നുണ്ട്. അവിവാഹിതരായി മരിച്ചു പോയവർ പിന്നീട് നാടിനോ കുടുംബത്തിനോ ദോഷങ്ങളൊന്നും ഉണ്ടാക്കാതിരിക്കാൻ സാധാരണ കല്യാണങ്ങൾ പോലെതന്നെ രണ്ടു കുടുംബം ആലോചിച്ചുറപ്പിച്ച് എല്ലാ ചടങ്ങുകളോടും കൂടിയാണ് പ്രേതവിവാഹവും നടത്തു ന്നത്.

കീഴാളഭാവനയുമായി ബന്ധപ്പെട്ട് പൊതുവെ സാഹിത്യത്തിൽ സജീവമായി ഉപയോഗിക്കപ്പെടുന്നവയാണ് പരലോകം, പ്രേതാത്മാക്കൾ തുടങ്ങിയ സങ്കേതങ്ങൾ. ടോണി മോറിസന്റെയും മറ്റും രചനകളിൽ2, കഥയിൽ നിർണായകമായ ഇടപെടൽ നടത്തുന്നവരായി മരിച്ചവരുടെ ആത്മാക്കൾ പ്രത്യക്ഷപ്പെടുന്നുണ്ട്. മലയാളത്തിൽ ഇത്തരമൊരാഖ്യാനതന്ത്രം ഫലപ്രദമായി ഉപയോഗപ്പെടുത്തിയ എഴുത്തുകാരനാണ് സി. അയ്യപ്പൻ. പ്രേതവും മനുഷ്യരും പ്രതികാരവും ഇടകലർന്ന ഒരുലോകമാണ് അയ്യപ്പൻ കഥകളുടെ ഭൂമിക. ജീവിച്ചിരിക്കെ തങ്ങൾക്ക് നേരിടേണ്ടി വന്ന അന്യായങ്ങൾക്കെതിരെ മരണശേഷം പ്രേതമായി വന്ന് പ്രതികാരം ചെയ്യുന്നവരാണ് അതിലെ കഥാപാത്രങ്ങൾ. അദ്ദേഹത്തിന്റെ പ്രേതഭാഷണം, കാവൽബ്ഭൂതം, ഭൂതബലി തുടങ്ങിയ കഥകളിലെല്ലാം ഇത്തരത്തിൽ പ്രേതലോകത്തിന്റെയോ ആത്മാവിന്റെയോ സാന്നിധ്യം കാണാനാവുമെങ്കിലും ഇതിൽനിന്നു വ്യത്യസ്ത മാണ് കുളെയിൽ കാണപ്പെടുന്ന പ്രേതസാന്നിധ്യം. അവിടെ നേരിടുന്ന അന്യായങ്ങൾക്കെതിരെ പ്രതികരിക്കുകയെന്ന ദൗത്യം നിർവഹി ക്കാൻ ആരും മരണപ്പെടുകയോ പ്രേതമായി മടങ്ങി വരികയോ ചെയ്യുന്നില്ല. അവിടെ പ്രേതമെന്നത്, തന്നെ വിവാഹം കഴിപ്പിക്കാൻ അനിയന്റെ സ്വപ്നങ്ങളിൽ വന്ന് ഭയപ്പെടുത്തുന്നൊരു ഓർമയും അമ്പിളിപ്പൂവിന്റെ ഏലുകൾ പോലെ തളിർത്ത വിരലുകൾ നീട്ടി സ്നേഹ ത്തോടെ തൊടാനായുന്ന സാന്നിധ്യവും ആണ്.

പതിനാലാംവയസ്സിൽ കപ്പണക്കെട്ടിലെ വെള്ളക്കെട്ടിൽ വീണുമരിച്ച രാജീവൻ നായരും മുടിയിൽ പറ്റിപ്പിടിച്ച അമ്പിളിപ്പൂവുകളോടെ പതിമൂന്നാംവയസ്സിൽ പ്ലാന്റേഷനിലെ പറങ്കിമാവിന്റെ കൊമ്പിൽ തൂങ്ങിമരിച്ച ഇരിയ കരിങ്കുട്ടി കോളനിയിലെ സ്കൂൾവിദ്യാർത്ഥിയായ ബീനയുമാണ് കുളെയിലെ രണ്ട് പ്രേതസാന്നിധ്യങ്ങൾ. എങ്കിലും അവരിരുവരും കഥയുടെ ഒഴുക്കിനൊപ്പം നിശബ്ദമായി ഒഴുകിനീങ്ങുന്നുവെന്നല്ലാതെ നേരിട്ട് കഥയിൽ ഇടപെടുകയോ കഥാഗതിയെ സ്വാധീനിക്കുകയോ തകിടംമറിക്കുകയോ ചെയ്യുന്നില്ല. എന്നാൽ ആദ്യാവസാനം കഥയിൽ തങ്ങളുടെ സാന്നിധ്യമറിയി ക്കുകയും ചെയ്യുന്നുണ്ട്.

മരണശേഷം ഇരുപത്തിനാലുകൊല്ലം കഴിഞ്ഞുള്ള രാജീവന്റെ പ്രേതവിവാഹമാണ് യഥാർത്ഥത്തിൽ കുളെ എന്ന കഥയുടെ ഇതിവൃത്തം. ആലോചന, നിശ്ചയം, (പ്രേത)കല്യാ ണം3 എന്നിങ്ങനെ മൂന്നുഭാഗങ്ങളായി കഥയെ തിരിച്ചിട്ടുണ്ട്. മൂന്നുഭാഗങ്ങളും കൃത്യമായി കേരളീയ പൊതുബോധത്തിൽ സജീവമായി നിലനിൽക്കുന്ന, ആചരിച്ചുപോരുന്ന സവർണ യുക്തികളെയും ബോധ്യങ്ങളെയും അടയാളപ്പെടുത്തുകയും ചോദ്യംചെയ്യുകയും ചെയ്യുന്നുണ്ട്. അനാവശ്യമായൊരു വാക്കോ സന്ദർഭമോ ഇല്ലാതെ, ഒരിടത്തും അഴിഞ്ഞുപോവാതെ ആദ്യം മുതൽ അവസാനം വരെ കഥാഘടനയുടെ കയ്യടക്കം സൂക്ഷിക്കാൻ എഴുത്തുകാരൻ സാധിച്ചിരിക്കുന്നു.

1. ആലോചന

ആലോചന എന്ന ഒന്നാംഭാഗം പേര് സൂചിപ്പിക്കും പോലെ രാജീവന്റെ കല്യാണാലോചനയെ കുറിച്ചാണ് പറയുന്നത്. 'തന്നെ കട്ടിലോടെ പൊക്കിയെടുത്ത്, ഇരുട്ടിൽ കോടയുടെ മറമായാത്ത കാരക്കുഴിച്ചാലിന്റെ തണുപ്പിലേക്ക് വലിച്ചെറിഞ്ഞ് 'എനിക്ക് പെണ്ണിനെ ഉണ്ടാക്കി താടാ' (മൃദുൽ, 2022:44) എന്നലറുന്ന ചേട്ടനെ സ്വപ്നം കണ്ട് ഉറക്കം ഞെട്ടി എണീറ്റോടുന്ന' സജീവന്റെ ഭയത്തിലൂടെയാണ് വായനക്കാരനും കഥയിലേക്ക് പ്രവേശിക്കുന്നത്. ക്രമേണ അമ്മ സത്യഭാമയിലൂടെയും അച്ഛൻ രാഘവൻനായരിലൂടെയും പുരോഗമന മുഖംമൂടികൾക്കു പുറകിൽ സമകാലികസമൂഹത്തിലിന്നും വേരുറപ്പിച്ചിട്ടുള്ള ജാതിയുടെ രാഷ്ട്രീയ യുക്തികളിലേക്ക് വായനക്കാരെ ത്തുന്നു.

ഏതൊരു കാലത്തായാലും മലയാളിയുടെ എല്ലാത്തരം പുരോഗമന അല്പത്തരങ്ങളും കള്ളി പൊളിച്ച് വെളിയിൽവരുന്ന അപൂർവ്വം സന്ദർഭങ്ങളിലൊന്നാണ് കല്യാണാലോചനകൾ. എല്ലാ പുരോഗമന ചർച്ചകൾക്കുമപ്പുറം സൂക്ഷ്മമായി ആചരിച്ചു പോരുന്ന ജാതിബോധത്തിന്റെ വേരുകൾ പ്രകടമായി അവിടെ തെളിഞ്ഞുവരുന്നു. കഥയിലും സ്ഥിതി വ്യത്യസ്തമല്ലെന്നു കാണാം. ഇവിടെ ആലോചന നടക്കുന്നത് മരിച്ചുപോയ രാജീവനാണ്. അച്ഛനായ രാഘവൻനാ

യരും ബ്രോക്കർ മണിയും കൂടിയാണ് ചർച്ചകൾ നടത്തുന്നത്. ഇരിട്ടി മുതൽ സുള്ള്യ വരെ അന്വേഷിച്ചിട്ടും രാജീവന് ചേർന്ന നായർ, നമ്പ്യാർ, മേനോൻ, നമ്പൂരി, മണിയാണി കുട്ടികളിൽ ഒന്നിനെപ്പോലും കണ്ടുപിടിക്കാൻ മണിക്ക് സാധിക്കുന്നില്ല. ഒടുവിൽ 'നായരെ ഈ കാര്യത്തിൽ കണിയാൻ പറഞ്ഞപോലെ... പെണ്ണ് തന്നെ ആവണം എന്നേ ഉള്ളൂ. അയിന് കളറും ക്ലാസും ഒന്നും വേണ്ട. ഒരു ചടങ്ങിന്... നമ്മളൊരാളെ കണ്ടുപിടിക്കുന്നു. കല്യാണം അങ്ങ് നടത്തുന്നു' (ibid:45) എന്ന് മണി പറഞ്ഞതിനു ശേഷമാണ് 'ഒരു മണിയാണി വരെയൊക്കെ... നോക്കാം' (ibid:45) എന്ന് വലിയ താല്പര്യത്തോടെയല്ലെങ്കിലും രാഘവൻനായർ തീരുമാനിക്കുന്നത്. അതിനു ശേഷമാണ് ആദ്യമായി ബീനയുടെ ആലോചനയുമായി മണി വരുന്നത്. എന്നാൽ മുറുക്കമുള്ള ഒരു നോട്ടം കൊണ്ട് രാഘവൻനായർ അത് വേണ്ടന്നു വയ്ക്കുന്നു.

ബീനയുടെ ആലോചനയ്ക്കു നേരെ രാഘവൻനായർ നോക്കുന്ന മുറുക്കമുള്ള നോട്ടം കേരളത്തിലെ വരേണ്യ പൊതുബോധത്തിനുള്ളിൽനിന്നു പലപ്പോഴായി ഉയർന്നു വന്നിട്ടുള്ള ഒന്നാണ്. മലയാളിയെ നിരന്തമായി പിന്തുടരുന്ന എത്ര കുടഞ്ഞെറിയാൻ ശ്രമിച്ചാലും വിടാതെ കൂടെയുള്ള ജാതിബോധമെന്ന അപരിഷ്കൃത മനോനിലയെ സൂചിപ്പിക്കാൻ അതിലും സൂക്ഷ്മമായ മറ്റൊരു സൂചകമില്ല. കഥയിൽ ആദ്യം മുതൽ അവസാനം വരെ രാഘവൻനായരിലൂടെ, സജീവനിലൂടെ, സജീവന്റെ അമ്മാവനിലൂടെയൊക്കെ ഈ മുറുക്കമുള്ള നോട്ടം തുടരുന്നുണ്ട്.

രാജീവന്റെ പ്രേതവിവാഹത്തെ ചുറ്റി പറ്റിയാണ് കഥ നടക്കുന്നതെങ്കിലും പിന്നീട് കഥയുടെ ഉപരിതലത്തിൽ വലിയ ഓളങ്ങളുണ്ടാക്കിക്കൊണ്ട് വന്നുവീഴുന്ന ശബ്ദങ്ങളിലൊന്ന് സത്യഭാമയുടേതാണ്. ഏതൊരു പുരുഷാധിപത്യ സമൂഹത്തിലുമെന്നത് പോലെ ശബ്ദമില്ലാത്ത, അഭിപ്രായങ്ങൾ പറയാനവകാശമില്ലാത്ത സ്ത്രീകളുടെ പ്രതിനിധിയായാണ് സത്യഭാമയും കഥയിൽ പ്രത്യക്ഷപ്പെടുന്നത്. മകന്റെ (പ്രേത)വിവാഹ ആലോചനകളിലൊന്നും അവരുടെ സാന്നിധ്യമില്ല. 'ഇറയത്ത് നിന്ന് കേൾക്കുന്ന ശബ്ദങ്ങളിലേക്ക് അടുക്കളയിൽ നിന്നു നോക്കാനുള്ള' അവകാശമേ അവർക്കുള്ളൂ. 'എന്ത് നാശം പിടിച്ച പ്രേതാ... ന്ന് നിങ്ങളെ മോൻ...! ചത്താല് ചത്ത ആളുകളെ പോലെ ജീവിക്കണം...' (ibid:44) എന്ന് ഒച്ചയെടു ക്കാനും പേടിപ്പിക്കാനും സ്വന്തം മകൻ പോലും തയ്യാറാവുന്ന നിലയിലാണ് കുടുംബത്തിനു ള്ളിൽ അവരുടെ നില.

രാഘവൻനായരുടെ താല്പര്യപ്രകാരമുള്ള ആലോചനകളൊന്നും രാജീവന് വരുന്നില്ലെന്നു കാണുമ്പോൾ സത്യഭാമ വീണ്ടും ബീനയുടെ കാര്യം എടുത്തിടുന്നു. എന്നാൽ അച്ഛനും മകനും അത് കേട്ടതായിപ്പോലും ഭാവിക്കുന്നില്ല. അരിയിടുന്നത്തിന്റെയും കറിക്കരി യുന്നത്തിന്റെയും നിലം തുടയ്ക്കുന്നത്തിന്റെയും അലക്കുന്നത്തിന്റെയും ഭർത്താവിന്റെ ഷർട്ട് തേക്കുന്നതിന്റെയും മാറാലയടിക്കുന്നതിന്റെയുമൊക്കെ ഇടയിലാണ് രാഘവൻനായർ കേൾക്കെയും കേൾക്കാതെയും അഞ്ചുദിവസത്തോളം സത്യഭാമ ബീനയുടെ ആലോചനയെ പൊതിഞ്ഞു വളർത്തുന്നത്. സ്വതന്ത്രമായി നിൽക്കുന്ന, സ്വതന്ത്രമായ പ്രകടന സാധ്യതയുള്ള ഒന്നല്ല സത്യഭാമയ്ക്ക് അവരുടെ അഭിപ്രായങ്ങൾ. വീടിനുള്ളിൽ ആരാലും ശ്രദ്ധിക്കപ്പെടാതെ പുകഞ്ഞുകൊണ്ടിരിക്കുക മാത്രമാണത്. എങ്കിലും പിന്നീട് പലകാരണങ്ങൾ കൊണ്ട് ബീനയുടെ ആലോചനയ്ക്ക് സമ്മതം മൂളുന്ന രാഘവൻനായർ, വിവാഹം അതീവ രഹസ്യമായിരിക്കണമെന്നും ആരും അറിയരുതെന്നും നിർബന്ധം പിടിക്കുന്നു. ബീനയുടെ ആലോചന ആദ്യമായി വന്ന സമയത്ത് രാഘവൻനായരിൽ നിന്നുണ്ടായ ആ മുറുക്കമുള്ള നോട്ടം തന്നെയാണ് വിവാഹം രഹസ്യമാക്കി വെക്കണമെന്ന നിർബന്ധബുദ്ധിയിലും തെളിഞ്ഞു കാണുന്നത്.

2. നിശ്ചയം

നിശ്ചയമെന്ന രണ്ടാംഭാഗത്തെത്തുമ്പോൾ കുറേക്കൂടി വേഗതയിലും ഉച്ചത്തിലുമാണ് കാര്യങ്ങൾ പറഞ്ഞുപോവുന്നത്. നിസ്സാരമെന്ന കണക്കാക്കി പലപ്പോഴും അവഗണിച്ചുകളയുന്ന ചില സംഭവങ്ങളിലൂടെ നിവൃത്തികേടുകൊണ്ട് എടുത്തണിയേണ്ടി വരുന്ന പുരോഗമന മുഖംമൂടികൾക്കുള്ളിൽ മനുഷ്യർ ഉടയാതെ കൊണ്ടുനടക്കുന്ന ജാതി/മതബോധ്യങ്ങളെ ഇഴകീറി എടുത്തുകാട്ടുകയാണ് കഥാകൃത്ത്. എത്ര സൂക്ഷ്മതയോടെയും, ശ്രദ്ധയോടെയുമാണ് കലർന്നു പോവാതെ ജാതിയുടെ/ വംശത്തിന്റെ ശുദ്ധി മനുഷ്യർ കൊണ്ടുനടക്കുന്നതെന്ന്, എന്നോ അവസാനിച്ചെന്ന് വിശ്വസിക്കുന്ന തൊടലും തീണ്ടലുമെല്ലാം മറ്റൊരു രൂപത്തിൽ, ഭാവത്തിൽ എങ്ങനെ സമൂഹത്തിന്റെ അടരുകൾക്കുള്ളിൽ കൃത്യമായി അനുഷ്ഠിക്കപ്പെടുന്നുവെന്ന് ഇവിടെ വ്യക്തമാകുന്നു.

ആസ്ബറ്റോസിന്റെ ഷീറ്റ് നിഴലുകൊടുക്കുന്ന മുറ്റത്ത് ഒരു ഫൈബർ ടേബിളിന്റെ അപ്പുറവും ഇപ്പുറവും ഇരുന്നാണ് രാജീവന്റെയും ബീനയുടെയും കല്യാണമുറപ്പിക്കൽ ബീനയുടെ വീട്ടിൽവച്ച് നടക്കുന്നത്. രാഘവൻനായരുടെ വീട്ടിൽ, കാവിയടിച്ച സിമന്റുപടിയുള്ള ഇറയത്തിരുന്നാണ്

രാജീവന്റെയും ബീനയുടെയുടെയും വിവാഹാലോചന നടക്കുന്നതെന്ന സൂചന കാണാം. എന്നാൽ കല്യാണനിശ്ചയ ത്തിനെത്തുമ്പോൾ ഇരിയ കരിങ്കുട്ടിക്കോളനിയിലെ ബീനയുടെ വീടകത്തേക്ക് രാഘവൻനായരോ സജീവനോ സജീവന്റെ അമ്മാവനോ കടന്നുചെല്ലുന്നില്ല. തികഞ്ഞ സ്വാഭാവികതയോടും നിഷ്കളങ്കതയോടും കൂടി അവഗണിച്ചുകള യുന്ന ഇത്തരം ചില കടന്നു ചെല്ലായ്മകളുടെ രാഷ്ട്രീയം കൂടി ഉയർത്തിക്കാട്ടുകയാണ് നിരന്തരം പുതുക്കപ്പെട്ടുകൊണ്ടിരിക്കുന്ന സമകാലചെറുകഥകളുടെ ആഖ്യാനലക്ഷ്യം. മാറ്റിനിർത്തപ്പെട്ട വരുടെ ആകുലതകളെകുറിച്ച് മാത്രമല്ല, മറിച്ച് അത്തരം ആകുലതകളുടെ ആഖ്യാനകേന്ദ്രത്തിനകത്ത് ബോധപൂർവ്വമോ അബോധപൂർവ്വമോ ആയി വന്നുപെടുന്ന സവർണതയുടെ യുക്തികളെ തിരിച്ചറിയുകയും പ്രതിരോധിക്കുകയുമാണ് പുതിയകാലത്ത് എഴുത്തുകാർ സാധ്യമാ ക്കുന്നത്.

കല്യാണമുറപ്പിക്കലിൽ യാതൊരു പങ്കുമില്ലാതെ പുറത്ത് തിണ്ണയിൽ മാറിയിരിക്കുന്ന മൂന്നുപേരെ തുടർന്നു കാണാം. ബീനയുടെ അമ്മ സരോജിനിയും സത്യഭാമയും പിന്നെയൊരു കറുത്തു മെലിഞ്ഞ പൂച്ചയുമാണ് അത്. ആണുങ്ങളുടെ വലിയലോകത്ത് അവരുടെ തീരുമാനമെടുക്കലുകളുടെ സമയങ്ങളിൽ അടുക്കളപ്പുറത്തോ തിണ്ണയിലോ മാറിയിരിക്കേണ്ട കേവലമൊരു തിര്യക് ജീവി മാത്രമായി പലപ്പോഴും സ്ത്രീ മാറുന്നു. തീരുമാനമെടുക്കുന്നത്, നടപ്പിലാക്കുന്നത് എല്ലാം പുരുഷനാണ്. കേൾക്കുക, അനുസരിക്കുക എന്നത് മാത്രമാണ് കുടും ബങ്ങൾക്കുള്ളിൽ സ്ത്രീകൾക്ക് കല്പിക്കപ്പെട്ടിരിക്കുന്ന ചുമതലയെന്ന സാമ്പ്രദായിക കുടുംബചിത്രം ഇവിടെയും കാണാം. കല്യാണമുറപ്പിക്കൽ കഴിഞ്ഞിറങ്ങുമ്പോഴും തൊടാതെ ബാക്കി വച്ചിരിക്കുന്ന നാരങ്ങാവെള്ളവും മിച്ചറും പ്രകടമായ ജാതീയതയുടെ രാഷ്ട്രീയസൂചകങ്ങൾ തന്നെയാവുന്നുണ്ട്.

മകന് ഈ കല്യാണം സമ്മതമായിരി ക്കുമോ എന്ന് ഒരിക്കൽ പോലും രാഘവൻ നായർക്കോ അയാളുടെ അളിയനോ സംശയമില്ലാ ത്തപ്പോഴാണ് 'ഓക്ക് സമ്മതുണ്ടോന്ന് ചോയ്ച്ചില്ലല്ലോ നമ്മോ!' (ibid:47) എന്ന് സരോജിനി മുന്ദനോട് ചോദിക്കുന്നത്.ആ ചോദ്യത്തിനും/ അഭിപ്രായത്തിനും സത്യഭാമയുടേത് പോലെ തന്നെ വലിയ ഒച്ചയില്ല. ഉറപ്പുമില്ല. പക്ഷെ അരിയിടുകയോ മാറാല തുക്കുകയോ ചെയ്യുമ്പോഴല്ലാതെ, സ്വതന്ത്രമായി ചോദ്യം ചോദിക്കുക എന്ന ക്രിയ മാത്രം ചെയ്തുകൊണ്ടാണ് സരോജിനി ഭർത്താവിനോടും തന്നോടുതന്നെയും സംസാരിക്കുന്നത് എന്നത് പ്രസക്തമാണ്. അവളോട് ചോദിച്ചിട്ടല്ല മുന്ദൻ, രാഘവൻനായരോട് കല്യാണമുറപ്പി ക്കുന്നത്. എങ്കിലും അത്തരമൊരു ചോദ്യത്തെ/ അഭിപ്രായത്തെ മറ്റൊന്നിന്റെയും പിൻബലത്തിലല്ലാതെ പറയാനുള്ള പരിസരം (ഉറപ്പുള്ളത് അല്ലെങ്കിലും) സരോജിനിക്ക് ലഭിക്കുന്നുണ്ട് എന്നത് ശ്രദ്ധേയമാണ്. അതിനുള്ള സാഹചര്യം പോലും സത്യഭാമയ്ക്ക് സ്വന്തം കുടുംബത്തി നുള്ളിൽ ഇല്ലെന്നു കാണാം. ഒരേസമയം സ്ത്രീ മാറ്റിനിർത്തപ്പെട്ടപ്പോഴും, നിശ്ശബ്ദയാക്കപ്പെടുമ്പോഴും ജാതി, മതം വർഗം എന്നീ ഘടകങ്ങൾക്കനുസരിച്ച് വിവേചനങ്ങളുടെ പ്രശ്നപരിസര ങ്ങൾ വ്യത്യസ്തമാവുന്നുണ്ട്.

സരോജിനിയുടെ ചോദ്യം കേൾക്കുന്ന മുന്ദൻ 'വലിയ ആളുകളുമായുള്ള ഈ കല്യാണം വേണ്ടിയിരുന്നില്ല' എന്നോർക്കുന്നു. തങ്ങൾ അപരരെക്കാൾ ഏതൊക്കെയോ വിധത്തിൽ താഴ്ന്നവരാണെന്ന് ഒരു ജനതയെക്കൊണ്ട് അറിഞ്ഞോ അറിയാതെയോ സ്വയം വിശ്വസിപ്പിക്കുകയാണ് ജാതീയതയുടെ പ്രഥമഭാവങ്ങളിലൊന്ന്. പ്രകടവും പ്രത്യക്ഷവുമായല്ല അബോധവും സൂക്ഷ്മവുമായാണ് സമൂഹത്തിലത് വേരുറ പ്പിക്കുന്നത്. സ്വാഭാവികമെന്ന് എണ്ണപ്പെടുന്ന ചില 'പൊതു'യുക്തികളിലൂടെ സമൂഹത്തിലത് പാലിക്കപ്പെടുകയും പകർത്തപ്പെടുകയും ചെയ്യു ന്നു.

3. (പ്രേത)കല്യാണം

(പ്രേത)കല്യാണം എന്ന മൂന്നാംഭാഗ ത്തെത്തുമ്പോൾ കഥയുടെ താളം കുറേക്കൂടി മുറുക്കമുള്ളതാവുകയാണ്. അതുവരെ കാണപ്പെട്ട മുറുക്കമുള്ള നോട്ടങ്ങളെയും കടന്നു ചെല്ലായ്മകളെയും തൊടായ്മകളെയും തുറന്നുകാട്ടി പ്രതിരോ ധമുയർത്തുകയാണ് അവസാനഭാഗം. സാധാരണ കല്യാണങ്ങൾക്കെന്ന പോലെയാണ് പ്രേതകല്യാണത്തിന്റെയും ഒരുക്കങ്ങൾ. പന്തലും നിലവിളക്കും നിറപറയും പ്രതീകാത്മകമായി എല്ലാം അവിടെയും കാണാം. കാലങ്ങളോളം അടിച്ചമർത്തിയും അടിമകളാക്കിയും അരികുവല്കരിച്ച ഒരു ജനവിഭാഗത്തിന്റെയുള്ളിൽ, സമരം ചെയ്തും ജീവൻ കൊടുത്തും അവർ നേടിയെടുത്ത ജീവിക്കാനുള്ള എല്ലാവിധ അവകാശങ്ങളും റദ്ദു ചെയ്യപ്പെടും വിധത്തിൽ തങ്ങൾ താഴ്ന്നവരാണ്, തല കുനിക്കേണ്ടവരാണ്, എപ്പോഴും വിനയം കാണിക്കേണ്ടവരാണ് എന്നുള്ള ചിന്തകളെ പൊതുസമൂഹം എങ്ങനെയാണ് ഊട്ടിയുറപ്പിക്കുന്നതെന്ന് ഈ ഭാഗത്ത് കാണാം.

വലിയവരുമായുള്ള വിവാഹാലോചന വേണ്ടായിരുന്നെന്ന് വിചാരിക്കുന്ന മുന്ദൻ പിന്നീടുള്ള ചടങ്ങുകളിലെല്ലാം രാഘവൻ നായരുടെയും കുടുംബത്തിന്റെയും അദൃശ്യമായൊരധികാരത്തെ അംഗീകരിച്ചുകൊണ്ട് സ്വയം പിൻവാങ്ങിയാണ്

നിൽക്കുന്നത്. അവിടെ കാണപ്പെടുന്ന അധികാരപരിസരം പുറമേക്ക് പ്രകടമായുള്ള ഒന്നല്ല. ബലപ്രയോഗത്തിലൂടെയല്ല അത് നിലനിർത്തിപ്പോരുന്നത്. മറിച്ച് അസ്പൃശ്യരായ ജനവിഭാഗം എല്ലാക്കാലത്തും എങ്ങനെയാണ് നിലനിൽക്കേണ്ടതെന്ന സവർണബോധ്യമാണതിനെ നിയന്ത്രിക്കുന്നത്. അദൃശ്യമായ ആ അധികാരവലയത്തിൽ നിന്ന് മുക്തനാവാവാൻ മുന്ദന് സാധിക്കുന്നില്ല.

കഥയിലുടനീളം രാഘവൻനായർക്കും സജീവനും അമ്മാവനും മുന്നിൽ ഭവ്യതയുടെയും അപേക്ഷയുടെയും സ്വരമാണ് മുന്ദൻ പിന്തുടരുന്നത്. എന്നാൽ പോണ്ടിച്ചേരിയിൽ പിജി പഠിക്കുന്ന അദ്ദേഹത്തിന്റെ മകൻ ബിനീഷ് ബോധപൂർവ്വം അത്തരമൊരു ബോധ്യത്തിന് പുറത്ത് നിൽക്കാൻ ശ്രമിക്കുന്നുണ്ട്. വിവാഹ സദ്യ കഴിക്കാതെ മടങ്ങാൻ ശ്രമിക്കുന്ന രാഘവൻ നായരോടും അയാളുടെ അളിയ നോടും സജീവനോടും ചടങ്ങു പൂർത്തിയാവണമെങ്കിൽ നിങ്ങൾ ഭക്ഷണം കഴിക്കണമെന്ന് മുന്ദൻ അപേക്ഷിക്കുമ്പോൾ ആ അപേക്ഷയുടെ മേൽ ശബ്ദമുയർത്തി 'ചടങ്ങ് തീർക്കാൻ പറ്റില്ലെങ്കിൽ, നിങ്ങള് കെട്ടിയ താലി പൊട്ടിച്ച് നിങ്ങക്ക് പോകാം... എന്റെ പെങ്ങക്ക് നിങ്ങളെ മോനെത്തന്നെ വേണന്നില്ല...' (ibid:49) എന്ന് അധികാരത്തോടെ/അവകാശ ത്തോടെ പറയാൻ ബിനീഷ് മടികാട്ടുന്നില്ല.

അതുവരെ ഏതാണ്ട് നിശ്ശബ്ദരായിരുന്ന രണ്ട് മനുഷ്യരുടെ ശബ്ദങ്ങളാണ് കുളെ എന്ന കഥയെ അതിന്റെ അവസാന ലാപ്പിൽ ചലനാത്മകമാക്കുന്നത്. കഥയുടെ രാഷ്ട്രീയം അതിന്റെ ഉച്ചസ്ഥായിയിലെത്തുന്നത് വായനക്കാരനും അനുഭവേദ്യമാവുന്നു. ആദ്യത്തേത് ബിനീഷിന്റെതാണെങ്കിൽ രണ്ടാമത്തെ ശബ്ദം സത്യഭാമയുടേതാണ്. ബിനീഷും മകൻ സജീവനും കൂടിയുള്ള ഏറ്റുമുട്ടൽ ഒഴിവാക്കിയശേഷം രംഗം തണുപ്പിക്കാനെന്നമട്ടിൽ വീട്ടിൽ അവരുണ്ടാക്കിയ ഭക്ഷണം കഴിക്കാതെ തളികയിൽ നിന്നൊരു കാട്ടുവാഴപ്പഴം എടുത്ത് ചടങ്ങു തീർക്കാനെന്നോണം രാഘവൻനായർ ശ്രമിക്കുമ്പോഴാണ് അയാളെയും സ്വന്തം മകനെയും സഹോദരനെയും അസ്തപ്രജ്ഞരാക്കിക്കൊണ്ട് സത്യഭാമയുടെ ശബ്ദം ഉയരുന്നത്. 'സരോജിനീ... എനക്ക് എല ഇട്ടോ.. അവര നോക്കണ്ട...' (ibid:49) എന്നുപറഞ്ഞ് രാഘവ ൻ നായരടങ്ങുന്ന തന്റെ കുടുംബത്തിലെ അന്നോളം ഉണ്ടായിട്ടുള്ള എല്ലാവിധ ആണധികാര ഒച്ചകളെയും/ തീരുമാനങ്ങളെയും സത്യഭാമ പ്രതിരോധിക്കുന്നു.

സരോജിനി വിളമ്പിയതെല്ലാം ആസ്വദിച്ചിരുന്നു കഴിച്ചും പുളിശ്ശേരി വെക്കുന്നതിന്റെ കറിക്കൂട്ടു ചോദിച്ചും അതുവരെ ഉണ്ടായിരുന്ന അദൃശ്യമെങ്കിലും ദൃശ്യമായിരുന്ന ജാതി/അധികാര ബോധ്യങ്ങളെ പൊളിച്ചടുക്കാനുള്ള ശ്രമങ്ങളും സത്യഭാമ നടത്തുന്നു. ഇറങ്ങാൻനേരം വലിച്ചടച്ച കാർഡോറിന്റെ ശബ്ദത്തിലേക്ക് പുറംതിരിഞ്ഞ് നിന്ന് അമ്പിളിപ്പൂവിന്റെ ഏല് ഒന്ന് തനിക്കും പൊട്ടിച്ചു തരണമെന്ന് ആവശ്യപ്പെടുന്ന സത്യഭാമ തുടർച്ചകളുണ്ടാവുമോ എന്നറിയാത്തൊരു സമരത്തിനാണ് തുടക്കമിടുന്നത്. ശബ്ദമില്ലാതിരുന്നവരുടെ ഒച്ചപ്പാടുകൾ ദുർബലമെങ്കിലും, നിലനിൽക്കുന്ന സാമൂഹ്യസ്ഥിതിയിൽ വലിയ മാറ്റങ്ങളുണ്ടാക്കുമെന്ന പ്രതീക്ഷയിലേക്കാണ് കഥ അവസാനിക്കുന്നത്.

കേരളത്തിന്റെ പൊതുമനസ്സിനുള്ളിൽ ഇന്നും സൂക്ഷ്മമായി നിലനിൽക്കുന്ന ഒന്നാണ് ജാതിബോധം. കുളെ എന്ന കഥ, നിലനിൽക്കുന്ന കേരളീയപൊതുബോധത്തിലെ ജാതിചി ന്തകളെയും വിവാഹം, കുടുംബം തുടങ്ങിയ സാമൂ ഹികസ്ഥാപനങ്ങളിലൂടെ കൃത്യമായും സൂക്ഷ്മമായും അതെങ്ങനെ പാലിക്കപ്പെടുന്നുവെന്നും തുറന്നുകാട്ടുന്നു. ജാതി വലിയ കോലാഹലങ്ങളു ണ്ടാക്കിയല്ല സമൂഹത്തിലൂടെ സഞ്ചരിക്കുന്നത്. നിസ്സാരമെന്നും നിഷ്കളങ്കമെന്നും അവഗണിക്കുന്ന ചില 'പൊതു'യുക്തികളിലൂടെയാണ് അത് അനുഷ്ഠിക്കപ്പെടുകയും ആചരിക്കപ്പെടുകയും ചെയ്യുന്നത്. അത്തരത്തിലുള്ള നിശബ്ദ ജാതീയ പരിസരങ്ങളെ കഥ തുറന്നുകാട്ടുന്നു.

കുളെ എന്ന, തികച്ചും പ്രാദേശികമായ ഒരാചാരത്തിന്റെ പരിസരത്തിലാണ് കഥ വികസിക്കുന്നതെന്നു കാണാം. അരികുവത്കരിക്കപ്പെട്ട എല്ലാത്തിനും സാഹിത്യത്തിൽ ഇടം നൽകിക്കൊണ്ടാണ് ഉത്തരാധുനികത കടന്നുവരുന്നതും നിലയുറപ്പിക്കുന്നതും. സമകാലികചെറു കഥാകൃത്തുക്കളടക്കം ചെറുതുകളുടെ ആവിഷ്കരണങ്ങൾക്കും ആഘോഷങ്ങൾക്കും തങ്ങളുടെ രചനകളിൽ ഇടം നൽകി. പ്രാദേശിക മിത്തുകളെയും ഭാഷകളെയും ആചാരങ്ങളെയും എഴുത്തിലൂടെ അടയാളപ്പെടുത്തി. പ്രാദേശികമായും സാമുദായികമായുമുള്ള ഭാഷാഖ്യാനങ്ങൾ കഥകളിൽ പ്രത്യക്ഷപ്പെട്ടു. വർത്തമാനകാലചെറുകഥ പുലർത്തുന്ന ഈ ആഖ്യാനസവിശേഷത തന്നെയാണ് കുളെയിലും പിന്തുടരുന്നത്. എന്നാൽ പൂർവ്വസൂരികളിൽ നിന്നു വ്യത്യസ്തമായി കീഴാളദൈന്യതയെ കാൽപനികവത്കരി ച്ചുകൊണ്ടുള്ള ആഖ്യാനശൈലിയല്ല കുളെയിൽ കൈകാര്യം ചെയ്യുന്നത്. ദളിത് സ്വത്വാവിഷ്കരണത്തെ സാധ്യമാക്കുന്ന അവസരങ്ങളിൽ പലപ്പോഴും അവരുടെ ദൈന്യതയേയും ദുർബ്ബലതയേയും ഉയർത്തിക്കാട്ടുന്ന രീതികളിൽ നിന്ന് വ്യത്യസ്തമായി യഥാർത്ഥ സാമൂഹ്യവ സ്ഥയെ കാൽപനികതയുടെയോ ആദർശാ

ത്മകതയുടെയോ അധികഭാരങ്ങളില്ലാതെ ആവിഷ്കരിക്കാൻ മുദ്ദുലിന് സാധിക്കുന്നു.

നാടോടിവിജ്ഞാനത്തിന്റെ ആഖ്യാന സങ്കേതങ്ങളെ കീഴാള ഭാവുകത്വവുമായി ചേർത്തുവെച്ച് അധികാരത്തിന്റെയും അടിച്ചമർത്തലിന്റെയും വരേണ്യബോധ്യങ്ങളെ പ്രതി രോധിക്കാനുള്ള ശ്രമങ്ങൾ സമകാലിക ചെറുകഥ മുന്നോട്ടുവെക്കുന്നുണ്ട്. ഒരേസമയം കേരളീയ പൊതുബോധ്യത്തിൽ ജാതി എങ്ങനെ പ്രവർത്തിക്കുന്നുവെന്ന് സൂക്ഷ്മമായി നിരീക്ഷിക്കുന്നതിനൊപ്പം വിവാഹം, കുടുംബം തുടങ്ങിയ സാമൂഹികസ്ഥാപനങ്ങൾ അതിനെ ആചരിച്ചുപോരാൻ എപ്രകാരം സമൂഹത്തെ പരിശീലിപ്പിക്കുന്നുവെന്നും സമകാലചെറുകഥ പരിശോധിക്കുന്നു. സമൂഹത്തിൽ ജാതി നിലനിൽക്കുന്നതും തുടർന്നുപോരുന്നതും കൃത്യമായ ചില ബിംബങ്ങളിലൂടെയാണ്. ഭക്ഷണം, രുചി, ചടങ്ങുകൾ, ശരീരഭാഷ, നോട്ടം, തുടങ്ങി ജീവിതത്തിന്റെ എല്ലായിടങ്ങളിലും ഏറിയും കുറഞ്ഞും ജാതീയമായ സംഘർഷങ്ങൾ നിലനിൽക്കുന്നുണ്ട്. ഇത്തരം സംഘർഷങ്ങളെ ഒരു നാടോടിവിശ്വാസത്തിന്റെ പശ്ചാത്തല ത്തിൽ ചേർത്തുവെക്കുമ്പോൾ ആഖ്യാനപരമായും പ്രമേയപരമായും അനുഭവ പ്രധാനമായൊരു കഥാഭൂമിക സൃഷ്ടിക്കാൻ സമകാലചെറുകഥയ്ക്ക് സാധിക്കുന്നുവെന്ന് ഉറപ്പിച്ചുപറയാനാവും.

ഉപദർശനങ്ങൾ

- ഒരേസമയം പല അടരുകളിൽ നിന്ന് വായന സാധ്യമാവുന്നവയാണ് സമകാലികകഥകൾ എന്നതിന് മുദ്ദൽ വി. എമ്മിന്റെ കുളെ ഉദാഹരണമാണ്.
- കേരളത്തിന്റെ സാമൂഹിക/കുടുംബാന്തരീക്ഷങ്ങൾക്കുള്ളിൽ നിഷേധിക്കാനാവാതെ തുടരുന്ന യാഥാർത്ഥ്യമാണ് ജാതി. പലപ്പോഴും നിസ്സാരമെന്നും സാധാരണമെന്നും എണ്ണപ്പെടുന്ന സന്ദർഭങ്ങളിലൂടെയാണ് അത് ആചരിക്കപ്പെടുന്നതും നിലനിർത്തപ്പെടുന്നതും.
- കേരളീയവിവാഹങ്ങൾ പലപ്പോഴും ജാതിമത ബോധ്യങ്ങളെ ഊട്ടിയുറപ്പിക്കാനും പിന്തുടരാനുമുള്ള മികച്ച സാധ്യതകളായി കണക്കാക്കപ്പെടുന്നു.
- കീഴാളരെന്ന് മുദ്രകുത്തപ്പെട്ടിരുന്ന ഒരു ജനതയ്ക്കുള്ളിൽ വർത്തമാനകാലത്തും അദൃശ്യമായൊരു അടിമപ്പെടലിന്റെ അധികാരബോധം ഉറപ്പിക്കാൻ സവർണബോധ്യങ്ങൾക്കായിട്ടുണ്ട്. അതിനെ പൊട്ടിച്ചെറിയുക എളുപ്പമല്ല.
- ജാതി, മത, ലിംഗ ആധിപത്യങ്ങൾക്കെതിരെ പൊരുതാൻ വിദ്യാഭ്യാസം ഒരു ജനതയെ പ്രാപ്തമാക്കുന്നുണ്ട്.
- പ്രാദേശികമായ മിത്തുകളെയും ആചാരങ്ങളെയും കേവല അനാചാരങ്ങൾ മാത്രമാക്കി മാറ്റി നിർത്തുന്നത് ഒരു ജനതയുടെ സാംസ്കാരിക പാരമ്പര്യത്തോടും പൈതൃകത്തോടും നടത്തുന്ന കലാപമാണ്.
- പ്രാദേശിക ജനസമൂഹത്തിന്റെ അനുഷ്ഠാനങ്ങൾക്ക് പലപ്പോഴും സാർവ്വലൗകീകമായൊരു ജൈവികമാനം കൂടിയുണ്ട്.
- ചുരുക്കത്തിൽ ഒരു നാടോടിവിജ്ഞാനത്തിന്റെ ദത്തങ്ങളുപയോഗിച്ച് ജാതി, ലിംഗം, പ്രാദേശികചരിത്രം, വിവാഹം, കുടുംബം എന്നിങ്ങനെ ഒന്നിലധികം വിഷയങ്ങളെ ഒരേസമയം അവതരിപ്പിക്കുകയും പ്രശ്നവല്ക്കരിക്കുകയും ചെയ്യുന്ന സമകാലചെറുകഥയുടെ ആഖ്യാന തന്ത്രങ്ങൾ കുളെയിലും കാണുന്നു. അതിലൂടെ സമകാലികമായ രാഷ്ട്രീയ/സാമൂഹികസമസ്യകളെ പ്രധാനമായി കീഴാളപ്രതിരോധത്തെയും ജാതിയുടെ രാഷ്ട്രീയത്തെയും കൃത്യമായി അടയാളപ്പെടുത്താൻ കഥാകാരന് സാധിച്ചിട്ടുണ്ട്.

കുറിപ്പുകൾ

1. Apparition; Soul of a deceased person to whom proper funeral rites have not been performed and hence remains roaming around the place and not having joined other deceased forefathers; The state of the deceased soul until the proper rituals are performed; A ghost.
2. ടോണി മോറിസന്റെ 'Beloved' (Alfred A. Knopf Inc., United States, 1987) എന്ന നോവൽ ഉദാഹരണമായെടുക്കാം.
3. കഥാകൃത്ത് (പ്രേത)കല്യാണം എന്ന് കഥയിൽ ഉപയോഗിച്ചിരിക്കുന്നതിനാൽ പ്രബന്ധത്തിലും രണ്ടിടത്ത് മാത്രം അപ്രകാരം സ്വീകരിച്ചിരിക്കുന്നു. പ്രബന്ധത്തിന്റെ ഇതര ഭാഗങ്ങളിൽ പ്രേതക്കല്യാണം എന്നും ഉപയോഗിച്ചിരിക്കുന്നു.

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തമ്പുരാൻ പാട്ടുകളുടെ സാംസ്കാരിക പ്രാധാന്യം

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കേരളത്തിന്റെ തെക്കൻ ഭാഗങ്ങളിൽ നിലനിൽക്കുന്ന അനുഷ്ഠാന കലകളിൽ ഒന്നാണ് തമ്പുരാൻ പാട്ട്. ക്ഷേത്രാരാധനയുമായി ബന്ധപ്പെട്ട ഈ അനുഷ്ഠാനഗാനശാഖയുടെ സാംസ്കാരികപ്രാധാന്യത്തെപ്പറ്റി അന്വേഷിക്കുകയാണ് ഈ പ്രബന്ധത്തിൽ.

താക്കോൽ വാക്കുകൾ: തമ്പുരാൻ പാട്ടുകൾ , കേരളസംസ്കാരവും നാടൻപാട്ടുകളും

ആമുഖം

കേരളത്തിന്റെ സാംസ്കാരിക ചരിത്രത്തിൽ നിറം മങ്ങാതെ നിൽക്കുന്ന ധാരാളം കലാരൂപങ്ങളും ആചാരാനുഷ്ഠാനങ്ങളും ഉണ്ട്. കാലം കൊണ്ട് മങ്ങിപ്പോയവയും വിരളമല്ല. ചിലരുടെയൊക്കെ നിർബന്ധം കൊണ്ട് നിലനിന്ന് പോരുന്നവയും ഉണ്ട്. കാലങ്ങൾ കൊണ്ട് മാറ്റം വരികയും ക്രമേണ ഇല്ലാതായിപ്പോവുകയും ചെയ്യുകയാണ് സാംസ്കാരികമായ പല സംഗതികളും. ഇത്തരത്തിൽ അന്യം നിന്നു പൊയ്ക്കൊണ്ടിരിക്കുന്ന ഒന്നാണ് തമ്പുരാൻ പാട്ടുകൾ. തമ്പുരാക്കന്മാരുടെ ചരിത്രമവസാനിച്ചതിനാൽത്തന്നെ അവയെ പുച്ഛിക്കുന്നവരും ഇല്ലാതില്ല. എങ്കിലും കേരളത്തിന്റെ സമ്പന്നമായ സാംസ്കാരിക പൈതൃകത്തിൽ തമ്പുരാൻ പാട്ടുകൾക്ക് ഒരു പ്രത്യേക സ്ഥാനമുണ്ട്. പ്രാചീന കാലഘട്ടങ്ങളിൽ രാജവംശങ്ങൾ പ്രചാരപ്പെടുത്തുകയും സംരക്ഷിക്കുകയും ചെയ്ത ഈ പാട്ടുകൾ, കേരളത്തിന്റെ സംസ്കാരത്തെയും സമൂഹത്തെയും ആഴത്തിൽ സ്വാധിച്ച കലാരൂപങ്ങളിൽ ഒന്നാണ്. തമ്പുരാൻ പാട്ടുകൾ സമൂഹത്തിന്റെ സാംസ്കാരിക അവബോധത്തിന് മാത്രമല്ല, കലാപ്രവർത്തനങ്ങളിലും ആചാരങ്ങളിലും ഉണർവുണ്ടാക്കിയ വീരഗാഥകളാണ്.

തെക്കൻ കേരളത്തിന്റെ ചരിത്രവും ഭാഷയും സംസ്കാരവും വെളിപ്പെടുത്തുന്ന പാട്ടുകളാണ് തെക്കൻ പാട്ടുകൾ. ഈ പാട്ടുകളിൽ പ്രധാനപ്പെട്ട ഒരു വിഭാഗമാണ് തമ്പുരാൻ പാട്ടുകൾ. അനുഷ്ഠാന പ്രധാനമായ പാട്ടുകളാണിവ. അപമൃത്യുവിനിരയാക്കപ്പെട്ട ധീരോദാത്തൻമാരായ രാജാക്കന്മാർ, രാജസേവകന്മാരായ വീരസേനാനിമാർ, ദേശഭക്തന്മാരായ യോദ്ധാക്കൾ, പതിവ്രതകളായ മനസ്വിനിമാർ എന്നിവർ മരണശേഷം വരബലങ്ങൾ നേടി തമ്പുരാൻ, മാടൻ, യക്ഷി മുതലായ രൂപങ്ങൾ കൈകൊണ്ട് ഭൂമിയിൽ തിരിച്ചെത്തുമെന്നും അത്തരം ദേവതകളെ പ്രീതിപ്പെടുത്തുന്നത് ജീവിതത്തിലെ സമസ്ത ഐശ്വര്യങ്ങൾക്കും നിദാനമാകുമെന്നുള്ള വിശ്വസങ്ങളിൽ നിന്നാണ് തമ്പുരാൻ പാട്ടുകളുടെ പിറവി.

'തെക്കൻതിരുവിതാംകൂറിലെ തമ്പുരാൻ സങ്കല്പവും വീരാരാധനയിൽനിന്ന് ഉയിർക്കൊണ്ടതാണ്. വീരന്മാർ ആകസ്മികമൃത്യുവിനുശേഷം ഭൂമിയിൽ ദേവതുല്യരായി ആരാധിക്കപ്പെടുന്നു. അവർ രാജ്യത്തിലെ പ്രജകൾക്കു പ്രത്യക്ഷദൈവമായിരുന്ന രാജാവാണെങ്കിൽ തമ്പുരാന്മാരായിത്തീരുമെന്നാണ് വിശ്വാസം. വീരന്മാരായ രാജകേസരികൾ സ്വർലോകപ്രാപ്തിക്കുശേഷം ശക്തിമത്തായ വരബലങ്ങൾ നേടി ഭൂമിയിൽ തങ്ങളുടെ ഉറ്റവർക്കും ഉടയവർക്കും ആശയും ആവേശവും പകരുന്ന പൊന്നു തമ്പുരാന്മാരായി തിരിച്ചെത്തുന്നവെന്ന് ഗ്രാമക്കൂട്ടായ്മകൾ ദൃഢമായി വിശ്വസിച്ചു. ഇത്തരം വിശ്വാസങ്ങളുടെ സാക്ഷ്യപത്രങ്ങളായി തമ്പുരാന്മാരെ ആലയങ്ങൾ നിർമ്മിച്ച് ഊട്ടും പാട്ടും കൊട്ടും ആട്ടവും നടത്തി ആരാധിക്കുകയാണ്. ജീവിച്ചിരിക്കുമ്പോൾത്തന്നെ അദ്ഭുതാവഹങ്ങളായ വീര്യബലങ്ങൾ കാട്ടിയവർ മരണശേഷം പതിന്മടങ്ങു ശക്തി കൈവരിച്ച് വീണ്ടും പ്രജകളുടെ രക്ഷകന്മാരായ തമ്പുരാന്മാരായി മാറുന്നു. മനുഷ്യരായി ജീവിച്ചു വീരമൃത്യുവരിച്ച അവർക്ക് പുരാണത്തിലെ ദേവീദേവന്മാരെക്കാളധികം നിഗ്രഹാനുഗ്രഹശക്തിയുണ്ടെന്നും, ജീവിതത്തിലുണ്ടാകുന്ന സമസ്ത ദുരിത ങ്ങളിൽനിന്നു തങ്ങളെ കാത്തുരക്ഷിക്കുമെന്നും നാട്ടുകൂട്ടായ്മകൾ വിശ്വസിച്ചിരുന്നു.

ഇതിന്റെ അനുബന്ധമായി ആരാധനാലയങ്ങൾ നിർമ്മിച്ച് അവരുടെ വീരാപദാനങ്ങൾ പാടിപ്പുകഴ്ത്തി. അങ്ങനെ, വേണാടിന്റെ തെക്കൻ ഭാഗങ്ങളിൽ തമ്പുരാൻ സങ്കല്പവും തമ്പുരാൻസ്ഥാനങ്ങളും തമ്പുരാൻ പാട്ടുകളും രൂപം കൊണ്ടു '. (ഡോ. ബി.എസ്.ബിനു തമ്പുരാൻ പാട്ടുകൾ വേണാടിന്റെ വീരഗാഥകൾ. പു 15) ഇതാണ് തമ്പുരാൻ പാട്ടുകളുടെ അടിസ്ഥാനം.

പ്രധാനപ്പെട്ട രാജകേസരികളാണ് തമ്പുരാൻ പാട്ടിലെ നായകന്മാർ. ഒരു നാട്ടിലെ ജനതയെ സത്യത്തിന്റെയും വിശ്വാസത്തിന്റെയും വഴികളിലൂടെ നടത്താൻ ഒരു കാലത്ത് ഈ പാട്ടുകൾക്ക് കഴിഞ്ഞിരുന്നു. തങ്ങളെ രക്ഷിക്കാൻ, ദേശം കാക്കാൻ ഒരു തമ്പുരാൻ ഉണ്ടെന്ന വിശ്വാസം തെല്ലൊന്നുമല്ല അവരെ ആശ്വസിപ്പിച്ചിരുന്നത്. അയൽ നാട്ടുവാഴികളുടെ ആക്രമണം, പ്രകൃതി ക്ഷോഭം, സാമ്പത്തിക പ്രശ്നങ്ങൾ, ദാരിദ്ര്യം, രോഗങ്ങൾ , കുടുംബ ദോഷങ്ങൾ തുടങ്ങിയുള്ള സകല പ്രശ്നങ്ങൾക്കും ഒരു പരിഹാരമെന്ന നിലയിൽ തമ്പുരാനെ പ്രാർത്ഥിക്കുക, പ്രസാദിപ്പിക്കുക എന്ന് പറയുന്നതിൽ നിന്ന് തന്നെ ദേശക്കാർ തമ്പുരാനും തമ്പുരാൻ പാട്ടിനും നൽകിയിരുന്ന അമിത പ്രാധാന്യം വ്യക്തമാണ്. വ്രതനിഷ്ഠകളോടുകൂടി അവതരിപ്പിക്കുന്ന കലയാണിത്. അത്രത്തോളം ശുദ്ധിയും വിശുദ്ധിയും സത്യവുമുണ്ട്. വിശ്വസിച്ചവരെ ഒരിക്കലും തമ്പുരാൻ കൈവിട്ടിരുന്നില്ലെന്ന് ഇന്നും തമ്പുരാൻ പാട്ടു പാടുന്നവർ വിശ്വസിക്കുന്നു. ഓരോ തമ്പുരാൻ പാട്ട് കലാകാരനും അതേറ്റ് പറയുകയും ചെയ്യും.

ദൈവങ്ങളുടെ അടുത്തു പോയി അനുഗ്രഹം വാങ്ങി വന്നയാളാണ് തമ്പുരാൻ. ശക്തിയും ചൈതന്യവും നേടി വന്നയാൾ. അദ്ദേഹം ജീവിച്ചിരുന്ന മഹാരാജാവായിരുന്നു. അതു കൊണ്ടുതന്നെ തങ്ങൾ കണ്ടിട്ടില്ലാത്ത ദൈവത്തേക്കാൾ കണ്ട തമ്പുരാനിൽ വിശ്വാസമേറും. അദ്ദേഹം ചെയ്തിട്ടുള്ള സത്കർമ്മങ്ങളും വീരപരാക്രമങ്ങളും അറിയാവുന്നതിനാൽ പ്രായോഗികമായിത്തന്നെ തമ്പുരാന്റെ ശക്തിയിൽ അടിയുറച്ച് വിശ്വസിക്കാൻ അവർ പ്രേരിതരായി എന്ന് വേണം കരുതാൻ. മാവേലിത്തമ്പുരാനെ അനുസ്മരിച്ച് ഓണം ഇന്നും ആഘോഷിക്കുന്നതിന്റെ കാരണം മാവേലിത്തമ്പുരാന്റെ സദ്ഭരണം തന്നെയാണ്. ഒരു ജനതയെയും അവരുടെ സംസ്കാരത്തേയും ദേശീയോത്സവത്തേയും നിർണ്ണയിക്കാൻ ഒരു മാവേലിത്തമ്പുരാന് കഴിയുന്നതും വീരാരാധനയുടെ മറ്റൊരു സവിശേഷത തന്നെയാണ്. മാവേലിയെയും നമ്മൾ മാവേലിത്തമ്പുരാൻ എന്ന് വിശേഷിപ്പിക്കുന്നതിന് കാരണവും മറ്റൊന്നല്ല.

സംസ്കാരം, ഒരു സമൂഹത്തിന്റെ അടിത്തറയും ആത്മാവുമാണ്. അതായത് ആ സമൂഹത്തിന്റെ ഭാഷ, കല, സാഹിത്യം, ആചാരങ്ങൾ എന്നിവയുടെ സമന്വയമാണ് സംസ്കാരം. കേരളസംസ്കാരത്തിൽ ഈ വാമൊഴിപ്പാട്ടുകൾക്ക് വലിയ സ്ഥാനമാമുള്ളത്. കാലഘട്ടത്തിന്റെ ചരിത്രം, രാജാക്കന്മാർ, അവരുടെ ഭരണരീതികൾ, നീതി നിർവ്വഹണം, യുദ്ധതന്ത്രങ്ങൾ, സാമൂഹിക ബന്ധങ്ങൾ എന്നിവയൊക്കെ തമ്പുരാൻ പാട്ടുകളിൽ ഉള്ളടങ്ങിയിട്ടുണ്ട്. ഇത് രാജവംശത്തിന്റെ വിശ്വാസങ്ങളും മതാചാരങ്ങളും പ്രതിഫലിപ്പിക്കുന്നതാണ്. അതുപോലെ 'രാജകുടുംബാംഗങ്ങൾ തമ്മിലുള്ള അധികാരവടംവലിയും വഞ്ചനയും ആഭ്യന്തരകലഹങ്ങളും, രാജഭരണത്തെ താങ്ങിനിർത്തുന്ന മാടമ്പിമാരുടെ കൂറും വീര്യബലങ്ങളും വെളിപ്പെടുന്ന ഒരമൂല്യ ചരിത്രരേഖയാണ് അഞ്ചുതമ്പുരാൻപാട്ട്. രാജകുടുംബങ്ങളുടെ ഉത്കൃഷ്ടതയും ഫ്യൂഡൽ പ്രഭുക്കന്മാരുടെ വഞ്ചനയും പറഞ്ഞു പഠിപ്പിച്ചവരാണ് കൊട്ടാരം സേവകന്മാരായ പല ചരിത്രകാരന്മാരും. അതു കേട്ടുപഠിച്ച ചരിത്രവിദ്യാർത്ഥികൾക്ക് സത്യം മറിച്ചാണെന്ന് വ്യക്തമാക്കിത്തരുന്ന ഒരുത്തമ ചരിത്ര ഏടാണ് അഞ്ചുതമ്പുരാൻപാട്ട്.' (ഡോ. ബി എസ് ബിനു തമ്പുരാൻ പാട്ടുകൾ വേണാടിന്റെ വീരഗാഥകൾ മാതൃഭാഷ പബ്ലിക്കേഷൻസ് നെയ്യാറ്റിൻകര 2020 പുറം 59)

കേരളത്തിലെ പല പ്രാചീന കലാരൂപങ്ങളിലും തമ്പുരാൻ പാട്ടുകളുടെ ആഴത്തിലുള്ള സ്വാധീനമുണ്ട്. ദേശത്തനിമയുള്ള പല ആചാരങ്ങൾക്കും ഈ പാട്ടുകളുമായടുപ്പവുമുണ്ട്. കൊല്ലം ജില്ലയിലെ ചില സ്ഥലങ്ങളിൽ കണിയാന്മാരായിട്ടുള്ള ആൾക്കാർ പശുക്കൾക്കും മനുഷ്യർക്കും ഓതാൻ വരുമ്പോൾ തമ്പുരാന്മാരെ സ്മരിച്ച് പാടാറുണ്ട്. നടുവേദന, ഉളുക്ക് തുടങ്ങിയവയ്ക്കും കണ്ണേറു തട്ടാതിരിക്കാനും പ്രത്യേകതരം പാട്ടുകൾ പാടാറുണ്ട്. ക്ഷേത്രങ്ങളിൽ മാടൻ തമ്പുരാന്റെ പ്രതിഷ്ഠയുണ്ട്. അതുപോലെ ചിലരുടെ കുടുംബ പരദേവതാ സങ്കല്പത്തിലും മാടൻ തമ്പുരാനെ പ്രത്യേകം പരിഗണിച്ചിട്ടുണ്ട്. എല്ലാ വർഷവും ഉരുസി നടത്തുന്ന മേടപ്പത്തിനും തുലാം പത്തിനും മാടൻ തമ്പുരാന് പ്രത്യേകം നിവേദ്യമുണ്ട്. തമ്പുരാൻ പൂജയും നിവേദ്യവുമുണ്ടെങ്കിലും തമ്പുരാൻ പാട്ടുകൾ പാടുന്നത് അപൂർവ്വമാണ്. തമ്പുരാൻ പാട്ടുകൾ പാടിയിരുന്ന കുടുംബത്തിൽപ്പെട്ട ആൾക്കാർ ഉണ്ടെങ്കിലും അവർക്കാർക്കും തന്നെ അവരുടെ അപ്പൂപ്പന്മാർ പാടിയിരുന്ന പാട്ടോ ഓതലോ വൈദ്യമോ ഗണിതമോ ജ്യോത്സ്യമോ അറിയില്ല. തലമുറകളായി കൈമാറി വന്നിരുന്ന പലതും ഇന്ന് തീർത്തും അവഗണിക്കപ്പെട്ട നിലയിലാണ്.

തിരുവിതാംകൂറിലെ രാജഭരണകാലത്ത് സാംസ്കാരിക പ്രസ്ഥാനങ്ങൾക്കുള്ള മുഖ്യമായ ഒരി

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നമായി തമ്പുരാൻപാട്ടുകൾ നിലകൊണ്ടിരുന്നു. ഇവയിലൂടെ കേരളത്തിന്റെ സംസ്കാരത്തിന്റെ വിവിധ ഭാവങ്ങളും അതിന്റെ ഭാഷാശുദ്ധിയും അനുഷ്ഠാനവിശുദ്ധിയും പ്രകടമായിരുന്നു.കാല ഘട്ടങ്ങൾക്കു ശേഷം കേരളത്തിൽ വലിയ സാം സ്കാരിക മാറ്റങ്ങൾ സംഭവിച്ചപ്പോൾ തമ്പുരാൻ പാട്ടുകൾക്കും അത് ബാധിച്ചു. ആയിരക്കണക്കി ന് വർഷങ്ങൾക്കിടയിൽ കേരളത്തിലെ സാം സ്കാരിക വ്യവസ്ഥയിലും സമൂഹ്യമായ ആശ യങ്ങളിലും വന്ന മാറ്റങ്ങൾ തമ്പുരാൻ പാട്ടുകളുടെ പ്രസക്തിയിലും കാര്യമായ മാറ്റങ്ങൾ ഉണ്ടാക്കി. സമൂഹത്തിന്റെ ധാരാളം നൂതന ആശയങ്ങൾക്കു വഴിവെക്കുമ്പോഴും പുരാതന പൈതൃകത്തിന്റെ യും അനുഷ്ഠാനങ്ങളുടെയും മേന്മ ചുരുങ്ങുന്നതായി കാണുന്നു. തമ്പുരാൻ പാട്ടുകൾ രാജവംശങ്ങളുടെ പ്രിയപ്പെട്ട കലാരൂപമായിരുന്നു. ഈ പാട്ടുകൾ പാരമ്പര്യമായി കൈമാറപ്പെട്ട താൽപ്പര്യങ്ങളും വികാരങ്ങളും അടങ്ങിയതാണ്. അതിനാൽ തന്നെ തമ്പുരാൻ പാട്ടുകൾക്ക് പ്രത്യേകമായ ഒരു പൈതൃകമുണ്ടെന്നു പറയാം. ശില്പകല, നൃത്തം, സംഗീതം തുടങ്ങിയ കലാരൂപങ്ങളുമായി ഇതിന് ബന്ധമുണ്ട്. തമ്പുരാൻ പാട്ടുകളിൽ സംസ്കൃതവും മലയാളവും ചേർന്ന ഭാഷയാണ് ഉപയോഗിച്ചിരു ന്നത്.

ചരിത്രപരമായി, തമ്പുരാൻ പാട്ടുകൾ രാജവംശ ങ്ങളുടെയും പണ്ഡിതരുടെയും സംരക്ഷണത്തിൽ വളർന്നു. കേരളത്തിന്റെ ചരിത്രവും തമ്പുരാൻ പാ ട്ടുകൾക്കും തമ്മിൽ ബന്ധമുണ്ട്. തിരുവിതാംകൂർ രാജാവിന്റെ കാലത്ത് രൂപം കൊണ്ടിട്ടുള്ള ഈ പാട്ടുകൾ, കാലങ്ങളിലേക്കു വ്യാപിച്ചുപോകുക യും, അതിന്റെ സംസ്കാരികവും മതപരവുമായ പ്രാധാന്യം നിലനിർത്തുകയും ചെയ്തു. തമ്പുരാൻ പാട്ടുകൾ, കേരളത്തിന്റെ ആചാരങ്ങളിൽ ഉറച്ചു പോയ ഒരു സ്വരൂപമാണ്. അനുഷ്ഠാനങ്ങളുടെ പ്രധാന ഘടകമായിത്തന്നെ തമ്പുരാൻ പാട്ടുകൾ ഉണ്ടായിരുന്നുവെന്നു പറയാം. ഇന്നും പല ക്ഷേത്ര ങ്ങളിലും തമ്പുരാൻ പാട്ടുകൾ ആചരിക്കുന്നുണ്ട്.

അനുഷ്ഠാനകല എന്ന നിലയിൽ തമ്പുരാൻ പാ ട്ടുകൾക്ക് ഒരു പ്രാമുഖ്യമുണ്ട്. പ്രത്യേകിച്ച് കലാ പ്രദർശനങ്ങളിലും ക്ഷേത്രാചാരങ്ങളിലും ഈ പാട്ടുകൾക്ക് വലിയ പ്രാധാന്യം നൽകിയിരുന്നു. അനുഷ്ഠാനങ്ങളുടെ ആധുനിക രൂപങ്ങൾക്കും പുരാതന രൂപങ്ങൾക്കും ഒട്ടും വ്യത്യാസമില്ലാത്ത പോലെയാണ് നിലകൊള്ളുന്നത്. അതുപോലെ തമ്പുരാൻ പാട്ടുകൾ തലമുറകളുടെ കൈമാറ്റത്തി ൽ മാത്രം നിലനിന്ന ഒരു കലാരൂപം എന്ന നിലയിൽ, കാലാതീതമായ സാംസ്കാരിക പൈ തൃകമായിത്തീരുന്നു. തമ്പുരാൻ പാട്ടുകൾ ഇന്ന് ഈ രംഗത്ത് യുവജനതയെ ആകർഷിക്കാൻ സാദ്ധ്യതയുള്ള ശക്തമായ പൈതൃകമായി മാറാൻ പ്രാപ്തമാണ്. എന്നാലിവ ഇന്നത്തെ കേരളത്തിൽ അന്യംനിൽക്കുന്ന അവസ്ഥയിലാണ്. പാരമ്പര്യ ത്തിലൂന്നിയ ഒരു പാട്ടുകലയായിരുന്നതിനാൽ, ആധുനിക കാലഘട്ടത്തിൽ അത് ഒരു പരിധിവ രെ മറന്നുപോവുകയും, അത് അന്യമായി കാണ പ്പെടുകയും ചെയ്യുന്നുണ്ട്.

ഉപസംഹാരം

തമ്പുരാൻ പാട്ടുകൾ ഇന്ന് നമ്മുടെ സംസ്കാരത്തി നും സമൂഹത്തിനും നൽകുന്ന സാംസ്കാരിക പ്രാ ധാന്യം അനവധിയാണ്. ഇവയിൽ അടങ്ങിയിട്ടു ള്ള സംസ്കാരത്തിന്റെയും പൈതൃകത്തിന്റെയും സന്ദേശങ്ങൾ ഏറെ പ്രസക്തമാണ്. തമ്പുരാൻ ക്ഷേത്രങ്ങളിൽ പൈതൃകത്തിന്റെയും സംസ്കാര ത്തിന്റെയും ഭാഗമായി തമ്പുരാൻ പാട്ടുകൾ അവ തരിപ്പിക്കപ്പെടുന്നു. തമ്പുരാൻ പാട്ടുകൾ, കലാപ്ര വർത്തനങ്ങളിലും, സാഹിത്യാനുഷ്ഠാനങ്ങളിലും, സംഗീതവിഷയങ്ങളിലും സ്വാധീനം ചെലുത്തു ന്നുണ്ട്. തമ്പുരാൻ പാട്ടുകളുടെ സാംസ്കാരിക പ്രാധാന്യത്തെപ്പറ്റി പരാമർശിച്ചപ്പോൾ, ഈ പാട്ടുകൾ മലയാളി സമൂഹത്തിന്റെ അനുഷ്ഠാനങ്ങ ളിൽ നിന്നും ആചാരങ്ങളിൽ നിന്നും വളർന്നുവ ന്ന ഒരു അപൂർവ കലാരൂപമാണെന്ന് കാണാം. തമ്പുരാൻ പാട്ടുകളുടെ പൈതൃകവും പ്രസക്തിയും കേരളത്തിന്റെ സാംസ്കാരിക അവബോധത്തി നും ആധുനിക കലാപ്രവർത്തനങ്ങൾക്കുമായി വിലമതിക്കാനാവാത്തതാണ്. ഈ പാട്ടുകൾ സംരക്ഷിക്കുകയും, പുതിയ തലമുറയിലേക്ക് പക ർന്നു നൽകുകയും ചെയ്യേണ്ടത് അനിവാര്യമാണ്. എന്നാൽ പല തമ്പുരാൻ ക്ഷേത്രങ്ങളിലും പൂജയും ഉത്സവങ്ങളും മുടങ്ങിപ്പോകുന്നുണ്ട്. ചിലവ അടച്ച് പൂട്ടി. കാവുകൾ കയ്യേറപ്പെട്ട പോലെ തമ്പുരാൻ ക്ഷേത്രങ്ങളും നാമമാത്രമാവുകയും കയ്യേറപ്പെട്ടു കയും ചെയ്തതായി കാണാം. വിശുദ്ധിയുടെയും വ്രതനിഷ്ഠയുടെയും പാട്ടുകളായ ഇവ, അവ പാലി ക്കപ്പെടാൻ സാധിക്കാതെയും നശിക്കാനിടയായി ട്ടുണ്ട്.

ചതി, വഞ്ചന, യുദ്ധം, വീരമരണം ഇവയാണ് തമ്പുരാൻ പാട്ടുകളുടെ പ്രമേയം. അപ്പോൾ ഈ പാട്ടുകൾ പലതും ചതിയുടെയും വഞ്ചനയുടെയും കഥകളാണ് പറയുന്നത്. വീരാരാധനയുടെ ഒരു വശം മാത്രമാണവ. നാടു ഭരിച്ചിരുന്ന മഹാരാ ജാവ് ദൈവം തമ്പുരാനായി വരുന്നതായ സങ്ക ല്പത്തിലായതിനാൽ ഇവ ഒരു കാലത്ത് ഏറെ പ്രചാരത്തിലിരുന്നു.വാസ്തവത്തിൽ ഇത്തരം കഥകൾ സമൂഹത്തിന് എന്താണ് സംഭാവന നൽകുന്നത് എന്നത് ഒരു ചോദ്യമാണ്. പരസ്പരം പട പൊരുതാനും ചതിച്ചു കൊല്ലാനും മടിക്കാത്ത

മനുഷ്യരും തോറ്റ പോയാൽ ആത്മാഹുതി ചെയ്യു ന്ന വീരന്മാരും പുനർജ്ജനിച്ച് നാടിനെ അനുഗ്ര ഹിക്കും എന്ന സങ്കല്പം ഒരു തരത്തിൽ വിചിത്രം തന്നെ. അവരെ പ്രീതിപ്പെടുത്താൻ ഊട്ടും പാട്ടും നടത്തുന്നതുമെല്ലാം ആധുനിക തലമുറ മറ്റൊരു തരത്തിലാണ് കാണുന്നത്. ജീവിതം ആഘോ ഷമാക്കി കാണാനും ആചാരങ്ങൾ, അനുഷ്ഠാന ങ്ങൾ, വിശ്വാസങ്ങൾ, ദൈവം തുടങ്ങിയുള്ളവയെ തീർത്തും നിരാകരിക്കാനും യുക്തിബദ്ധതയോട് കൂടി ഇവയൊക്കെ വീക്ഷിക്കാനും ആധുനിക തലമുറ പഠിച്ചു കഴിഞ്ഞു. സാങ്കേതികവിദ്യയുടെ യും ഇന്റർനെറ്റിന്റെയും ലോകത്ത് വിഹരിക്കുന്ന പുതു തലമുറ ഇത്തരം ആചാരങ്ങളെ ലംഘിക്കാ നാണ് ശ്രമിക്കുക. അതിന് അവരെ കുറ്റപ്പെടു ത്താനും കഴിയില്ല അതിനാലാവണം ഈ കലാ രൂപമൊക്കെ അന്യം നിന്ന് പോകുന്നത് എന്ന് പറഞ്ഞു പോകുന്നത്. ഇങ്ങനെയൊക്കെയാണെ ങ്കിലും തമ്പുരാൻ പാട്ട് നിലനിർത്താനും ആചരി ക്കാനും നമ്മൾ ശ്രമിക്കുന്നിടത്താണ് കേരളസം സ്കാരവും പൈതൃകവും സംരക്ഷിക്കപ്പെടുന്നത്. അങ്ങനെ സംരക്ഷിക്കേണ്ടത് ഇന്നിന്റെ ആവശ്യ വുമാണ്.

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Nutritional Needs and Challenges in Female Sportspersons - A Literature Review

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Abstract

Nutrition is vital for enhancing performance and overall health for female sportspersons. Understanding their unique nutritional needs helps them excel in their sports and promotes long-term wellness. Key nutrients such as iron, calcium, and vitamin D are important for bone health and energy delivery. Hormonal changes, particularly during menstruation, pregnancy, and menopause, influence energy metabolism, making appropriate nutrient timing essential. Awareness of dietary requirements, hydration, and nutrient timing is essential for optimising performance, health, and recovery in female athletes.

Keywords: Nutrition, Calcium, Vitamin D, Hydration, Sports performance, Sportsperson

Introduction

Nutrition plays a critical role in sports performance, recovery, and overall athletic success. Athletes require a well-balanced diet to fuel their bodies, enhance endurance, build strength, and maintain optimal health. Beyond physical performance, nutrition also impacts mental focus, reaction time, and mood, which are essential for competitive sports. For female athletes, proper nutrition is crucial for athletic expertise and overall wellness. It enhances energy, recuperation, and physical strength. By comprehending their bodies' specific needs, female athletes can thrive in their chosen sports and promote long-term health. They need focused care on essential nutrients such as iron, calcium, and vitamin D to promote bone wellness, enhance oxygen delivery, and lower the risk of anaemia. Hormonal fluctuations, particularly during menstruation, pregnancy, and menopause, can affect energy metabolism, making proper nutrient timing and intake crucial for optimal performance and recovery.

Nutritional Requirements of Female Sportspersons

The interplay between nutrition, female physiology, training, hormones, and lifestyle factors significantly impacts athletic performance, recovery, and overall well-being. Understanding these relationships can help female athletes excel in their pursuits. Macronutrients form the cornerstone of sports nutrition for female athletes. Carbohydrates play a vital role in intense training sessions and endurance exercises, proteins facilitate muscle recovery and growth, while fats provide dense energy and help maintain hormonal balance. Micronutrients and proper hydration also contribute to maintaining health and enhancing performance. The nutritional needs of sportspersons vary significantly depending on the type, intensity, and duration of the sport they participate in. Sports can generally be categorised into endurance, strength/power, and team sports, each requiring distinct dietary approaches to optimise performance and recovery.

The connection among proteins, carbohydrates, and energy access holds significant value for female athletes due to the connection between female reproductive hormones and metabolic pathways. Insufficient intake of calories, carbohydrates, and proteins can negatively affect reproductive function, leading to a cascade of health issues. These encompass diminished thyroid activity, alterations in bone mineral regulation, and altered immune system and digestive processes. Ultimately, physical performance declines (Kleiner, 2008).

Energy balance and energy availability

Energy balance denotes the balance between energy ingested via food and drinks (energy intake) and energy utilised by the body (energy expenditure), measured in kilocalories (kcal). Athletes may experience 'energy deficit' or 'energy surplus' depending on the difference between these two factors.

Adequate calorie intake is necessary for an athlete to meet daily tasks, exercise, and reproductive requirements. While both genders can experience energy deficiency, it is more common among women. The most reliable indicator of energy efficiency is the rate of change. Often, insufficient food intake can lead to cessation of menstrual periods as the body redirects energy towards essential survival functions. Irregular or missing periods can have detrimental health effects due to hormonal changes, impacting bone density, immune system function, appetite, and other areas. It is important to note that synthetic contraceptives can mask some residual energy within the menstrual cycle.

Female athletes typically require higher caloric intake (often needing more than 2,400-3,000 kcal per day) than average individuals (needing 2,200-2,700 kcal per day), respectively to support their activity levels and muscle mass. However, it is important to maintain a balance to avoid weight gain (Gastrich et al., 2020).

Macronutrient intake

Carbohydrates: Carbohydrates are crucial for the body's energy, and athletes should consume 6 - 12g per kg body weight daily. Whole grains, fruits, underground vegetables, and legumes can provide sustained energy for exercise and recovery, with individual requirements varying based on body size and activity levels (Turner, 2021). The amount needed depends on the duration and intensity of the workout.

Proteins: Protein is essential for promoting muscle growth and supporting muscle repair in female athletes, including lean sources such as poultry, fish, lean, meats, eggs, dairy, legumes, and plant-based options (Tiwari, 2023). Protein requirements vary depending on the type of activity performed.

Fats: A healthy fat plays a vital role in hormone production, brain function, and long-term energy. Female athletes require adequate fat intake, comprising 20 - 35% of daily energy, for hormone production and overall health. Diets should include sufficient essential fatty acids (EFAs) while limiting saturated and trans-fats (Cancel, 2015). Foods like avocados, nuts, seeds, oil seeds, and fatty fish are good sources of healthy fats (Turner, 2021).

Micronutrient intake

Iron: Women with heavy menstrual periods and intense workouts are more likely to suffer from iron deficiency. Iron-rich foods such as lean meat, poultry, fish, legumes, and dark leafy greens are beneficial. Deficiency can lead to reduced performance, fatigue, decreased stamina, and diminished aerobic capacity (Drennan, 2020).

Calcium and vitamin D: A good diet rich in calcium and vitamin D is essential for bone health, particularly for athletes due to the stress on the body's muscle and biochemical systems (Andy, 2016). Women are at greater risk of developing weak bones due to higher estrogen levels. It is recommended to consume approximately 1,000 mg of calcium daily, including dairy products, fortified plant-based milk, leafy greens, and fatty fish. Vitamin D may enhance athletic performance, reduce injuries, and promote muscle function.

Folate and B vitamins: B vitamins and folate are essential to maintain a healthy metabolism of energy and general well-being. It is recommended to include whole grains, leafy vegetables, and enriched foods in the diet. Thiamin, riboflavin, vitamin B6, niacin, biotin, and choline are essential for red blood cell formation (Woolf et al., 2013).

Magnesium: Magnesium is essential for muscle operation, energy generation, and electrolyte equilibrium. Consuming foods such as nuts, seeds, whole grains, and leafy greens contributes to overall health.

Omega-3 fatty acids: Omega-3 fatty acids, including alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA), are distinctive molecules with signalling and anti-inflammatory properties (Simopoulos, 2007). They support performance, recovery, and injury prevention, and can be found in oily fish, walnuts, flaxseeds, and chia seeds.

Antioxidants: Antioxidants, which include vitamins, minerals, and micronutrients, shield cells by neutralising free radicals. Athletes should increase their antioxidant intake, particularly from fruits and vegetables, to combat oxidative stress caused by intense exercise and promote overall health, especially when regular training is not sufficient.

Hydration requirements

Proper hydration is essential for athletic performance, with a target of two to three litres of water daily. Dehydration can result in tiredness, muscle cramps, and dizziness in athletes. Sports beverages can replenish electrolytes and enhance performance. Sodium, potassium, magnesium, and calcium are essential for maintaining muscle function and proper hydration levels. During extended training sessions, sports drinks or electrolyte-rich foods (bananas, nuts, leafy greens) can be beneficial. Consuming low-carbohydrate, calorie-dense drinks can also help. Adjust intake according to workout intensity and duration (Tiwari, 2023). Female athletes should monitor their hydration before, during, and after physical activity. Water requirements depend on climate, exercise intensity, and perspiration rate.

Nutritional Challenges

Female athletes face unique challenges in balancing nutritional needs with energy expended during exercise. Energy availability refers to the remaining energy for bodily functions after subtracting energy used in exercise from energy consumed through food.

Female athletes should be monitored for relative energy deficiency in sports (RED-S). An athlete's fuel intake does not meet the energy requirements for training and daily activities. Failing to achieve energy balance or experiencing prolonged low energy availability can increase the risk of injury, illness, and weight reduction. In females, low energy availability (EA) can impact various aspects of health.

Effects on menstrual cycles: Low energy availability can cause estrogen levels to fluctuate, resulting in irregular or absent menstrual periods.

Skeletal health: Reduced energy availability can lead to decreased estrogen levels, which may weaken bones. This can result in conditions like stress fractures, osteopenia, and osteoporosis. To maintain strong bones, calcium and vitamin D supplements may be beneficial.

Maintaining a healthy weight: Consuming sufficient energy through a well-balanced diet is crucial. Insufficient energy intake may result in disordered eating patterns and nutrient deficiencies (Choi, 2024).

Vegetarian/Vegan Diet

Athletes following plant-based diets should consume a diverse range of plant proteins, including pulses, cereals, soy-based foods, and tree nuts to fulfil their protein requirements. Certain nutrients, such as vitamin B12 and iron, may be deficient in vegetarian or vegan diets, necessitating the use of supplements or fortified food products. Vegetarian and vegan athletes might need to supplement with creatine to enhance short-duration exercise performance, muscle growth, and strength, as their muscle carnosine levels are typically lower than those of omnivores. Understanding nutritious plant-based diets, comprising whole grains, legumes, fruits, vegetables, nuts, and seeds, is crucial. The use of fortified foods for calcium and iodised salt, along with appropriate supplements, is necessary.

Female Athlete Triad: Energy Availability, Bone Health, and Menstrual Health

During the peak years of bone growth (teenage to about 20 years), eating disorders are common in women. Female athletes with eating disorders, particularly those who restrict their food intake, are known to suffer from the female athlete triad. Female athletes are impacted by three conditions: eating disorders, amenorrhea, and osteoporosis. A lack of proper nutrition can lead to multiple periods being missed in a row. The athlete's chances of suffering a bone fracture increase because of this reduction in calcium and bone density.

The triad can emerge in any female competitor, but adolescent girls face the highest vulnerability due to ongoing biological transformations and periods of rapid growth, alongside peer and societal pressures, as well as swiftly shifting life contexts during their teenage years. Any female athlete may develop one or several aspects of the triad. Athletes engaging in sports that promote slenderness for visual appeal (like figure skating or gymnastics) or enhanced performance (such as long-distance running or rowing) are particularly at risk.

Disordered eating

Different types of eating disorders can impact almost every system in the body, including restricted eating, excessive exercise, overeating, self-induced vomiting, laxative abuse, diuretic abuse, digestion and eating, and spitting (Joy et al., 2016). There is a strong association between eating disorders (ED) and sports and they can have some negative impact on mental and physical health (Malayil, 2013).

Women are at a higher risk of developing eating disorders compared to men. This can lead to dehydration, muscle fatigue, weakness, heart arrhythmias, kidney damage, and other serious conditions (Mulcahey, 2020).

Menstruation

Women athletes must comprehend the impact of the menstrual cycle on their performance and recovery. To stay healthy and well, female athletes should make wise food decisions to meet their nutritional needs during menstruation. Whether the athlete is intentionally limiting food consumption or unknowingly not consuming enough, an energy deficit can interfere with the reproductive system. Young athletes may experience delayed puberty and menstruation. Menstruation in elderly women can be shorter than usual (oligomenorrhea) or completely absent for multiple consecutive cycles (menorrhoea). Menstrual disorders can have detrimental effects on various body systems and may result in permanent side effects if not addressed (Schlicter, 2021).

Changes in muscle activation, energy usage, thermoregulation, and body composition are probable contributors to the observed enhancements in overall bodily performance across multiple stages. Changing diet and exercise routines in various stages can aid in controlling hormonal changes.

Bone health

Moreover, hormonal fluctuations as well as energy inadequacy can be deleterious to bone health. In such circumstances, the ability of bones to perform self-repair is suboptimal. For instance, as a result of loss of bone mass through repeated stress injuries, an athlete may develop either an osteopenia or osteoporosis bone condition as the bone mass replacement is the entire root cause of this issue (Forsyth, 2020).

Common Concerns Faced by Female Sportspersons

Female issues are profound and multifaceted, impacting sports, society, and wider cultural dynamics. Due to societal norms and limited resources, women often have fewer opportunities to participate in sports. The majority of sports-related studies focus on male athletes, leaving gaps in addressing female athletes' unique issues, such as anterior cruciate ligament (ACL) injuries and menstruation-related performance issues.

Even when their performance or viewership metrics are comparable, female athletes earn less than their male counterparts. Common concerns faced by female sportsperson were the following

Sports anaemia

Most athletes experience sports anaemia at the start of intensive training, which is caused by an enhanced blood volume that dilutes blood constituents.

Overuse injuries

When the musculoskeletal tissues are stressed or loaded with no adequate recovery, the tissues experience an overuse injury. It has been reported that about 50% of the young athletes' injuries result from overuse, and most of them are preventable. The total prevalence of overuse injuries is lower than it should be because of such factors as the absence of a consistent definition of the injury, its classification, and methods of reporting its incidence. (Stone et al., 2016). Patellofemoral discomfort syndrome and stress fractures are common overuse injuries in post-pubescent girls.

Patellofemoral pain syndrome

Among teenage girls, patellofemoral pain syndrome is quite prevalent. This condition is marked by pain in the front of the knee that arises with physical activity. Using stairs or running on inclined surfaces exacerbates the discomfort. It is linked to weaknesses and imbalances in the lower extremities, as well as insufficient strength in the core and hips. A reduction in abduction, external rotation, and extension strength has been noted in women suffering from patellofemoral pain syndrome (Vora et al., 2018).

Stress fracture

Repetitive loading that exceeds the bone's ability to heal causes a stress fracture. Females are more likely than guys to suffer from stress fractures, which can occur in any sport. The tibia, tarsals, metatarsals, and femur are all common locations. Once a stress fracture is discovered, it is important to assess lower limb alignment, strength, and gait, and to screen for risk factors such as eating disorders, menstrual disorders, and other long-term health conditions that could make the athletes more likely to develop osteoporosis.

(ACL) injury

ACL tears are more prone to occur in women because of the structure of their knee joints. There are usually more looseness and range of motion in women's joints, including their knees (Cosgarea, 2022).

Dietary Supplement

The consumption of supplements is widespread among athletes, with rates ranging from 40% to 100% depending on the sport and competitive level. Reports indicate that female athletes are more likely to use supplements than their male counterparts. However, females typically opt for vitamin and mineral-based supplements, while males tend to prefer those aimed at increasing muscle mass, such as creatine and protein powder. Additionally, elite athletes tend to use supplements more than non-elite athletes, and those involved in endurance sports show higher levels of usage than athletes in other sports. The following information will concentrate on ergogenic supplements (i.e., those designed to boost performance) that may offer advantages for female athletes, as well as guidelines for safe usage. It is crucial to highlight that a cost/benefit evaluation should be conducted by a qualified professional, in collaboration with the athlete, prior to any supplement usage. Factors such as the athlete's needs, preferences, and type of sport should be taken into account, among others.

Nutrition Goals

Nutrition is one of the pillars of athletic performance as well as health, and in women, this factor is even greater. Most female athletes are balancing their nutritional needs with their training schedules. Women participate in many sports today. Each time the female athletes break records and push boundaries, nutrition becomes even more important. It is not only about what she eats, but the confidence that comes from knowing one's body and its requirements. When professionally fuelled, female athletes can achieve higher jumps, faster sprints, and more impressive performances in their sport as well as in health and wellness. Working with a qualified sports nutritionist can help generate a personalised nutrition plan that meets individual requirements and goal, enabling athletes to become exemplars of strength, stamina, and unlimited potential.

Timing: Consistent consumption of meals and snacks containing protein and carbohydrates supports adaptation, muscle preservation, and weight gain. Athletes should eat every 2 - 3 hours to maintain physical performance and light training (Kerksick et al., 2018). Pre-workout meals should be carbohydrate-rich for energy, while post-workout meals should focus on protein for muscle repair.

Snacking: Snacks play a vital role in helping athletes meet their caloric and nutritional needs, and maintain energy levels between meals (Louisa, 2021). Nutritious options include yogurt, nuts, fruits, and whole-grain crackers (Manuel, 2019).

Supplements: While athletes may benefit from dietary supplements, it is essential to consult a registered dietitian or healthcare professional before use.

Menstrual cycle: Female athletes should be aware of their menstrual cycles and make informed decisions to support their health. Physiological changes, including muscle activation, energy use, temperature regulation, and body composition, can affect performance across different phases, requiring adjustments in diet and training (Schlicter, 2021).

Bodyweight training: Woman athletes are interested in bodyweight training to maintain a balance between upper and lower body weights, improve bone density, fat loss, and muscle definition, and enhance sports performance.

Practical Tips for Female Athletes

- A sports dietitian can tailor a plan based on the type of sport, body composition, and menstrual cycle.
- Ensure that energy intake is supported without overwhelming digestion.
- Pre- and post-training nutrition is important for energy and recovery.
- If dietary intake is inadequate (under professional guidance), consider taking supplements like iron, omega-3 fatty acids, calcium, or vitamin D after consultation with a physician.
- To ensure adequate nutrition, monitor body composition, energy levels, and menstrual health regularly.
- A proper warm-up and cool-down is important for exercise performance.

Conclusion

Proper nutrition is essential for female sportspersons to optimise performance,

promote recovery, and maintain long-term health. A balanced diet rich in carbohydrates, proteins, healthy fats, vitamins, and minerals is critical to meet the unique energy and nutritional demands of training and competition.

Special considerations, such as iron and calcium intake, hydration, and the timing of meals, play a crucial role in supporting endurance, strength, and overall well-being. Attention to issues like the Female Athlete Triad (low energy availability, menstrual dysfunction, and bone health) ensures a holistic approach to health and performance.

By prioritising individualised nutrition strategies, female athletes can achieve their goals while fostering a sustainable and healthy lifestyle.

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Voices Unheard: Challenges Faced by Children of Migrant Workers in Kerala – A Review

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Abstract

As highlighted by the 2011 Census, one in every five migrants in India is a child, reflecting a significant demographic that is frequently marginalised in discussions surrounding migration and labour. The Indian state of Kerala witnessed significant inbound migration in recent years, with millions of workers arriving from other states. This review evaluates existing literature and research findings to explore the socio-economic, educational-nutritional and health impacts of parental migration on children. By critically analysing various case studies and field reports, this article unveils the systemic barriers that prevent these children from achieving their full potential. Through qualitative interviews and case studies, the article seeks to amplify the voices of these children, shedding light on their experiences and aspirations. It underscores the need for targeted policy interventions that address both the immediate and long-term challenges faced by these children. By fostering inclusive educational practices, providing mental health support, offering nutritional practices, and promoting community awareness, stakeholders can work towards creating a more equitable environment for the children of migrant workers.

Keywords: Children of migrant workers, impact of migration, nutrition, health, education.

Introduction

Migration is a significant global trend. Human Development Report (2023–2024) highlights India's internal migration rate has increased significantly over the past decade, driven primarily by economic factors. Kerala, often hailed as India's most socially advanced state, is home to millions of migrant workers who contribute significantly to its economic growth. However, beneath the surface lies a vulnerable population: the young children of these migrant workers. Estimated to be over 500,000, these children face unparalleled challenges, from inadequate access to education, nutrition and healthcare to emotional distress and social isolation (National Human Rights Commission Research Report, 2018). Despite their significant presence, the experiences of young children of migrant workers in Kerala remain grossly understudied. This review focuses on migrant children in Kerala, examining their unique challenges and experiences. Understanding the impact of migration on these children is crucial for developing effective policies and support systems to ensure their well-being and integration into society.

Concept of Migration

"An itinerant worker who travels from one area to another in search of work" is how the American Heritage Dictionary of the English Language defines a migrant. The World Health Organisation (2024) now defines a migrant as someone who "travels across state or international borders to participate in activities for remuneration and is generally socio-culturally and linguistically considerably different from the majority of the domestic population". The United Nations Convention on the Rights of Migrants defines a migrant as "one that moves from one region to another by chance, instinct, or plan" (Migrant Clinicians Network, 2024). The term 'migration' literally refers to the more or less permanent relocation of an individual or group of individuals from one cultural area or physical space to another.

History of Migration

Migration has been a fundamental aspect of human society since time immemorial. According to the International Labour Organization (ILO, 2024), migration has a long history driven by four main factors: colonialism, industrialisation, urbanisation, and globalisation. These factors have shaped migration patterns over centuries. From colonial era's forced migration of enslaved people and indentured servants to the industrialisation-driven internal migration in Europe and the post-World War II government-sponsored recruitment of migrant workers, migration patterns have evolved significantly. Today, migration continues to be shaped by global events, events of economic inequality, and conflict, resulting in increased migration flows and complex challenges for migrant workers. This on-going shift transforms the demographic landscape, creating both challenges and opportunities, as nations grapple with the implications of an increasingly mobile population.

Migration in India

India has one of the most complicated and varied migration histories in the world. In India, people are constantly moving from one state to another, from one region to another, and from rural to urban areas (Mandal et al., 2023). Three out of four homes in various parts of India are made up of migrants. The national economy and society are significantly impacted by the effects of migration on people, households, and regions (Srivastava & Sasikumar, 2019). Migrants are inherently vulnerable to human rights violations from the outset of their journey, the moment they depart from their country of origin (Bustamante, 2021). To put it in another way, a person is less vulnerable at home than he or she is immediately after leaving to migrate. According to De Rosa et al. (2018) numerous factors, such as social and political marginalisation and a lack of socioeconomic and societal resources, influence susceptibility.

Migrant Workers in Kerala

The Saikia (2015) study aims to investigate the financial circumstances of Kerala's migrant labour force. The study was done on a sample of 166 migrant workers, and it threw light on their income, savings, consumption patterns, and the kind of employment of migrant workers in the Thiruvananthapuram district of Kerala. The analysis shows evidence of long-distance migration from states like West Bengal and Assam in recent years, while previous studies show evidence of short-distance migration from surrounding states like Tamil Nadu and Karnataka to Kerala. The study indicated that the migrant workers' informal information networks are crucial to the movement of workers to Kerala. Bad economic circumstances back home, high wages, and improved job prospects in Kerala are the main reasons for migration.

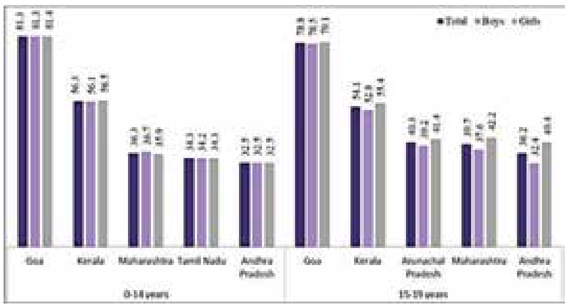

Figure 1: Top five states with the highest percentage of in-migrant children (*Source*: Human Development Report, 2020)

Kerala is the new Gulf, according to a poll by the Centre of Development Studies in Thiruvananthapuram, where workers make over Rs 350 per day, or over Rs 10,000 per month, which is six times the national average. Numerous migrant workers travel to Kerala to work in a variety of industries, including construction, jewellery production, small-scale businesses, hospitality, and food-processing facilities, according to a poll on their pay trends and living conditions. Kerala is home to a large number of Tamil labourers and their families. They work for themselves or in the hospitality and other service sectors. The vast majority of migrants from other states are unskilled or semiskilled workers, with a very small percentage being professionals and skilled workers (Viju, 2019).

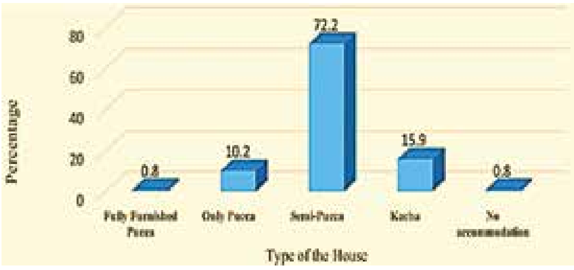

Figure 2 : Types of housing (*Source*: Justin, 2020)

Migrant housing and hygienic conditions (as determined by their usage of restrooms) have allowed us to assess their living conditions. The majority of migrant workers in Kerala (72%) can afford semi-pucca or half-cemented homes. The majority of these migrant construction workers, over 16%, are living in Kachha homes, as they are affordable. The study discovered during the survey that these other state migrant workers would rather co-exist with their friends and family. Since they typically use their own social space and cook and eat together, it really benefits them. It is noteworthy that 15% of migrant workers have reported not using any lavatory facilities, despite Kerala being the first Indian state to be designated as an open defecation-free state. However, in Kerala, just over 13% of these migrant workers reported using public restrooms, compared to roughly 73% who reported using private restrooms (Justin, 2020).

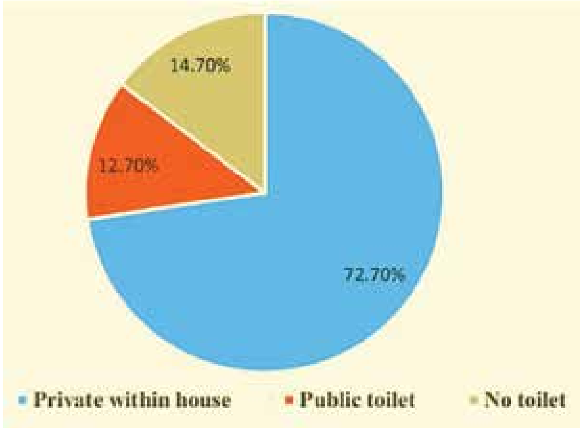

Figure 3 : Types of toilet facilities used by migrants (*Source*: Justin, 2020).

Many migrant labourers have bad behaviours that can eventually cause health problems. The majority of the male employees smoke and consume alcohol. Pan parag is not widely used. Approximately 50% of the female employees, however, chew pan. The Pan-chewing habit is more prevalent among women than among men (Jajati et al., 2021). These poor lifestyle choices have an indirect impact on their children.

Attitude towards Migrants

The attitudes towards migrants are complex and often contradictory, shaped by a multitude of factors including political narratives, economic competition, cultural exchanges, and personal experiences. On the one hand, many host communities recognise the significant contributions made by migrants to their economies and societies. From a labour perspective, migrants often fill critical gaps in the workforce, particularly in sectors facing labour shortage (Srivastava & Sasikumar, 2019). However, often migrants are depicted as criminals or welfare abusers, ignoring the reality that they also face considerable hardships and risks. Misinformation and stereotypes play a significant role in cementing such negative attitudes. Many migrants themselves are driven by desperation, seeking safety and stability for their families in environments that may initially be hostile to them.

Problems Encountered by the Natives Due to Migrants

According to a study by Justin (2020), Kerala's native labourers have expressed concerns over wage suppression, as the influx of migrants is perceived to drive down workforce standards and salary levels. Additionally, cultural clashes and social integration issues further exacerbate the situation. The diverse socio-cultural backgrounds of migrants often clash with the local traditions and practices, leading to misunderstandings and conflicts within communities. The sudden influx of migrants has led to a surge in population density, resulting in overburdened public services such as healthcare and education, which strains the already limited resources available to local citizens. Furthermore, research has found that migrant populations are disproportionately affected by social issues, including substance abuse, illegal activities, and criminal cases, which are more prevalent among migrants compared to native populations (Kumar & Nair, 2020).

Demographic Profile of Migrant Children

Although different policy concerns apply to both stocks and flows, migration data relate to the stocks of migrants rather than the movements. According to a small number of pilot studies or scant field data, children in the 0–14 age group who accompany their parents during family migration may make up around one-third of all migrants, while children in the elementary school age group (6–14 years old) make up roughly 20%, or almost six million. However, these are cautious estimations, and the actual number might be higher (Smitha, 2018).

A study by the Centre for Labour Research and Action reveals significant demographic trends among migrant children. Notably, 47% of this population falls within the 6–14 age bracket, suitable for formal education, while 43% are below 6 years. Additionally, an analysis of migrant children in three cities in Odisha indicates a near-equal gender distribution in studies, with 51% boys and 49% girls.

Impact of Migration on Their Children

Limited access to quality education and childcare

Disadvantaged children, specifically those between six and ten years of age, especially from families of commercial sex workers and migrant labourers, experience significant obstacles in accessing quality education and childcare, culminating in substantial school dropout rates. The numbers may be low at the moment, but they are expected to rise in the future as the state's migrant labour force grows and their children's education becomes a problem due to their frequent moves. The State government of Kerala suggested that these children will require specialised training (Jajati et al., 2021).

The study reveals that the domestic migrant labourers in Kerala are not among the most backward groups in their home states, with relatively higher educational and economic backgrounds. Despite earning a good income in Kerala, their children's lower school enrolment rates are primarily due to language barriers and frequent changes in employment locations (Table 1). A significant concern is the high dropout rates among migrant children, who are often forced to engage in manual labour to support their families, thereby violating their human rights (National Human Rights Commission Research Report, 2018).

Health disparities and inadequate nutrition

National statistics on child health indicators, such as infant mortality, birth deformities, adolescent pregnancy, and homicide rates, are lacking for the migrant community. Inadequate preventive medical care is provided to migrant children, who also face nutritional deprivation, occupational illness and injury, a higher prevalence of infectious diseases and toxic exposures, a higher risk of family violence, and mental health issues (Zachariah et al., 2019).

According to Jajati et al. (2021), children whose parents relocate in search of work experience significant levels of malnutrition. The high degree of malnourishment has been attributed to a number of factors, including feeding, dietary patterns, diseases, and maternal malnourishment.

Migration disrupts women's childcare routines, putting their children's health and nutritional status at risk. Research shows that migrant women often fail to follow optimal breastfeeding practices, critical for infant nutrition and long-term health (Saikia, 2015). A study by Kusuma et al. (2018) reveals that rural migrant children face higher malnutrition and inadequate immunisation rates than urban migrants, while urban migrants have lower immunisation rates than native urban residents.

Table 1 : Dropout reasons of migrant children

Nature of migration	Drop out reasons	Frequency	Percentage
Not migrated with parents	Financial crisis	27	69
	Language problem	2	5
	Migration of parents	9	23
	Distance to school	-	-
	Parents not interested	19	48
	Children not interested	15	39
	Discrimination at school	-	-
	Transfer of parents	-	-
	Total number of dropouts	39	-
Migrated to Kerala with parents	Financial crisis	31	52
	Language problem	5	8
	Migration of parents	34	57
	Distance to school	-	-
	Parents not interested	18	30
	Children not interested	3	5
	Discrimination at school	2	3
	Transfer of parents	-	-
	Total number of dropouts	60	-

[*Source*: National Human Rights Commission Research Report (2018)]

Parental poverty, frequent migrations, low health expectations, delayed schooling, cramped living conditions, and inadequate sanitary facilities are common issues faced by children of migrant households. Children of migrants are more susceptible to TB, poor nutrition, anaemia, short stature, undiagnosed congenital anomalies, undiagnosed delayed development, substance abuse, teen pregnancy, bacterial and viral gastroenteritis, intestinal parasites, skin infections, scabies, and head lice, as well as to pesticide exposure and poor nutrition. Dental care and immunisations are frequently neglected or postponed. Many kids have never had their eyes and ears checked for chronic illnesses. The children, the family, the society, and the nation all gain when these youngsters receive medical care (Mu & Jaysawal, 2024).

Vulnerability to child labour and exploitation

Children from migrant households experience poverty at far higher rates than other children. The lack of access to high-quality medical treatment and educational resources is another aspect of poverty that can result in children's poor health and academic failure. Numerous risk factors, including having a mother with low levels of education and/or living in a low-income, linguistically isolated, or single-parent household, have been connected to adverse developmental outcomes for children. Furthermore, studies indicate that although kids are usually resistant to a single risk factor, the combined impact of several risk factors, no matter which one they are, might compromise a child's normal development (Nazeer Mohammed, 2024).

According to the International Labour Organization (2024) "Child-labor includes children prematurely leading adult lives, working long hours for low wages, under conditions demanding of their health and their physical and mental development, sometimes separated from their families, and frequently deprived of meaningful educational and training opportunities that could open up for them a better future".

Many migrant children work in the unorganised sector, specifically in establishments such as hotels, restaurants, canteens, roadside dhabas, shops, and workshops. In addition, they work as merchants, coolies, shoeshine boys, and hawkers. In big cities, children are often engaged in cleaning and washing autos (Smitha, 2018).

Social inclusion and policy interventions

Social stigma and legal challenges also pose significant barriers to the inclusion of children of migrant workers. Many face discrimination based on their socio-economic status, which can hinder their integration into the community. The Kerala State Child Policy (2013) recognises the need for social protection mechanisms but often lacks the necessary implementation strategies to effectively address the issues faced by these children. To combat social stigma, community awareness programmes and inclusive policies are essential. Engaging local communities through workshops and outreach can foster understanding and empathy, promoting social cohesion. Moreover, legal frameworks that protect the rights of these children must be strengthened to ensure they have equal access to resources and opportunities.

Policy interventions need to focus on creating robust healthcare access for these children. The implementation of health camps and mental health initiatives in rural areas can address some of these challenges. Furthermore, integrating health education into school curricula can empower children with knowledge about personal health and well-being, enabling them to make informed choices (Jajati et al., 2021).

Conclusion

In examining the intricate realities faced by children of migrant workers in Kerala, it becomes clear that their voices remain largely unheard amidst a backdrop of socio-economic challenges and systemic neglect. The plight of these children is a poignant reminder of the broader implications of migration. While migration can be viewed as a pathway to economic betterment for families, it often comes at a significant cost to the younger generation left behind. Many children are deprived of the basic right to education as they grapple with the instability of their living conditions and the absence of parental care. Schools often lack the resources and infrastructure to cater to these vulnerable groups, leading to high dropout rates and a cycle of poverty that perpetuates itself across generations.

Moreover, the challenges extend beyond education. Health concerns are paramount, with limited access to healthcare services exacerbating the vulnerabilities of these children. The emotional toll of separation from parents, coupled with the societal stigma faced by families of migrant workers, creates an environment where these children feel isolated and unsupported. The lack of psychological support further compounds their struggles, leaving them to navigate their hardships without the necessary coping mechanisms.

In light of these challenges, it is imperative for policymakers, educators, and community leaders to address the systemic gaps affecting these children. Initiatives aimed at integrating children of migrant workers into mainstream educational systems are crucial. This includes the development of inclusive policies that recognise and accommodate the unique needs of these children, providing them with access to quality education and support services. Furthermore, fostering partnerships between government agencies, NGOs (Non-Government Organizations), and local communities can help create a more robust support network that addresses not only educational needs but also their health and emotional, well-being.

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Development and Standardisation of Kodo Millet- Based Probiotic Drink Blended with Fruit Pulp

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Abstract

Kodo millet, a nutrient-dense and gluten-free grain, serves as an excellent medium for probiotic fermentation. This study aimed to develop and standardise a Kodo- millet-based probiotic drink using Lactobacillus casei and fruit pulps (banana, mango, strawberry, and palmyra fruit). Various formulations with different ratios of Kodo millet milk to fruit pulp were tested, and their sensory qualities were evaluated using a nine-point Hedonic scale. Among the formulations, the combination with banana pulp at an 80:20 ratio was rated highest in consumer acceptability. Nutritional analysis revealed that the selected probiotic drink offered a rich source of energy, protein, dietary fibre, calcium, and iron. This study demonstrates the potential of Kodo- millet-based probiotic beverages to combine the digestive benefits of probiotics with the nutritional value of millet and fruits, offering a promising addition to the functional foods market.

Keywords: Kodo millet, probiotic drink, functional food, fruit pulp, gut health

Introduction

The increasing awareness of the health benefits of probiotics has positioned them as a vital component of functional foods. Probiotics, as defined by the World Health Organization (WHO, 2001), are live microorganisms which, when administered in adequate amounts, confer a health benefit on the host. Their widely recognised benefits include improved gastrointestinal health, enhanced immune function, and the maintenance of a balanced intestinal microbiota (Sánchez et al., 2017). Food products are considered probiotic when they contain at least 10^6 CFU/ml of viable microorganisms, with commonly used strains belonging to the genera *Lactobacillus* and *Bifidobacterium*. Notably, *Lactobacillus casei* has demonstrated anti-hypertensive effects, antioxidant activity, and lipid profile improvements (Balthazar et al., 2018; Sperry et al; 2018).

Millets, particularly Kodo millet (Paspalum scrobiculatum), are underutilized grains with significant nutritional value. It is gluten-free, rich in protein (11%), dietary fibre (14.3%), and micronutrients such as B vitamins, calcium, and iron (IIMR, 2017). With its low fat content (4.2%) and digestibility, Kodo millet supports nervous system health and is particularly beneficial for individuals with gluten intolerance and postmenopausal women managing high blood pressure and cholesterol levels, key indicators of cardiovascular disease (Singh, et al., 2023).

Millet-based probiotic beverages present a unique opportunity to harness the nutritional value of millets and the digestive benefits of probiotics. Incorporating fruit pulps further enhances the sensory appeal and nutritional content of these beverages by adding natural sweetness, flavour, and antioxidants. This development not only caters to health-conscious consumers but also contributes to food innovation and sustainability, making it a promising addition to the functional foods market.

This study was initiated with the following objectives:

- To develop a Kodo- millet-based probiotic drink blended with fruit pulp.
- To assess the overall acceptability of the beverage through sensory evaluation and to find out the best probiotic beverage formulation.
- To determine the nutritional composition of the developed product.

Methodology

Selection of raw materials

Kodo millet, optimum ripened fruits, namely, banana (Robusta), mango (Moovandan), strawberry, and palmyra fruit, milk powder and sugar were the raw materials selected for the study. All the raw materials were purchased from local market. Lyophilised bacterial culture of *L. casei* (MTCC no. 12468) was procured from the Microbial Type Culture Collection, Chandigarh.

Processing of raw materials

Kodo millet was washed and then soaked in water for 8 hours overnight. The water was drained off and the grains were pulverised for extraction of milk by adding water in the ratio of 2:1 (water- kodo millet). Selected fruits were washed thoroughly and blanched separately for 5 minutes at low flame, then cooled to room temperature for preparing the fruit pulps. Selected fruits were crushed and pulped separately to extract the pulp and were pasteurized at 70° C for 30 seconds.

Microbiological analysis

The Gram staining was performed on the strains which were isolated from the MRS medium. Cultures were grown at an appropriate temperature of 37ºC for 24 hours under anaerobic conditions. The stained slides were observed under the microscopes at different magnifications. The *Lactobacillus* is a gram-positive, bacillus that absorbs the primary stain and appears rod-shaped (Figure 1).

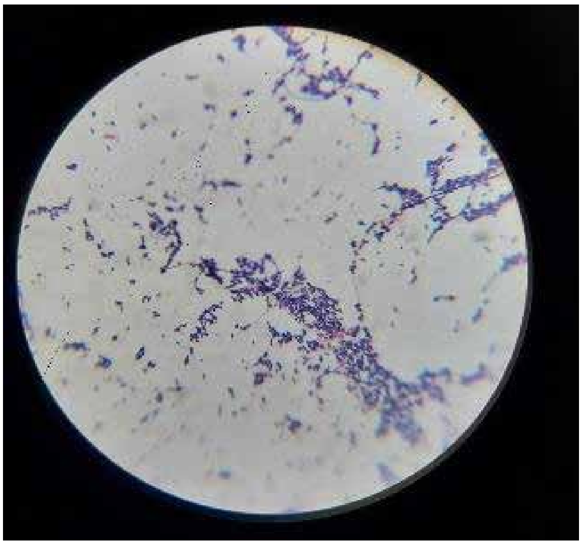


Figure 1 : Microscopic observation of Gram-stained colony of *L. casei*

Development of the probiotic beverage blend

First, the Kodo millet milk was cooked with 5g of milk powder and 15g of sugar up to 80°C for 10 minutes in a sterilised container. To this liquid, fruit pulps of various fruits selected were added except in control. The ratios of Kodo millet milk added to different fruit pulps were 85:15, 80:20, 75:25 and 70:30. When the solution was cooled to 40°C, 1% activated culture of *L. casei* was inoculated. The mixture was incubated for 6 hours in a metabolic shaker to maintain the temperature. Subsequently, the prepared drinks were packed in food-grade containers and refrigerated at 4°C.

Standardisation

All the combinations tried out were evaluated for their sensory properties using a nine point hedonic scale by 15 trained and semi-trained panellists from different age groups. The best combinations were selected based on the highest score obtained by calculating the sum of the mean score of each parameters -including appearance, colour, aroma, taste, texture, and overall acceptability.

Statistical analysis

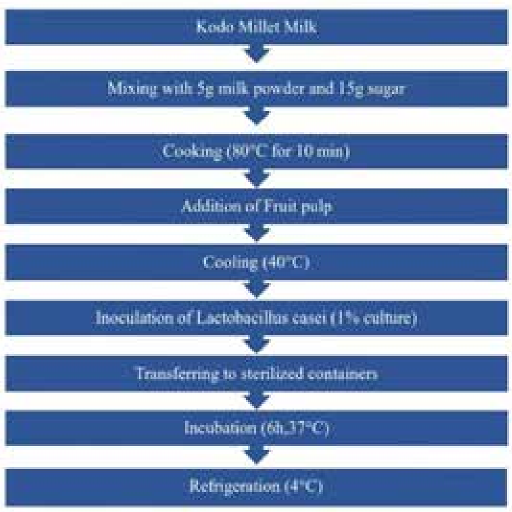
Data pertaining to the sensory attributes of probiotic products were averaged to obtain mean scores which were subjected to analysis of variance(two-way ANOVA) to determine if statistical difference ($p<0.05$) existed. Results from all the tests were expressed as means ± standard deviations (SD).

Nutritional composition of the selected beverage

Nutritive contents such as energy, carbohydrates, protein, fat, iron, calcium and fibre content were calculated. The nutritional composition of the probiotic drinks was calculated by using the ICMR Indian food composition table, NIN-2023.

Results and Discussion

Development of probiotic drink blended with fruit pulp



Different proportions of Kodo millet milk and fruit pulp were formulated for the development and standardisation of the fruit-blended Kodo millet-based probiotic drink. The different formulations were named T_1, T_2, T_3, and T_4 and the control treatment was named T_0. The following were the proportions of millet milk to fruit pulp for each formulation:

- Treatment 1 (T_1) 85:15,
- Treatment 2 (T_2) 80:20,
- Treatment 3(T_3) 75:25
- Treatment 4 (T_4) 70:30.

To each of these treatments, 15g sugar, 5g milk powder and 1% inoculum were added. Control treatment T_0, contained only the millet milk (100%) and was inoculated with 1% *L. casei* inoculum. Seventeen combinations were prepared.

Control T_0(100:0)

Evaluation of sensory qualities

The development of the Kodo- millet-based probiotic drink revealed that, among the different fruit pulp formulations, the 80:20 ratio of millet milk to fruit pulp (T_2) performed best in terms of sensory acceptability.

Kodo millet based probiotic beverages blended with banana pulp

Kodo millet based probiotic beverages blended with mango pulp

Figure 2 : Seventeen treatments of the probiotic blend prepared

The banana-based drink, T_2B (42.59) was selected as the best probiotic drink based on analysis of the sum of the mean scores for various sensory parameters of each treatment. Followed by Treatment 2with mango pulp, T_2M (41.98) and then Treatment 2 with Palmyra fruit pulp, T_2P (41.58). The 80:20 ratio performed best due to its ability to balance the natural flavour and texture of Kodo millet milk with the sweetness, aroma, and flavour of fruit pulp. Higher proportions of fruit pulp (e.g., 70:30 in T_4) may have overpowered the unique characteristics of the millet milk, whereas lower proportions (e.g., 85:15 in T_1) may not have adequately improved the sensory appeal.

3.2.1 Statistical Analysis

Further statistical analysis was done by TWO FACTOR ANOVA. The results were analysed using two-way ANOVA with replication and the ANOVA table is shown in Figure 2.

ANOVA: Two-Factor with Replication

SUMMARY	Taste	Texture	Colour	Flavour	Overall acceptance	Total
Probiotic Control(100:0)						
Count	15	15	15	15	15	75
Sum	113	110	107	106	115	551
Average	7.533333	7.333333	7.133333	7.066667	7.666667	7.346667
Variance	1.266667	0.952381	0.695238	0.638095	0.809524	0.878198
T_2Banana pulp (80:20)						
Count	15	15	15	15	15	75
Sum	129	128	125	127	131	640
Average	8.6	8.533333	8.333333	8.466667	8.733333	8.533333
Variance	0.4	0.266667	0.238095	0.266667	0.209524	0.279279
(Mango pulp) Variation 2(80:20)						
Count	15	15	15	15	15	75
Sum	127	125	124	125	129	630
Average	8.466667	8.333333	8.266667	8.333333	8.6	8.4
Variance	0.266667	0.238095	0.209524	0.238095	0.4	0.27027
(Palmyra pulp) Variation 2(80:20)						
Count	15	15	15	15	15	75
Sum	124	123	123	126	126	622
Average	8.266667	8.2	8.2	8.4	8.4	8.293333
Variance	0.209524	0.171429	0.314286	0.257143	0.257143	0.237117
Total						
Count	60	60	60	60	60	
Sum	493	486	479	484	501	
Average	8.216667	8.1	7.983333	8.066667	8.35	
Variance	0.681073	0.6	0.592938	0.673446	0.570339	

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Sample	65.63667	3	21.87889	52.68998	4.94E-27	2.636845
Columns	4.886667	4	1.221667	2.942087	0.020864	2.403885
Interaction	2.046667	12	0.170556	0.410742	0.958882	1.786856
Within	116.2667	280	0.415238			
Total	188.8367	299				

Figure 3: Two - way ANOVA table

H_0: There is no difference between parameters in columns

H_1: There is a difference between in parameters in columns

From the analysis F value obtained for the columns is greater than the F critical value (2.94 >2.40). Therefore, the parameters in the column are significant. The variation due to different probiotic drinks is significantly different (p value is 0.000). Also, the mean effects in taste, texture, colour, flavour, and overall acceptance are significantly different (p value is 0.021).

Nutritional composition of the selected formulations

Table 1 : Nutritive values of the developed drink

Parameters	**Approximate value per 100g**
Energy	79.5 kcal
Carbohydrate	16.18 g
Protein	2.99 g
Fat	1.77 g
Fibre	4.46 g
Iron	1.22 mg
Calcium	41.80 mg

The nutrient composition of the selected treatment of Kodo- millet-based probiotic drink blended with banana pulp was calculated with respect to their energy, carbohydrate, protein, fats and minor nutrients such as iron, calcium, and fibre (Table 2). The energy content of the selected beverage is 79.5 kcal/100g, while carbohydrate content is 16.18 g/100g. The protein content of the formulation is 2.99 g per 100g and fat content is 1.77 g/100g. The minor nutrients such as iron, calcium, and fibre are 1.22mg /100g, 41.80 mg /100g, and 4.46 g/100g respectively.

The results of this study demonstrate that Kodo millet-based probiotic beverages enriched with fruit pulps not only nutritionally beneficial but also possess significant sensory appeal. In line with previous findings of Mojikon et al. (2022) which highlighted the addition of fruit and vegetable juices in probiotic beverages, the incorporation of fruit pulps in probiotic beverages significantly improves their overall flavour profile, natural sweetness, and antioxidant content.

Potential for scalability and commercialisation

The scalability of the developed formulation is promising, given its high acceptability and nutritional benefits. The formulation aligns with consumer demand for functional beverages that combine gut health benefits with natural flavours. From a commercialisation perspective, banana pulp emerges as a cost-effective and widely available ingredient with a broad consumer appeal, further enhancing its market potential. Additionally, the use of Kodo millet, a sustainable and underutilised crop, supports the growing trend towards eco-friendly and health-promoting food products.

Conclusion

This study summarises that the addition of fruit pulp especially banana, into the Kodo millet-based probiotic drink had a positive impact on the nutrients and sensory properties of the developed probiotic beverages. It creates a functional drink that leverages the health benefits of both millets and probiotics while promoting the use of underutilized grains, contributing to dietary diversity and sustainability. Fruit juices can be an ideal option for the delivery of probiotics and due to its palatability, it will be acceptable for a large segment of the population who wish to have plant-based probiotic drinks.

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Enhancing Nutritional Knowledge for Cancer Prevention: A Study Among College Students in Thiruvananthapuram

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Abstract

This study aimed to assess the knowledge level of nutrition and cancer prevention among college students and to evaluate the impact of nutritional education on their understanding. A cross-sectional study was conducted among college students aged 18–24 years in Thiruvananthapuram, Kerala. Choosing 18-24 age group for enhancing cancer prevention knowledge is highly relevant for reasons like developing healthy habits, influence on peers and family, early detection and awareness, and a long-term public health impact. A questionnaire was used to collect data on the socio-economic status of the respondents' families, their knowledge regarding cancer prevention, and their attitudes and practices towards it. Nutritional awareness sessions were conducted through face-to-face interactions and phone calls. The paired t-test and correlation analysis were applied to analyse pre- and post-intervention knowledge scores. In the pre-test, two-thirds of the boys and nearly three-fourths of the girls exhibited a good understanding of dietary factors linked to cancer prevention. After the awareness sessions, over 75% of students from both genders showed good knowledge. The analysis revealed that age was not a determinant factor for knowledge levels; however, knowledge scores were significantly associated with the students' place of residence. The findings suggest that awareness and education strategies significantly enhance knowledge about cancer prevention among college students. Including healthy habits in daily life, along with educational programmes, can further improve students' understanding of cancer prevention. This study emphasises the need for targeted initiatives to promote a health-conscious mindset among young adults.

Keywords: Cancer prevention, Nutritional awareness, College students, Knowledge and practices, Healthy lifestyle

Introduction

Cancer is a significant health concern that can affect individuals of all ages, including students aged 18 years and above, where early awareness is crucial for prevention, early detection, and improved treatment outcomes. Educating this age group promotes healthy lifestyle habits and equips them with the knowledge to reduce future risks.

The focus on conducting research among the student group aged 18 and above stems from their pivotal role as future influencers of society. This age group is at a crucial stage of developing lifelong habits and decision-making skills. Young adults in this phase are more receptive to health-related knowledge, making them ideal candidates for interventions that promote long-term preventive behaviours. Studies suggest that early exposure to cancer awareness programmes significantly improves long-term adherence to healthy habits, reducing lifetime cancer risks (Kushi et al., 2012).

By enhancing their knowledge and fostering positive attitudes towards cancer prevention, such research aims to empower them to make informed lifestyle choices that can reduce their risk of cancer. Additionally, educated students can act as advocates, spreading awareness within their peer networks and communities, thus amplifying the impact of prevention strategies. Research by Story et al. (2008) supports the idea that peer-led health promotion initiatives are highly effective among young adults, as they rely on social influence to drive behavioural changes. This underscores the importance of equipping this age group with accurate information on cancer prevention. This proactive approach contributes to the broader goal of reducing the burden of cancer and promoting a culture of health consciousness in the coming generations.

A study by Timothy J. Key et al. (2014) highlights the role of dietary habits and lifestyle choices, such as body weight maintenance, alcohol moderation, and regular physical activity, in reducing cancer risks. It emphasises the importance of consuming fruits, vegetables, and moderate amounts of preserved and red meats while avoiding high salt intake and very hot foods and drinks. Additionally, the American Institute for Cancer Research (AICR) and the World Cancer Research Fund (WCRF) emphasise that nearly one-third of all cancers could be prevented through diet and lifestyle modifications (WCRF/AICR, 2018). This highlights the crucial role of nutrition education in public health initiatives.

The National Cancer Registry Programme Report (2020) provides a comprehensive overview of cancer trends in India, identifying lung cancer and breast cancer as the most prevalent cancers among males and females, respectively. This study underscores the increasing incidence of cancer and the need for early detection and prevention strategies, such as risk reduction and management. Further evidence from the Global Cancer Observatory (GLOBOCAN, 2020) highlights a steady rise in diet-related cancers worldwide, reinforcing the necessity of nutrition-focused cancer prevention programmes, particularly among young adults.

Methodology

Participants

The study was conducted among undergraduate and postgraduate students between 18 and 24 years of age without considering any specific physiological status from colleges in urban areas in Thiruvananthapuram. A total of 100 samples consisting of a group of 50 boys and 50 girls were chosen for the study. The sampling method used for the selection of samples is convenience sampling.

Data collection/materials

The survey method was used to collect the information through direct interviews and online platforms. A sociodemographic schedule to collect information regarding the demographic characteristics of respondents and questionnaire were employed for data collection.

The socio-demographic schedule gathered personal details of the respondents including age, gender, religion, community, type of work, educational qualifications, place of residence, marital status, type of family, and family income. The questionnaire used techniques to collect anthropometric information. To analyse respondents' knowledge, close-ended questions with binary (yes/no) responses were used alongside other formats to elicit detailed information. The awareness sessions covered topics on cancer risks, diet, lifestyle, and early detection to ensure consistency. Presentations and quizzes based on these topics were also conducted which helped students for better understanding on the content.

The questionnaire was validated prior to data collection through a pilot study and ensured the reliability and validity of the questionnaire for the target population consultation with help of a statistician.

The questionnaire was distributed to respondents and data were collected both online, through emails, and offline, via direct distribution of the questionnaire.

The data were analysed using percentage analysis and interpreted with the aid of tables, charts, and diagrams. Statistical analysis was performed using appropriate tools to derive meaningful insights.

Analysis/methods

For judging the significance of the mean of difference between the two related samples paired t-test was used. A paired t-test is a statistical method used to compare the means of two related groups to identify any significant differences between them. This test can be used when we want to compare the before and after observations obtained from the same subjects.

The time duration between the intervention and the post-test was clearly noted as 2–4 weeks to ensure clarity regarding the timeline of the study. Differences arising due to methods of data collection, including pre-test and post-test phases, were carefully considered and addressed. It was ensured that consistent methods were employed across both phases, and any variations were systematically documented to maintain accuracy.

Results and Discussion

Demographic profile of the respondents

This includes the data regarding certain basic background information of the samples like age, location of residence, siblings, educational status of parents, occupational status of parents, and their family income.

Table 1: Distribution of respondents based on the demographic profile

Variables	No. of respondents
Age in years	18-19 yrs
Males	19 (38%)
Female	30 (60%)
Residence	Rural/urban
Males (rural)	30 (60%)
Females (urban)	31 (62%)
Type of family	Nuclear
Male	36 (72%)
Female	42 (84%)
Occupation of father	Daily wages
Male	29 (58%)
Female	21 (42%)
Occupation of mother	Housewife
Male	37 (74%)
Female	37 (74%)
Education of father	10th standard
Male	28 (56%)
Female	23 (46%)
Education of mother	10th standard
Males	31 (62%)
Females	16 (32%)
Siblings	Brother/sister
Males(sister)	31 (62%)
Female (brother)	25 (50%)
Monthly income	Below 10,000
Male	31 (62%)
Fenale	20 (40%)

As presented in Table 1, the majority of male respondents (38%) belonged to the age group of 18–19 years. Similarly, among females, the majority (60%) were aged 18–19 years. In terms of residential location, 60% of male respondents were from rural areas, whereas 62% of female respondents were from urban areas. Regarding family type, most male respondents (72%) belonged to nuclear families, as did 84% of females. For father's occupations, the majority of fathers of male respondents (58%) were daily wage earners, while 42% of fathers of female respondents held the same occupation. Among mothers, the majority (74%) in both groups were housewives. Regarding educational qualifications, 56% of fathers of male respondents and 46% of fathers of female respondents had studied up to 10th standard. Similarly, 62% of mothers of male respondents had studied up to 10th standard, whereas 32% of mothers of female respondents had the same qualification.

Regarding siblings, 62% of male respondents had sisters, while 50% of female respondents had brothers. In terms of family income, 62% of male respondents and 40% of female respondents belonged to families earning below Rs. 10,000/- per month.

These findings highlight that the majority of respondents across all categories fall within similar dominant demographic trends.

Knowledge of students regarding nutrition related to cancer prevention

The knowledge regarding nutrition related to cancer prevention was assessed by evaluating the knowledge score before and after providing nutrition education. The session was conducted through direct interactions, telephone calls and online platform, with each session lasting approximately 10-15 minutes. The number of participants varied according to the place in some areas it included 10-15 participants. Most of the class was taken individually for respondents. In the pre-test, they simply answered based on their general knowledge. The same test was administered after providing an awareness class of about 20-minute duration once to these students on the topic 'Nutrition Related to Cancer Prevention'.

Six statements related to nutrition and cancer prevention were selected for evaluation, with three responses: 'yes', 'no', and 'I don't know'. These statements were chosen after being reviewed and rated by experts. Based on the score, the respondent's knowledge level was categorised as poor (0-4), average (5-8), and good (9-12). The details are provided in Table 2.

Table 2: Distribution of respondents based on pre- and post-test score of knowledge

Knowledge pre-test	Male		Female	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Poor	2	4.00	1	2.00
Average	15	30.00	14	28.00
Good	33	66.00	35	70.00
Total	50	100.00	50	100.00
Knowledge post test	Frequency	Percentage (%)	Frequency	Percentage (%)
Poor	0	0.00	0	0.00
Average	3	6.00	1	2.00
Good	47	94.00	49	98.00
Total	50	100	50	100

From the Table 2, it seems among males that knowledge score of the respondents in the pre-test is 66%, which is categorised as good knowledge, while 30% had average knowledge, and 4% had poor knowledge regarding nutrition related to cancer prevention. However, in the post test, their scores increased, with 94% having good knowledge and 6% having average knowledge.

Among females, the knowledge score of the respondents in the pre-test is 70%, categorised as good knowledge, 28% had average knowledge, and only 2% had poor knowledge regarding nutrition related to cancer prevention. However, in the post test, their scores increased, with 98% having good knowledge and 2% having average knowledge. This shows that after receiving nutrition education, the knowledge level of the respondents improved.

Ibadan and Folasire (2016) have investigated nutrition-related knowledge on cancer prevention among respondents. Their findings revealed that less than half (49%) of participants had good knowledge, while the majority (51%) demonstrated poor knowledge. Among the 20 knowledge-based questions, over 60% of respondents correctly answered 15 questions. The study highlighted key areas of understanding, with over 60% acknowledging the protective role of limiting energy-dense foods against cancer and 70.3% agreeing on the importance of fruits and vegetables comprising half of an adult's plate. However, gaps were identified, as only 58.3% recognised reducing alcohol intake as protective, and 64.6% were aware of the benefits of avoiding tobacco use or exposure to smokers. These findings underscore the need for targeted educational interventions to address specific gaps in cancer prevention knowledge.

Table 3: Comparison of knowledge of males based on their location of residence

Location	*Knowledge score*		*Paired t-test significance*
	Pre-test	*Post test*	
Rural	*9.27±0.46*	*11.14±0.25*	*-5.577**
Urban	*9±0.45*	*11.8±0.12*	*-5.984**

* Significant.

A paired sample t-test was conducted to evaluate the knowledge of males regarding nutrition related to cancer prevention. The results indicated a significant increase in knowledge scores among males residing in rural areas, with pre-test scores (mean = 9.27, SE = 0.46) improving to post-test scores (mean = 11.14, SE = 0.25). Similarly, males from urban areas showed a significant increase in knowledge, with pretest scores (mean = 9, SE = 0.45) rising to post- test scores (mean = 11.8, SE = 0.12).

The paired t-test values of for both rural (-5.577) and urban (-5.984) areas revealed statistically significant differences in the knowledge scores based on location of residence. This suggests that the educational intervention effectively enhanced nutrition-related knowledge about cancer prevention among males in both rural and urban settings, with noticeable improvements in both groups.

In a study by Lahiji et al. (2019), students' knowledge significantly varied by age, the field of study, and family history of cancer. This study was conducted among 500 female students of Iran University of Medical Science. The student's knowledge with the mean score of 16.97, significantly varied by age ($p = 0.03$), the field of study ($p = 0.001$), and the family history of breast cancer ($p = 0.01$).

Table 4: Comparison of knowledge of females based on their location of residence

Location	Knowledge score		Paired t-test significance
	Pretest	Post test	
Rural	9.95±0.47	11.63±0.19	-3.6181*
Urban	9.29±0.4	11.19±0.2	-5.1562*

* Significant.

A paired sample t-test was conducted to assess the knowledge of females regarding nutrition related to cancer prevention. The results indicated a significant increase in the knowledge scores of females residing in rural areas, with pre-test scores (mean = 9.95, SE = 0.47) improving to post scores (mean = 11.63, SE = 0.19). Similarly, females from urban areas showed a significant improvement, with pretest scores (mean = 9.29, SE = 0.4) increasing to post-test scores (mean = 11.19, SE = 0.2).

The paired t-test values for both rural (-3.6181) and urban (-5.1562) areas indicated statistically significant differences in the knowledge scores based on location of residence. These findings suggest that the nutrition education intervention effectively enhanced knowledge related to cancer prevention among females in both rural and urban settings, with significant improvements observed in both groups.

Ahmed et al. (2020) assessed the long-term effects of nutrition education programmes on dietary behaviour changes in women from rural and urban areas. Their study revealed that rural participants retained knowledge longer, possibly due to community reinforcement and the perceived novelty of the information.

Table 5 : Comparison of knowledge score of college students based on their education

Education level	Knowledge score		Paired t-test significance
	Pretest	Post test	
12th	8.98±1.3	11.38±1.6	-8.31724*
Degree	9.72±1.4	11.38±1.61	-6.13759*

* Significant.

A paired sample t-test was conducted to evaluate the knowledge scores of college students on nutrition related to cancer prevention based on their educational level. The analysis revealed a significant improvement in knowledge among students with a 12th standard education level, with pre-test scores (mean = 8.98, SE = 1.3) increasing to post-test scores (mean = 11.38, SE = 1.6). Similarly, students with a degree-level education also demonstrated a significant increase in scores, from pre-test (mean = 9.72, SE = 1.4) to post-test (mean = 11.38, SE = 1.61).

The paired t-test results indicated statistically significant differences in the knowledge scores for both groups, with t-values of -8.31724 for 12th standard students and -6.13759 for degree-level students. These findings highlight that the education intervention was effective in improving nutrition-related knowledge for cancer prevention across different educational backgrounds, with notable gains observed in both groups.

Wilson and Green (2022) compared the outcomes of cancer prevention education across different education levels. They found that while all groups showed significant improvement, students with advanced education were better at applying knowledge to lifestyle changes.

Another study by Chen and Li (2020) assessed the effectiveness of nutrition education on cancer prevention awareness among diverse educational groups. Their study concluded that interventions were equally impactful for high school and college students, but the depth of knowledge retained varied.

Conclusion

The study highlights a significant improvement in knowledge regarding nutrition and cancer prevention among respondents across various demographic and educational groups following the nutrition education intervention. Initial assessments revealed a low to moderate level of knowledge, with variations based on gender, location of residence, and educational background. However, the post-test results demonstrated substantial gains in knowledge scores across all groups, underscoring the effectiveness of the educational sessions.

For males, a marked improvement in knowledge was observed in both rural and urban settings, with urban respondents showing slightly higher post-test scores. Similarly, females exhibited significant advancements in knowledge levels, with notable improvements in both rural and urban areas. Furthermore, the findings indicate that respondents with different educational levels (12th standard and degree-level) benefited significantly from the intervention, with statistically significant differences in pre- and post-test scores for both groups.

The results emphasise the importance of targeted educational programmes in enhancing awareness of cancer prevention through nutrition. Incorporating such interventions into regular curricula and public health campaigns could further improve knowledge, attitudes, and practices among diverse populations. Additionally, continued efforts in developing innovative and accessible educational strategies are recommended to sustain and expand the positive impact observed in this study.

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Assessing Climate Change Resilience in Coastal Communities of Thiruvananthapuram District, Kerala

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Abstract

Climate change poses significant threats to coastal communities, particularly in regions susceptible to rising sea levels, extreme weather events, and changing precipitation patterns. This study aims to assess the climate change resilience of coastal communities in Thiruvananthapuram district, Kerala, India. Thiruvananthapuram, located along the Arabian Sea, is vulnerable to the impacts of climate change, including sea-level rise, increased cyclonic activity, and altered precipitation regimes.

The research employs an approach, where socio-economic indicators such as income levels, education, and healthcare access are considered to understand the social dimensions of climate vulnerability. Community resilience is assessed through interviews conducted with residents. In the study, 54 persons above the age of 18 years from the coastal area of Thiruvananthapuram Corporation participated. The study investigates the adaptive capacity of communities, including their awareness of climate change impacts, the utilisation of traditional knowledge, and the effectiveness of existing adaptive strategies. Furthermore, the research explores community-based initiatives and government policies aimed at enhancing climate resilience in the region.

The study findings suggest that socio-economic factors influence the resilience of coastal communities in Thiruvananthapuram. The study contributes to the growing body of knowledge on climate change adaptation and resilience, offering insights that can inform policy decisions and community-driven initiatives. By understanding the specific challenges faced by these communities, stakeholders can develop targeted strategies to enhance their adaptive capacity and promote sustainable development in the face of climate change.

Keywords: Climate change resilience, Climate change vulnerability, adaptive capacity, sustainable development, climate adaptation

Introduction

Climate change poses an unprecedented challenge to coastal communities worldwide, requiring a comprehensive understanding of their resilience capacities for effective adaptation and sustainable development. This research endeavours to contribute to this imperative discourse by focusing on the assessment of climate change resilience in the coastal communities of Thiruvananthapuram district, Kerala. Situated along the southwest coast of India, Thiruvananthapuram is not only renowned for its ecological diversity but also increasingly vulnerable to the multifaceted impacts of climate change, including rising sea levels, erratic weather patterns, and heightened cyclonic activity.

The urgency of this study is underscored by the unique socio-ecological characteristics of the region, where coastal communities are intricately connected to the marine environment for their livelihoods and sustenance. Understanding the resilience of these communities is essential not only for their immediate well-being but also for informing broader strategies aimed at fostering adaptive capacities in the face of ongoing and future climate challenges. In recent years, there has been a growing recognition of the need for interdisciplinary research that integrates environmental science, social science, and community perspectives to holistically assess climate change resilience. This study adopts an approach that considers data sourced from remote sensing, geographic information system (GIS) analysis, and socio-economic surveys. By combining quantitative and qualitative data, we aim to unravel the intricate web of factors influencing the resilience of coastal communities in Thiruvananthapuram.

This research aligns with global initiatives promoting sustainable development goals and climate action. The findings are anticipated to contribute not only to the academic understanding of climate change resilience but also to serve as a practical guide for policymakers, local communities, and non-governmental organisations involved in climate adaptation and disaster risk reduction efforts. As we embark on this endeavour, we acknowledge the complex nature of climate change resilience and the necessity for nuanced and context-specific insights. By focusing on Thiruvananthapuram district, Kerala, the study aims to provide a localised perspective that can be extrapolated to similar coastal settings, thereby contributing to a broader understanding of how communities can navigate the challenges posed by a changing climate.

Objectives

1. To understand the demographic profile of the respondents
2. To know socioeconomic profile factors influencing the resilience level
3. To assess the climate change resilience of the respondents.

Significance

The significance of this study lies in its potential to inform targeted and context-specific strategies for enhancing climate change resilience in the coastal communities of Thiruvananthapuram district, Kerala. By comprehensively assessing the socio-economic and environmental factors that contribute to or hinder resilience, the research aims to empower local communities and policymakers with valuable insights. This knowledge is crucial for the development and implementation of effective climate change adaptation policies and sustainable development initiatives. Additionally, the findings may contribute to the broader field of environmental conservation and disaster risk reduction, providing data-driven inputs for the preservation of critical ecosystems and the planning of resilient communities in the face of cyclones and rising sea levels.

Methodology

Study area

The area of study is Thiruvananthapuram Corporation which is a part of the Coastal Regulation Zone (CRZ) of Thiruvananthapuram District, Kerala. The coastal areas of seas, bays, creeks, rivers, and backwaters get influenced by tides up to 500 m from the high tide line (HTL), and the land between the low tide line (LTL) and the high tide line was declared as CRZ in 1991.

Figure 1: CRZ zones of Thiruvananthapuram district.

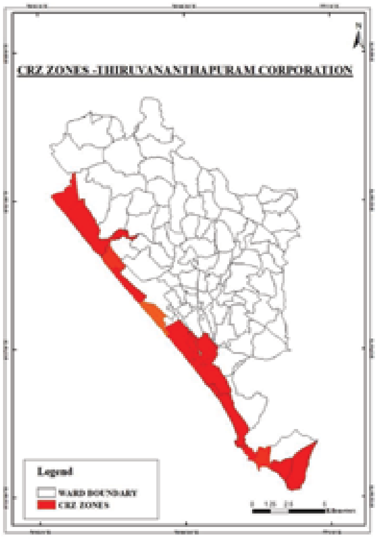

Figure 2 : CRZ zones of Thiruvananthapuram Corporation.

Data collection and analysis

Primary data were collected through a self-structured interview schedule exploring the socio-economic profile and climate change resilience level of the participants. For the study, 54 participants above the age of 18 years from the coastal area of Thiruvananthapuram Corporation were selected through a random sampling method. Secondary data were collected from the official website of authorities like KSDMA, and INCOIS and related studies and relevant articles. Collected data were analysed using Descriptive Statistics.

Results and Discussion

The results of this study are discussed in the following aspects.

1. Socioeconomic factors influencing the resilience level
2. Climate Change Resilience Assessment

Socio-economic factors influencing the resilience level

Table 1: Socio-economic profile of the respondents

Sl. no.	Aspect	Frequency (N = 54)	Percentage
1.	Age in years		
	18–27	8	14.8
	28–37	8	14.8
	38–48	22	40.7
	Above 48	16	29.6
2.	Gender		
	Female	18	33.3
	Male	36	66.7
3.	Years of residence		
	1–10 years	4	7.4
	11–20	6	11.1
	21–30	22	40.7
	More than 30	22	40.7
4.	Educational Qualification		
	Schooling	26	48.1
	Higher secondary	12	22.2
	Degree and above	16	29.6

5.	Employment sector		
	Private	8	14.8
	Self employed	8	14.8
	Fishing and fisheries related	24	44.4
	Not employed	14	25.9
6.	Monthly income		
	Less than RS.1500	12	22.2
	1500–6000	28	51.9
	Above 6000	14	25.9

Table 1 gives information about the socio-economic background of the participants in the study. As shown in the table, 40.7% of the participants were from the age category of 38–43 years, and 66.7% were male and 33.3% were female. A majority of the participants (80%) have resided in coastal areas for more than 20 years. While looking at the educational qualification, 48.1% of participants have done their schooling, 29.6% of participants have graduated or above and 22.2% of participants have higher secondary as their qualification. Of the participants, 44.4% worked in fishing or fisheries-related sector, 14.8% each worked in the private sector or were self-employed, and 25.9% were unemployed. In this study, 81.5% of participants' families have a dependence on fisheries for their family's livelihood. More than half of the participants (51.9%) were under the income category of Rs.1500–6000 per month, while 25.9% had a monthly income above Rs. 6000 and 22.2% had a monthly income below Rs.1500.

Table 2 : Climate change awareness of the respondents

Sl. no.	Aspect	Frequency (N=54)	Percentage
1.	**Do you think that there is a great change in the availability of fish in the last 10 years?**		
	Yes, it increased	8	14.80
	Yes, it decreased	34	63.00
	Yes, the species changed	10	18.50
	No, I couldn't notice any change	2	3.70
2.	**Major environmental issues in the region**		
	Coastal erosion	36	66.6
	Lack of fresh drinking water	4	7.4
	Lack of proper waste management	6	11.1
	Extreme climate events	8	14.8

Table 2 shows some aspects related to the climate change awareness of the respondents. As shown in the table, 96% said that there is a great change in the availability of fish for the past 10 years and they consider that it has a strong connection with climate change. Further, 63% of participants said that the availability of fish decreased, 18.5% said that the availability of species changed, 14.8% said that the availability increased, and only 3.7% said that they could not notice any change in the availability of fish. While considering the major environmental issue they were facing in the region, 66.6% said that coastal erosion is their major issue, 14.8% said that extreme climate events are a major problem, 11.1%

said that lack of proper waste management is their major issue, and 7.4% said that lack of proper drinking water is what they suffer from.

Climate change resilience assessment

Climate change resilience encompasses a multifaceted set of aspects that collectively contribute to the ability of individuals, communities, ecosystems, and systems to anticipate, prepare for, respond to, and recover from the adverse impacts of climate change. Table 3 lists different aspects of climate change resilience.

Table 3 : Community and social resilience of the respondents

Sl. no.	Statement	Frequency (N=54)	Percentage
1	**Our area and neighbourhood have very good cooperation and cohesiveness while facing extreme climate events.**		
	Strongly agree	4	7.4
	Agree	34	63
	Neutral	2	3.7
	Disagree	6	11.1
	Strongly disagree	8	14.8
2	**There are some individual household activities initiated to protect personal property from acute climate events**		
	Strongly agree	0	0
	Agree	8	14.8
	Neutral	10	18.5
	Disagree	36	66.7
	Strongly disagree	0	0
3	**There are some community-initiated activities to protect personal property from acute climate events.**		
	Strongly agree	4	7.4
	Agree	12	22.2
	Neutral	14	25.9
	Disagree	24	44.4
	Strongly disagree	0	0
4	**I have been involved in activities to protect natural resources in the coastal region**		
	Strongly agree	0	0
	Agree	44	81.5
	Neutral	8	14.8
	Disagree	2	3.7
	Strongly disagree	0	0
5.	**The political and social leadership in the region is very efficient in tackling climate change-related issues.**		
	Strongly agree	0	0
	Agree	12	22.2
	Neutral	6	11.1
	Disagree	18	33.3
	Strongly disagree	18	33.3

Table 3 shows the community and social resilience aspects during climate change events. Community cohesion is the strength and connectedness within a community, fostering mutual support and collaboration during and after climate-related events. The majority of the study participants said that they have the unity and connectedness among themselves in facing an extreme climate event. The individual household-initiated activities or community-initiated activities to protect personal property from acute climate events are not that much among the selected participants. The majority of the participants disagree with those statements. While considering the participation in activities, only 22% of the participants say that the political and social leadership in the region is very efficient in tackling climate change-related issues.

Table 4 : Economic resilience of the respondents

Sl. No	Statement	Frequency (N=54)	Percentage
1.	My financial status is stable even in case of some loss of assets happening through extreme weather events.		
	Strongly agree	0	0
	Agree	2	3.7
	Neutral	16	29.6
	Disagree	16	29.6
	Strongly disagree	20	37

Economic resilience is a major factor when considering climate change impacts on the community. Only 3.7% can ensure that their financial status is stable even in case of some loss of assets happening through extreme weather events (Table 4).

Table 5 : Infrastructure resilience of the respondents

Sl. No	**Statement**	**Frequency (N=54)**	**Percentage**
1.	**We have proper shelter and infrastructure for being safe during an extreme climate event.**		
	Strongly agree	0	0
	Agree	12	22.2
	Neutral	12	22.2
	Disagree	18	33.3
	Strongly disagree	12	22.2
2.	**There is a proper transportation facility and vehicles available during the time of acute climate events.**		
	Strongly agree	0	0
	Agree	26	48.1
	Neutral	12	22.2
	Disagree	10	18.5
	Strongly disagree	6	11.1

A properly built environment, i.e., the presence of physical structures and infrastructure (buildings, roads, bridges) to withstand and recover from climate-related events, and a critical infrastructure, i.e., resilience of key systems such as energy, water, and communication networks to climate-related stresses are inevitable while considering the resilience aspect.

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The majority of the participants admit that they do not have proper shelter and infrastructure to be safe during an extreme climate event (Table 5). This is very concerning when we consider the area's vulnerability to extreme climate events. However, considering the transportation facilities in the area, it is relieving that the majority of participants believe they have proper transportation facilities.

Table 6 : Governance and institutional resilience of the respondents

Sl. No	Statement	Frequency (N=54)	Percentage
1	**I have received proper support from the government during extreme weather events in the past.**		
	Strongly agree	0	0
	Agree	4	7.4
	Neutral	18	33.3
	Disagree	14	25.9
	Strongly disagree	18	33.3
2	**I have been part of some training programmes regarding disaster management by the government, other concerned authorities and organisations.**		
	Strongly agree	0	0
	Agree	4	7.4
	Neutral	18	33.3
	Disagree	14	25.9
	Strongly disagree	18	33.3
3.	**The weather alert system prevailing is accurate and very helpful.**		
	Strongly agree	0	0
	Agree	16	29.6
	Neutral	10	18.5
	Disagree	20	37
	Strongly disagree	8	14.8
4.	**I am satisfied with the rehabilitation schemes and services provided by the government.**		
	Strongly agree	0	0
	Agree	2	3.7
	Neutral	20	37.0
	Disagree	26	48
	Strongly disagree	6	11.1

Government and other major institutions in the community have a great role in resilience building. While considering Table 6, only 7.4% of the participants could agree that they received proper support from the government during the extreme weather events in the past. And the majority disagree with this. The majority of the participants have never been part of any training programmes regarding disaster management by the government, other concerned authorities, and organisations.

While considering the early warning system, the majority of the participants consider it as inaccurate and there are a lot of participants who are fishermen who ignore the warning and go fishing. Only 3.7% of participants in the study feel satisfied with the rehabilitation schemes and services provided by the government and the majority disagree with the statement.

Table 7: Health resilience of the respondents

Sl. no.	Statement	Frequency (N=54)	Percentage
1	**There is proper medical care facilities and support system nearby which is easily accessible in case of emergency.**		
	Strongly agree	4	7.4
	Agree	38	70.4
	Neutral	6	11.1
	Disagree	2	3.7
	Strongly disagree	4	7.4

The resilience of local health infrastructure and services to climate-induced stresses is inevitable. The availability, proximity, and proper functioning are very important. It is good to see that a large majority (70%) agree that they have proper medical care facilities and support systems nearby which are easily accessible in case of emergency (Table 7).

Table 8 : General Awareness and Indigenous Knowledge of the Respondents

Sl. No	Statement	Frequency (N=54)	Percentage
1	**I am aware of the possible extreme climate events which could happen in my region.**		
	Strongly agree	14	25.9
	Agree	34	63
	Neutral	6	11.1
	Disagree	0	0
	Strongly disagree	0	0
2	**I am aware of the impacts and effects of extreme climate events to our region and assets.**		
	Strongly agree	8	14.8
	Agree	34	63
	Neutral	6	11.1
	Disagree	6	11.1
	Strongly disagree	0	0
3	**I have proper knowledge regarding how to face an extreme climate event and the measures to take to be safe.**		
	Strongly agree	0	0
	Agree	20	37.0
	Neutral	6	11.1
	Disagree	24	44.4
	Strongly disagree	4	7.4
4	**The usage of indigenous knowledge for predicting extreme climate events is still there**.		
	Strongly agree	10	18.5
	Agree	28	51.9
	Neutral	2	3.7
	Disagree	10	18.5
	Strongly disagree	4	7.4

While considering the awareness level of participants regarding the possible extreme climate events that could happen in their region, 63% of respondents say that they are aware of those and that they are aware of the possible impacts and effects of extreme climate events in their region and assets (Table 8). Only 37% of the participants agree that they have proper knowledge regarding how to face an extreme climate event and the measures to take to be safe**.** The utilisation of traditional knowledge systems to enhance resilience and adaptation strategies is also something to be considered for effective adaptation, as 51% of the participants say that the usage of indigenous knowledge for predicting extreme climate events is still there.

Table 9 : Technological resilience of the respondents

Sl. No	Statement	Frequency (N=54)	Percentage
1	**I have the basic knowledge to use ICT devices and access the alert messages.**		
	Strongly agree	0	0
	Agree	26	48.1
	Neutral	6	11.1
	Disagree	16	29.6
	Strongly disagree	6	11.1
2.	**I have the database of contact numbers and contact details required during an extreme climate event.**		
	Strongly agree	0	0
	Agree	4	7.4
	Neutral	14	25.9
	Disagree	30	55.6
	Strongly disagree	6	11.1

The development and implementation of technological solutions that enhance resilience and access towards that has a great impact on resilience building. Nearly half of the participants (48%) say that they have the basic knowledge to use ICT devices and access the alert messages (Table 9). However, 55.6% of participants disagree that they have the database of contact numbers and contact details required during an extreme climate event.

Table 10 : Adaptive capacity of the respondents

Sl. No	Statement	Frequency (N=54)	Percentage
1.	**Me and my family are prepared to face an extreme climate event occurrence if proper warning and alert system is provided**.		
	Strongly agree	4	7.4
	Agree	26	48.1
	Neutral	0	0
	Disagree	20	37
	Strongly disagree	4	7.4
2.	**I am part of community organisations/self-help groups/neighbourhood groups and we used to discuss capacity building and risk reduction activities there.**		

	Strongly agree	6	11.1
	Agree	8	14.8
	Neutral	14	25.9
	Disagree	22	40.7
	Strongly disagree	4	7.4

The ability of individuals and communities to learn from past experiences and share knowledge to improve future adaptive strategies along with enhancing the skills and resources necessary for effective adaptation and response to climate change also has to be considered. A shown in Table 10, 48.1% of the participants agree to the statement that their family is prepared to face an extreme climate event occurrence if a proper warning and alert system is provided, while 37% of the participants say that they are not prepared to face an extreme weather event even if a proper warning system is there. In addition, 40.7% of the respondents say that they have not been part of community organisations/ self-help groups/neighbourhood groups and we used to discuss capacity building and risk reduction activities there.

Understanding and enhancing resilience across these diverse aspects is essential for developing holistic strategies that address the complex and interconnected challenges posed by climate change. Each aspect is interlinked, and addressing them collectively can contribute to building more robust and sustainable systems in the face of a changing climate.

Conclusion

In conclusion, this study on climate change resilience in Thiruvananthapuram's coastal communities has uncovered multiple factors like awareness regarding climate change, community and social life, economic status, governance, health, use of indigenous knowledge, and access to technology affecting their ability to adapt. The results highlight the pressing need for specific actions that address both environmental and social challenges these areas face due to climate change. Combining traditional knowledge with modern strategies could be a promising way to boost resilience, underlining the importance of community-led efforts. The study emphasises that awareness, adaptability, and the effectiveness of current strategies are key elements in the overall resilience of these coastal communities.

Looking ahead, the initial findings provide a solid base for smarter decision-making in policies and communities. The study suggests that integrating these findings into policies is crucial, stressing the role of community involvement and tailor-made strategies in building lasting resilience to climate change. As we move forward, this kind of study sets the groundwork for more effective measures, paving the way for a future where coastal communities not only endure but thrive despite the challenges posed by climate change.

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Formulation and Standardisation of Jackfruit (*Artocarpus heterophyllus*) Flour Fortified Bread

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Abstract

Jackfruit is a tropical fruit that has antioxidant qualities and is high in vitamins, minerals, and fibre. This study aimed to develop and standardise a value-added bread supplemented with jackfruit while assessing its nutritional value, shelf life, and organoleptic properties. Four different combinations of jackfruit flour and wheat flour (T1, T2, T3, and T4) were made, and sensory evaluations were performed using a nine-point Hedonic scale. T0 was considered as the control sample. The sensory evaluations showed that Variation 1 (T1) was the most agreeable. Jackfruit flour and wheat flour differed in several ways based on the presence of various nutrients. When compared with wheat flour, jackfruit flour had substantially lower levels of calories, fat, and protein. The high dietary fibre content of jackfruit flour may help lower the risk of chronic diseases like diabetes and improve digestion. Jackfruit flour has a higher fibre, calcium, and potassium content than wheat flour. Wheat flour lacks vitamin C, whereas jackfruit flour is rich in it. From the findings of the study, bread made with jackfruit flour is more nutrient-dense than that made with wheat flour in terms of fibre content, vitamins, minerals, antioxidants, protein, and low glycaemic index, and it offers several health advantages. It presents a viable way to address micronutrient deficiencies. Because of its good sensory acceptability, taste, and nutritional composition, bread also has a good chance of being accepted by consumers. The production of jackfruit flour-fortified bread not only represents a strategic approach to combating specific nutritional deficiencies but also aligns with broader goals of dietary diversification and health promotion.

Keywords: Jackfruit flour, Fortified bread, Nutritional analysis, Sensory evaluation, Shelf life, Value-added products, Nutrition and health, Micronutrient deficiencies, Sustainable food systems, Dietary fibre, Mineral fortification, Antioxidant

Introduction

A nutrient-dense and adaptable fruit, the jackfruit can be used to make several products with added value. When appropriately used, its trash lowers disposal costs and increases economic value. A global health concern, micronutrient deficiencies can be addressed by jackfruit, which is rich in bioactive chemicals. Consumer health and environmental sustainability could both benefit greatly from the use of jackfruit flour. In terms of environmental sustainability, it promotes lower-carbon agriculture and helps reduce food waste by using more of the fruit's underutilised sections. Compared to crops like wheat, which demand a lot of resources, jackfruit trees are more sustainable because they need less water and grow well in tropical regions. Since their production encourages biodiversity and gives farmers alternative sources of income, they can also reduce reliance on monoculture farming. Health-wise, jackfruit flour is high in fibre, vitamins, and minerals; jackfruit flour aids in digestion and guards against long-term conditions. These nutrients strengthen the immune system, enhance gut health, prevent colon cancer, regulate blood cholesterol, promote heart and bone health, and help with weight management. Its low carbohydrate content makes it perfect for managing diabetes. Moreover, vitamin C and its antioxidant qualities strengthen immunity. Jackfruit may be made into several value-added products. Additionally, they provide a simple method of incorporating functional ingredients, which makes them an efficient option to provide customers with health advantages. (Waghmare et al., 2019). To truly reap its benefits, however, broad adoption could necessitate improvements in product offers, processing infrastructure, and customer awareness.

A creative and nourishing product, jackfruit flour-fortified bread combines the health benefits of jackfruit with whole wheat bread. Adding jackfruit flour to bread can enhance its nutritional profile, texture, and sensory qualities, increasing its appeal to customers. An environmentally responsible and sustainable substitute for conventional wheat flour in breadmaking is jackfruit flour (Rao et al., 2019). The creation of bread enhanced with jackfruit flour presents several advantages for the environment, health, and nutrition, making it a useful functional meal. Because of its antibacterial, antioxidant, and antifungal qualities, jackfruit is used to cure a variety of illnesses and boost health (Swami et al., 2012).

This study has the following objectives:

- Formulation and standardisation of jackfruit flour bread.
- Assess the organoleptic qualities of the product.
- Assess the nutritional composition of jackfruit flour-fortified bread.
- Evaluate the shelf life of the developed product.

Methodology

Selection of raw materials: Wheat is a staple food well-liked in every household. Jackfruit has both nutritional and health-promoting qualities. Thus, wheat and jackfruit were the raw materials used.

Processing of raw materials

Preparation of wheat flour: The local market provided the raw wheat kernel. The wheat was thoroughly rinsed to remove dust or debris. Then, it was laid out on a fresh cloth and left to air dry thoroughly. The wheat was then milled into a fine powder. To remove any coarse particles, the flour was sieved after grinding. Although optional, this step makes the flour finer.

Jackfruit flour: Pure Jackfruit flour was bought from KVK, Alappuzha.

Fortified Bread Preparation: To make the bread dough, yeast was activated in lukewarm water and sugar, then combined with wheat and jackfruit flour, milk powder, sugar, salt and softened butter. The dough was kneaded for five to seven minutes, or until it was elastic and smooth. For one to one and a half hours, the dough was left in a greased mould to rise. After that to release the air, the dough is punched down. Then flattened it out into a rectangle and tightly roll it up by pinching the seam to seal it into a loaf. After 45 minutes the dough will rise once more, about an inch above the pan's edge. Preheat the oven to 375°F. Bake for 30 to 35 minutes, or until the top is golden brown.

Formulation of variations: One control and four variations of jackfruit flour-fortified bread were developed (Table 1).

Table 1 : Ingredients proportion of all variations.

Ingredients	Control (T0)	Variation (T1)	Variation (T2)	Variation (T3)	Variation (T4)
Wheat flour	150 g	140 g	130 g	120 g	110g
Jack Fruit flour	---	10 g	20 g	30 g	40 g
Milk powder	10 g	10 g	10 g	10g	10 g
Yeast	2.5 g	2.5 g	2.5 g	2.5 g	2.5 g
Butter	15 g	15 g	15 g	15 g	15 g
Water	90 ml	90 ml	90 ml	90 ml	90 ml
Sugar	12 g	12 g	12 g	12 g	12 g
Salt	2.5 g	2.5 g	2.5 g	2.5 g	2.5 g

Sensory analysis

The sensory evaluation of the samples of jackfruit flour incorporated bread was carried out by a panel of judges.

Standardisation

A nine-point hedonic scale was used to assess the sensory qualities of each combination that was developed. The highest scores from the sum of the mean scores for each of the following parameters namely appearance, flavour, colour, taste, texture, and overall acceptability were used to assess the product.

Results and Discussion

This study on the formulation and standardisation of Jackfruit flour-fortified bread is discussed under the following headings.

- Development of jackfruit-fortified bread.
- Evaluation of the Sensory Qualities of Fortified Bread.
- Nutritional Comparison of wheat flour and jackfruit flour.
- Evaluation of the shelf life of the developed product.

Development of jackfruit flour fortified bread

Jackfruit flour-fortified bread (Figure 1) was made using wheat and jackfruit flour as base ingredients, along with milk powder, yeast, butter, water, sugar, and salt. Four variations T1, T2, T3, and T4 were prepared, with varying proportions of wheat and jackfruit flour. The control (T0) used only wheat flour. After sensory evaluation, Treatment 1 (T1) with 140g wheat flour, 10g jackfruit flour, 10g milk powder, 2.5g yeast, 15g butter, 12g sugar, and 2.5g salt was selected as the most acceptable variation.

Figure 1: Jackfruit - fortified bread.

Evaluation of the sensory qualities of fortified bread

The acceptability of food products is mostly determined by sensory analysis. The sensory attributes of fortified bread were evaluated by a panel of judges, which included students, teachers, and housewives, with a flair for appearance, texture, flavour, colour, and taste, and the results are presented in Figures 2 and 3. A nine-point hedonic scale to score qualities like flavour, texture, colour, taste, and appearance. Among the variations, the T1 variation was found to be highly acceptable. In this study, the sensory characteristic score of bread containing 10% jackfruit flour was found to be the highest in terms of appearance, flavour, colour, texture, taste, and overall acceptability when compared to bread containing 20%, 30%, and 40% of jackfruit flour. The sensory scores decreased with increasing levels of jackfruit flour. Several quality attributes deteriorated as the amount of jackfruit flour in the bread samples rose. The colour score declined from 8.6 to 2.4, the flavour score dropped from 8.5 to 2.5, and the appearance score dropped from 8.3 to 2.7. More jackfruit flour significantly reduced overall sensory appeal, as evidenced by the texture score dropping from 8.3 to 2.4, the taste score dropping from 8.5 to 2.3, and the overall acceptability score dropping from 8.3 to 2.2. The bread had higher scores for all sensory characteristics at 10% jackfruit flour incorporation levels. Similar findings were made by (Feili et al., 2013) and (Ngwere & Mongi, 2021). By combining 10% jackfruit flour with wheat flour, acceptable results are obtained. As a result, using more than 10% jackfruit flour did not produce satisfactory results.

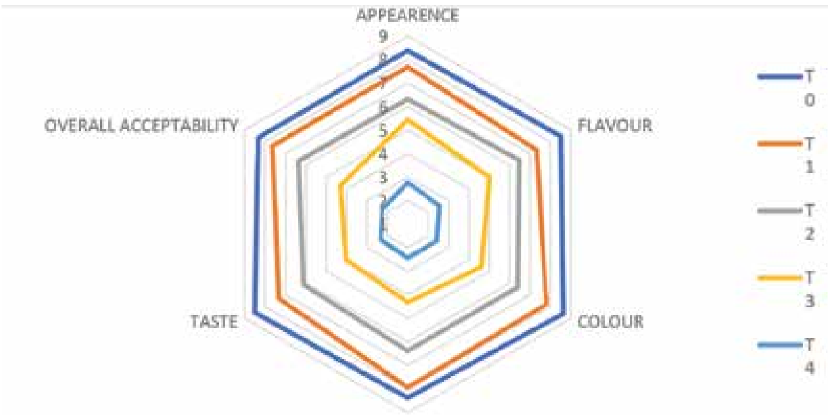

Figure 2 : Sensory evaluation of jackfruit flour bread.

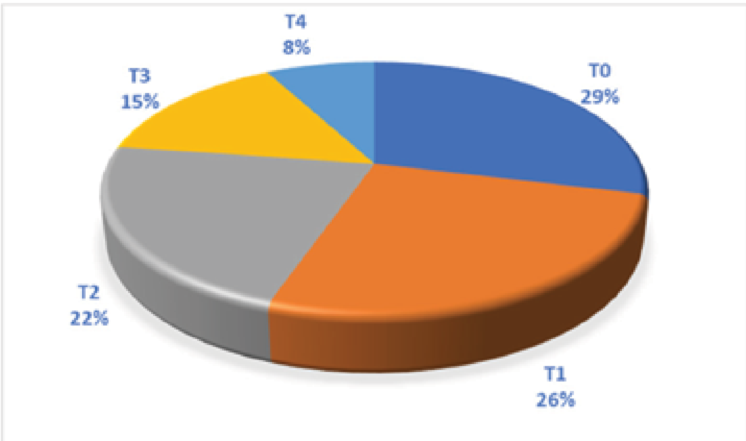

Figure 3 : Overall acceptability of prepared variations of bread.

Comparing Variation 1 (T1) to the other treatments, the findings of the sensory evaluation make it abundantly evident that it scored highest for appearance, flavour, colour, texture, taste, and overall acceptability. Because its ratings are more in line with those of the standard treatment (T0), it is the ideal option for adding jackfruit flour to bread. A discernible decrease in volume and a flattening of the bread's form were seen as the amount of jackfruit flour in the recipe rose. The density of the bread also rose as the amount of jackfruit flour increased.

Statistical analysis

Table 2 : Rating of sensory scores

	Appearance	Flavour	Colour	Texture	Taste	Overall Acceptability
H	20.4	20.1	20.5	20.4	20.5	20.4
df	4	4	4	4	4	4
p-value	0.0004					

Table 2 gives the mean and standard error of sensory evaluation

Table 3 : Kruskal-Wallis test results

Treatments	Appearance	Flavour	Colour	Texture	Taste	Overall Acceptability
T0	8.38 ± 0.12	8.5 ± 0.10	8.6 ± 0.09	8.38 ± 0.12	8.5± 0.15	8.34±0.12
T1	7.68±0.11	7.32±0.13	7.8±0.11	7.94±0.13	7.32± 0.09	7.64±0.12
T2	6.32±0.08	6.46±0.13	6.38±0.14	6.38±0.13	6.12±0.08	6.36±0.10
T3	5.44± 0.14	5±0.13	4.62±0.15	4.32±0.09	4.02±0.14	4.3±0.12
T4	2.78 ±0.13	2.56±0.12	2.42±0.09	2.44±0.11	2.32±0.09	2.26±0.14

- Null hypothesis (H_0): There is no difference in the distribution of sensory scores among the groups.
- Alternative hypothesis (H_1): There is a significant difference in the distribution of sensory scores compared to the others.

The Kruskal-Wallis test is applied to study the significant variation in the sensory evaluation and the results are presented in Table 3.

To determine if there were notable variations in the sensory scores of the various groups, a Kruskal-Wallis test was used. The test findings produced a p-value of 0.0004 and a Kruskal-Wallis statistic (H), which are shown in Table 3. A statistically significant difference in the distribution of sensory scores between the groups is shown by the rejection of the null hypothesis since the p-value is smaller than the traditional significance level of 0.05. Since the p-value is so low (0.0004), we can say that there is a significant difference in the sensory ratings for each group.

Nutritional comparison of wheat flour and jackfruit flour

Table 4 : Nutritional comparison of wheat flour and jackfruit flour

Parameters	Wheat Flour (100 g)	Jackfruit Flour (raw) (100g)
Energy	341kcal	51 kcal
Fat	1.7 g	0.3 g
Protein	11.8 g	2.6 g
Dietary fibre	1.9 g	2.8g
Iron	4.9 mg	1.7 mg
Calcium	48 mg	30 mg

Vitamin C	--	14 mg
Phosphorus	355mg	40 mg
Thiamine	0.49 mg	0.05 mg
Niacin	4.3 mg	0.2 mg
Riboflavin	0.17 mg	0.04 mg

(Source: - Nutritive Value of Indian foods NIN-, ICMR, (Aykroyd et al., 1971.)

When comparing the nutritional contents of 100 g of jackfruit flour with wheat flour, it was noted that the former had significantly fewer calories and fat than the latter. Wheat flour had a greater protein and iron content than jackfruit flour. Jackfruit flour has higher levels of vitamin C and dietary fibre than wheat flour, which is shown in Table 4.

Nutritional analysis of jackfruit flour fortified bread (T1)

Table 5 : Nutritional analysis of developed product

Sl no.	Parameters	Approximate value per loaf of bread
1	Energy	687 kcal
2	Protein	21.6 g
3	Fat	14.9 g
4	Dietary Fibre	2.94 g
5	Iron	7.22 g
6	Calcium	215.49 mg
7	Phosphorus	656.07 mg
8	Vitamin C	1.9 mg
9	Thiamine	0.69 mg
10	Niacin	6.14 mg
11	Riboflavin	0.438 mg

A nutritional analysis of the bread fortified with jackfruit flour is displayed in Table 5. The nutritional profile of bread is improved by using jackfruit flour supplemented with vital minerals, vitamin C, and dietary fibre (Singh et al., 2020). Combating malnutrition may be possible if macronutrients like protein and fat and micronutrients like iron, calcium, phosphorus, thiamine, riboflavin, and niacin are present. Numerous chronic diseases, including diabetes, heart disease, and cancer, can be avoided with the use of vitamin C and dietary fibre which are all present in the bread fortified with jackfruit flour.

Shelf Life of Developed Product

The most popular version (T1) of the bread fortified with jackfruit flour was stored in airtight containers to assess its shelf life. It was stored at both ambient temperature and refrigerated temperature. Consequently, it was physically noted that bread fortified with jackfruit flour could be kept for three days at room temperature without colour change or noticeable microbiological growth, and it could be kept for one week in the refrigerator without experiencing any of these issues.

Conclusion

Fortification is the process of enhancing foods with key micronutrients to remedy deficiencies and promote public health. Incorporating 10% jackfruit flour into wheat bread not only increases its nutritional value by providing vitamin C, calcium, potassium, fibre, and antioxidants, but it also improves digestive, immunological, and cardiovascular health. fibre reduces the incidence of colon cancer and antioxidants counteract oxidative stress and inflammation. As a result, 10% Jackfruit flour-fortified bread is a convenient and long-term solution for addressing vitamin deficiencies and avoiding infections.

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Health Profile of Migrant Labourers: A Cross-Sectional Study from Thiruvananthapuram District

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Abstract

A large population of migrants work in areas demanding heavy physical labour. Such effort needs to be accompanied with good food, good hygiene, and rest. However, these basic resources are often scarce for migrant labourers, and consequently they are always under the shadow of health and nutritional problems. There is not enough research that focuses on the nutritional problems faced by migrant workers. The primary aim of this research was to evaluate the socioeconomic dimensions, as well as the health status and nutritional consumption patterns of migrant labourers. The study was conducted amongst the migrant labourers in Thiruvananthapuram district, located at the southern end of the Indian state of Kerala. For this study, 100 respondents were purposively selected. Standardised interview schedule was used to obtain the data. The biochemical data were collected using relevant tools The nutrient intake of the respondents was recorded using a three-day 24-hour dietary recall method. The data was analysed using SPSS. The descriptive analysis (mean and standard deviation) and inferential analysis (t-test,) were performed, and the results were then interpreted. Majority of the migrant labourers observed in the study were from West Bengal, between the age group of 18 and 27 years (62%). The biochemical parameters assessed during the study came under the respective normal ranges. However, an evaluation of their dietary patterns and lifestyle indicates a strong likelihood of them deviating from the normal range and becoming prone to health problems. The macronutrient intake was found to be satisfactory, but the same could not be seen with the micronutrient intake. This deficiency in the micronutrient intake would lead to deficiency diseases in a long run. Since migrant labourers in Kerala are a significant economic force, their health and well-being influence the state's local economy and its people. By imparting proper awareness on various nutritional aspects, constructive changes could be brought up on the food pattern of migrants, thereby improving their health.

Keywords: Migrant labourers, Macronutrients, Micronutrients, Nutrient intake, Hygiene

Introduction

Migration, as the word implies, is a temporary or permanent replacement from one place to another. People migrate for a variety of reasons with the main motivating factor being the desire for a relatively better life. This would mean different things for different people – better education, better job, or better living surroundings. For underprivileged internal migrants, comparatively higher wage rates in unorganised sectors, continuous availability of jobs in the informal sector, and relatively humane treatment of migrant workers by the host community made Kerala one of the most hopeful destinations in India (Peter & Narendran, 2017). A large population of migrants work in areas demanding heavy physical labour. Such effort needs to be accompanied with good food, good hygiene, and rest. Since these resources are in short supply, migrant labourers are always under the shadow of health and nutritional problems. The objective of this study was to assess the socioeconomic profile, health, and nutrient intake of migrant labourers.

Materials and Methods

The study was conducted among the migrant labourers in Thiruvananthapuram district. Thiruvananthapuram stands at the second place in the number of migrant labourers in Kerala (Parida & Raman, 2021). For the study, areas with high concentration of migrant labourers (major pockets) were identified. Hundred respondents were then picked in equal proportion from selected major pockets (Sreevaraham, Menamkulam, Pallithura and Station Kadavu) through purposive random sampling. The inclusion criteria adopted for including a subject were

- should be from a state other than Kerala,
- between the age group of 18 and 55 years,
- should be staying in Thiruvananthapuram district for a minimum duration of more than six months, and
- should be working in a sector demanding heavy physical labour.

The researchers avoided participants who were not willing to cooperate with the study.

Socioeconomic data: The data were obtained using a standardised interview schedule. which includes questions regarding age, income, education, and native place.

Biochemical data: Various biochemical parameters such as blood sugar level (fasting) using Hexokinase method, haemoglobin level using Cyanmethemoglobin (Spectrophotometry) method, and total cholesterol level using Enzymatic Rate method were analysed in this study. The researchers acquired the services of a phlebotomist from a NABH accredited lab in the geographical area selected for the study

Nutrient data: The 24-hour dietary recall method was used to record the nutrient intake of the respondents. A 24-hour dietary recall is a structured dietary assessment interview tool that is used to gather detailed information about all the foods and the beverages consumed by the respondent in the previous 24 hours. The portion size of each food consumed was noted using standardised utensils. The nutrient composition was calculated using the database of 'Nutritive Value of Indian Foods' given by the National Institute of Nutrition (Gopalan et al., 2016). The mean nutrient intake for three days was computed and compared with the Recommended Dietary Allowance (RDA) 2020 (ICMR-National Institute of Nutrition, 2020)11,12]]},"issued":{"date-parts":[["2020"]]}}}],"schema":"https://github.com/citation-style-language/schema/raw/master/csl-citation.json"} .

IBM SPSS Statistics was used to analyse the collected data. The descriptive analysis (mean and standard deviation) and inferential analysis (t-test) were performed, and the results were then interpreted.

Results and Discussion

Socioeconomic profile of the respondents

Table 1: Socioeconomic profile of the respondents

Native place	
Assam	2%
Bihar	5%
Rajasthan	3%
West Bengal	90%
Age (in years)	
18 – 27	62%
28 – 37	28%
38 – 47	9%
Above 48	1%

Daily wage (₹)	
401 – 600	55%
601 – 800	34%
801 – 1000	11%
Monthly income (₹)	
10001 - 15000	52%
15001 – 20000	36%
Above 20000	12%
Education	
High school	44%
Primary	43%
Illiterate	13%

Table 1 shows that majority of the migrant labourers were from West Bengal, between the age group of 18 and 27 years (62%). They received wages on a weekly basis (₹400-₹600 per day), which accumulated up to ₹10000-₹15000 per month (52%). About 43% of them had a primary-level education and 44% had high-school level education.

Diesel was the preferred cooking fuel (49%). There was no proper kitchen to cook food in a sanitary manner. Popular cooking fuel like LPG was not readily accessible or affordable. Kerosene was also not available easily forcing them to resort to crude alternatives like diesel as the cooking fuel. Only 13% of them had medical insurance (AWAS card).

Biochemical data

The results of the biochemical tests are shown in Table 2.

Table 2 : Biochemical parameters of the respondents (n = 100)

Biochemical parameters	Mean ± Standard Deviation	Normal values
Haemoglobin (g/dL)	14.7 ± 1.66	13 – 17 [1]
Blood sugar – fasting (mg/dL)	86.97 ± 10.62	70 – 100 [1]
Total Cholesterol (mg/dL)	170.8 ± 37.31	< 200 [2]

Sources: [1] WHO, [2] NCEP (ATP-III)

Table 2 indicates that the mean value of the biochemical parameters assessed during the study came under the respective normal ranges. However, based on the analysis of their dietary pattern and life style, it is highly likely that they would fall out of the normal range and become susceptible to ill-health.

The respondents were asked whether they smoked or not, for which 64% indicated that they had the habit of active smoking while the remaining 36% said they did not smoke at all.

Table 3 shows the independent sample t-test results for the biochemical parameters in smoking and non-smoking respondents. It revealed no substantial disparity in the biochemical parameters across both classifications. The normal reference range for haemoglobin cannot be applied for smokers and an adjustment needs to be applied when evaluating the same for smokers (WHO, 2011). This directive from WHO indicates that the haemoglobin levels could appear as elevated in smokers. No such significance was observed in this study. One probable reason could be that majority of the respondents were relatively young and the effect of smoking has not yet been reflected on their haemoglobin levels.

Table 3 : Comparison of biochemical parameters among smokers and non- smokers (n =100)

Parameters	Smokers		Non-smokers		Independent t-test	
	Mean	SD	Mean	SD	t-value	p-value
Haemoglobin (g/dL)	14.75	1.81	14.64	1.50	0.318	0.751
Blood sugar - fasting (mg/dL)	86.38	7.65	87.60	13.26	0.569	0.571
Total Cholesterol (mg/dL)	168.71	36.41	173.06	38.90	0.578	0.565

Nutrient intake of the respondents

A 24-hour recall method was done to get a clear picture of the nutrient intake of the migrants.

Since the p-value is less than 0.01 in the case of Energy, Protein, Fat, Carbohydrates, Calcium, Zinc, Thiamine, Riboflavin, Vitamin C and Magnesium intake, it is significant at 1% level, implying that the nutrient intake values do not match RDA.

Based on the mean value score, the intake of Protein, Fat and Carbohydrates were above the RDA value.

Table 4 : Mean Nutrient intake of migrants (n =100, t-test)

Nutrients	Mean nutrient intake ± SD	RDA+	Percentage of RDA met	t-value	p-value
Energy (Kcal/d) ++	2642.05 ± 391.05	3470	76.14	-21.17	< 0.001**
Proteins (g/d)	99.09 ± 15.56	54	183.5	28.98	< 0.001**
Fat (gm/d) ++	61.25 ± 15.4	40	153.13	13.8	< 0.001**
Carbohydrates (g/d)	422.5 ± 74.61	130	325	39.2	< 0.001**
Calcium (mg/d)	546.65 ± 200.61	1000	54.67	-22.6	< 0.001**
Zinc (mg/d)	10.44 ± 2.2	17	61.41	-29.89	< 0.001**
Thiamine (mg/d)	1.74 ± 0.32	2.3	75.65	-17.77	< 0.001**
Riboflavin (mg/d)	1.06 ± 0.19	3.2	33.13	-114.28	< 0.001**
Niacin (mg/d)	24.43 ± 5.72	23	106.22	2.5	0.014*
Vitamin C (mg/d)	38.45 ± 9.65	80	48.06	-43.06	< 0.001**
Iron (mg/d)	18.96 ± 3.05	19	99.79	-0.14	0.888
Magnesium (mg/d)	839.05 ± 179.27	385	217.94	25.33	< 0.001**

+ RDA ICMR 2020.

++ Estimated Average Requirement (EAR).

** Significant at 1% level.

* Significant at 5% level.

Figure 1 gives an idea about the percentage of migrant labourers consuming various nutrients with respect to the RDA. As shown in the figure, 97% of the subjects consumed more than 100% of the RDA of Proteins, and 85% of subjects consumed more than 100% of the RDA of fat. In the case of Carbohydrates, all the subjects consumed more than 100% of the RDA. In the case of Calcium, 53% of the subjects consumed between 50% and 74% of the RDA. As for Iron, 54% consumed more than 100% of the RDA.

Percentage distribution of migrants according to the intake of nutrients

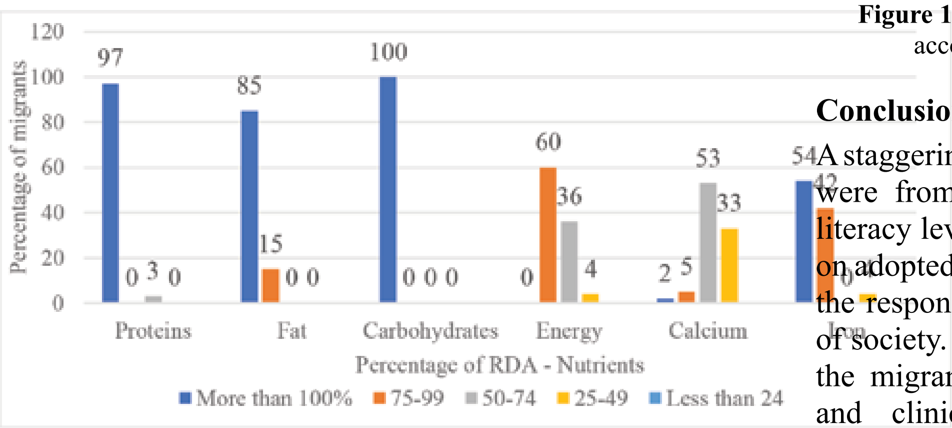

Figure 1 : Percentage distribution of migrants according to the intake of nutrients.

Conclusion

A staggering three quarters of the respondents were from the state of West Bengal. The literacy level was basic in most cases. Based on adopted socio-economic scale, majority of the respondents belonged to the lower class of society. Assessment of the health status of the migrant labourers through biochemical and clinical examinations showed that majority of the respondents were in good health. Disparities were observed between the level of intake of macro and micro nutrients. This was not entirely due to lack of nutritional awareness; rather they were not willing to spend their hard-earned income to bring variety to their food palette.

Since migrant labourers in Kerala are a significant economic force, their health and well-being influence the State's local economy and its people. By imparting proper awareness on various nutritional aspects, constructive changes could be brought up on the food pattern of migrants, thereby improving their health.

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Screening, Isolation, and Identification of Extracellular Protease-Producing Bacteria from The Soil Sample of Thangu Valley, Sikkim

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Abstract

A total of thirteen morphologically distinct bacterial isolates were obtained from the high-altitude soils of Thangu Valley, Sikkim, and screened for protease production. Among these, isolate '3' demonstrated the highest protease activity at 55.24 U/ml and was subsequently identified as Serratia plymuthica through a comprehensive polyphasic approach integrating phenotypic, biochemical, and 16S rRNA gene sequencing analyses. Optimisation studies revealed critical parameters for maximum protease production: neutral pH (7.0), room temperature, lactose as the carbon source, and casein as the nitrogen source. Peak enzyme activity was observed after 24 hours of incubation. These findings underscore the industrial potential of S. plymuthica as a robust producer of extracellular proteases and emphasise the biotechnological significance of exploring microbial diversity in extreme environments. This research contributes to the growing understanding of microbial enzymatic capabilities in high-altitude ecosystems, offering insights into novel bacterial strains with promising industrial applications in enzyme production.

Keywords: Protease, *Serratia plymuthica*, Enzyme optimisation, High-altitude soil microbiome.

Introduction

Proteases are enzymes that catalyse the hydrolysis of peptide bonds in proteins. They are one of the most widely studied and commercially exploited enzymes; they represent nearly 60% of the world enzyme market (Rao et al., 1998). They have numerous applications in pharmaceutical industry, food processing, detergents production, leather processing, and waste disposal (Singh and Bajaj, 2017). The properties like substrate specificity, catalytic efficiency, and adaptability to various environmental conditions make protease important in several biotechnological and industrial processes (Sujitha and Shanthi, 2023). Among the various proteolytic enzymes, microbial proteases are particularly attractive mainly because of their lower production cost, ease of genetic manipulation, and ability to function under diverse physicochemical conditions (Thapa et al., 2019). Bacteria are known to be the most abundant producers of proteases among microbial sources. Especially, the genera *Bacillus*, *Pseudomonas*, and *Serratia* have been extensively investigated for their capacity to produce extracellular proteases with favourable properties for industrial applications (Danilova and Sharipova, 2020; Razzaq et al., 2019). Microbial protease production has the advantage of rapid growth rates, ease of scaling up, and the ability to couple media optimisation and genetic engineering to increase enzyme production (Tatta et al., 2022).

High-altitude places and extreme environments are highly unexplored and hence they are attractive sources for novel microbial species with unique enzymatic properties. Spread across the northern part of Sikkim, the high-altitude, cold climate, and unique soil composition of Thangu Valley represents an underexplored ecosystem rich in microbial biodiversity. Environments at the extremities frequently result in microbial enzymes with increased stability, activity, or flexibility – qualities of great interest for industrial applications (Cavicchioli et al., 2002). Bacteria are capable of producing protease with high catalytic efficiency and demonstrate stability in variable environmental conditions. *Serratia*, a Gram-negative bacillus of the *Enterobacteriaceae* family is reported to produce various enzymes (Barman et al., 2020). Due to its metabolic flexibility and capacity to grow in a wide range of habitats, it has emerged as a potential organism for enzyme production on an industrial scale.

Proteases, particularly those produced by bacteria of the genus *Serratia*, have garnered significant attention in recent years due to their diverse applications in medicine, biotechnology, and industrial processes. Recent studies have focused on isolating and characterising *Serratia marcescens* strains capable of producing high levels of serratiopeptidase. For instance, soil samples, silkworm guts, and sugarcane stems have been explored as environmental sources for isolating potent strains. These efforts have led to the identification of strains such as *Serratia marcescens* VS56, which exhibits high proteolytic activity and anti-inflammatory potential (Nair & Devi, 2024; Natarajan & Subashkumar, 2023). The production of serratiopeptidase has been optimised through the manipulation of cultural conditions, including carbon and nitrogen sources, pH, temperature, and incubation time. For example, the uses of maltose as a carbon source and soybean meal as a nitrogen source have been shown to significantly enhance enzyme production. Additionally, statistical designs such as Plackett-Burman and Taguchi methods have been employed to further optimise these conditions, leading to increased yields and specific activity of the enzyme (Melchor-Moncada et al., 2024; Subathra Devi et al., 2014; Ananthakrishnan et al., 2013).

Cell-free protein synthesis (CFPS) systems have been explored as a novel approach for producing serratiopeptidase. This method allows for the soluble expression of the enzyme, avoiding the challenges associated with heterologous expression in systems like *Escherichia coli*. Furthermore, the use of immobilised cells in calcium alginate gel beads has been investigated to enhance enzyme stability and production (Meng et al., 2023; Vuillemard et al., 1988). Serratiopeptidase has been widely studied for its therapeutic applications, including its anti-inflammatory, analgesic, and thrombolytic properties. Recent studies have also explored its potential in treating conditions such as arthritis, bronchitis, and thrombosis. The enzyme's ability to lyse blood clots and its stability at physiological pH make it a promising candidate for thrombolytic therapy (Natarajan & Subashkumar, 2023, Krishnamurthy et al., 2017). Beyond its therapeutic applications, serratiopeptidase has been investigated for its potential in industrial processes, such as laundry detergents and protein stain removal. The enzyme's ability to function under alkaline conditions and its stability in the presence of surfactants and organic solvents make it suitable for such applications (Li et al., 2011; Furhan and Nissar, 2021). Proteases from *Serratia* have also been explored for their potential in bioremediation. Their ability to degrade proteins and other organic matter makes them useful in waste management and environmental cleanup processes (Li et al., 2011). Recent studies on protease production by *Serratia*, particularly *Serratia marcescens*, have highlighted the potential of these enzymes in various applications, ranging from therapeutic uses to industrial processes. Advances in production methodologies, including the use of cell-free protein synthesis systems, immobilisation of cells, and statistical optimisation, have further enhanced the efficiency and yield of serratiopeptidase production. These findings underscore the importance of continued research into the production and applications of proteases from *Serratia*.

This study was aimed at isolation and identification of protease-secreting bacteria from the soil of Thangu Valley, Sikkim, and further analysing the isolates for their enzyme activity while optimising conditions for maximum protease production. The research follows a polyphasic approach for the identification of the protease-producing bacteria. Above that, this work identifies and analyses important variables affecting protease production to establish optimal conditions for large-scale enzyme production. Focusing on a unique microbial niche, this work adds to the growing inventory of microbial diversity and biotechnological applications. The findings of this study might have positive implications for industrial challenges, such as enzyme production at a low cost.

Methodology

Sample collection

For the isolation of protease-producing bacteria, 11 soil samples were collected from Thangu Valley (27.8981° N, 88.5312° E), Sikkim, India. The sampling was performed using random sampling to ensure representativeness. Each sample was collected from the top 5 cm of soil and transferred into sterile plastic containers. The samples were then transported under cold conditions (4°C) to the laboratory, where they were stored at 4°C until further analysis. The samples were pooled to obtain a representative microbial community for further screening.

Isolation and screening of protease-producing bacteria

The soil sample was serially diluted and spread plated on nutrient agar. The plates were incubated overnight at room temperature and the bacterial colonies formed were selected based on colony morphology. The selected colonies were further pure cultured by repeated quadrant streaking and cultures were stored in nutrient agar slants at 4°C.

Primary screening by plate assay

The isolated bacterial cultures were streaked on Skim milk agar plates (Skim milk powder, 28 g; Peptone, 5 g; Yeast Extract, 2.5 g; Glucose, 1 g; Agar, 15 g; PH 7; Distilled water, 1000 ml) and incubated overnight at room temperature. Protease-producing bacteria will produce clear zones on Skim milk agar. The bacterial isolates which showed clear zones were selected for further studies.

Secondary screening by enzyme assay

The two isolates selected by primary screening were subjected to secondary screening by protease activity evaluation using a modified method (Johnvesly et al., 2002). For this, the selected isolates were separately grown in skim milk broth, incubated overnight at room temperature. The broth was then centrifuged at 10000 rpm for 15 minutes at 4°C. The supernatant was subjected to protease assay. The reaction mixture contained 1 ml 1% (w/v) casein in 50 mM phosphate buffer at pH 7 and 0.9 ml of Glycine-NaOH. The reaction mixture was pre incubated at 50°C and then 100 µl of crude enzyme solution was added and allowed to react at 50°C. The reaction was terminated by adding 2 ml of 10% (w/v) trichloroacetic acid (TCA). It was then filtered using Whatman® No. 1 filter paper and A_{280nm} was measured using a spectrophotometer. The assay was done in triplicates. Amount of tyrosine produced was calculated from the tyrosine standard curve and protease produced by the two isolates were quantified.

Identification of the protease-producing bacterial isolate

The selected bacterial strain was identified by a polyphasic approach.

Phenotypic Identification of the protease-producing bacterial isolate

The selected bacterial isolate was subjected to phenotypic studies. Gram's staining, endospore staining, and hanging drop method were done for the microscopic analysis of the isolate. Biochemical characteristics of the isolates were identified by carbohydrate fermentation test, indole test, methyl red test, Voges-Proskauer test, citrate utilisation test, urease test, nitrate reduction test, triple sugar iron agar test, catalase test, and oxidase test.

Molecular 16srRNA based identification of the bacterial isolate

Genomic DNA isolation and 16S rRNA amplification: Genomic DNA was isolated using NucleoSpin® Tissue Kit (Macherey-Nagel). Overnight culture broth was taken in a microcentrifuge tube. An aliquot of 180 µl of T1 buffer and 25 µl of Proteinase K were added and incubated at 56°C in a water bath until it was completely lysed. After lysis, 5 µl of RNase A (100 mg/ml) was added and incubated at room temperature for 5 minutes. Then 200 µl of B3 buffer was added and incubated at 70°C for 10 minutes. An aliquot of 210 µl of 100% ethanol was added and mixed thoroughly by vortexing. The mixture was pipetted into NucleoSpin® Tissue column placed in a 2 ml collection tube and centrifuged at 11000 x g for 1 minute. The NucleoSpin® Tissue column was transferred to a new 2 ml tube and washed with 500 µl of BW buffer. Wash step was repeated using 600 µl of B5 buffer. After washing the NucleoSpin® Tissue column was placed in a clean 1.5 ml tube and DNA was eluted out using 50 µl of BE buffer. The quality of the DNA isolated was checked using agarose gel electrophoresis.

The isolated DNA was subjected to PCR for amplification of 16S rRNA by using forward primer 16SRS-F 'CAGGCCTAACACATGCAAGTC' and reverse primer 16SRS-R 'GGGCGGWGTGTACAAGGC'. The PCR amplification was carried out in a PCR thermal cycler (Gene Amp PCR System 9700, Applied Biosystems). PCR amplification profile consisted of denaturation at 95°C for 5 min, 35 cycles of 95°C for 30 sec, 35 cycles of 60°C for 40 sec, 35 cycles of 72°C for 60 sec and final extension at 72°C for 7 min. The PCR products were checked in 1.2% agarose gels prepared in 0.5X TBE buffer containing 0.5 µg/ml ethidium bromide. Then 1 µl of 6X loading dye was mixed with 4 µl of PCR products and was loaded and electrophoresis was performed at 75 V power supply with 0.5X TBE as electrophoresis buffer for about 1–2 hours, until the bromophenol blue front had migrated to almost the bottom of the gel. The gels were visualised in a UV transilluminator (Genei) and the image was captured under UV light using Gel documentation system (Bio-Rad). An aliquot of 5 µl of PCR product was mixed with 0.5 µl of ExoSAP-IT (Exonuclease I and Shrimp Alkaline Phosphatase) and incubated at 37°C for 15 minutes followed by enzyme inactivation at 85°C for 5 minutes for the removal of unwanted primers and dNTPs from a PCR product mixture.

Sequencing of 16srRNA using BigDye Terminator v3: Sequencing reaction was done in a PCR thermal cycler (GeneAmp PCR System 9700, Applied Biosystems) using the BigDye Terminator v3.1 Cycle sequencing Kit (Applied Biosystems, USA) following manufactures protocol. The Sequencing PCR mix consisted of distilled water, 6.6 µl; 5X Sequencing Buffer, 1.9 µl; Forward primer, 0.3 µl; Reverse primer 0.3 µl; Sequencing Mix, 0.2 µl; Exosap treated PCR product, 1.0 µl. Sequencing PCR amplification profile consisted of denaturation at 96°C for 2 min, 30 cycles of 96°C for 30 sec, 30 cycles of 50°C for 40 sec, 30 cycles of 60°C for 4 min. Post Sequencing PCR clean-up was done and the cleaned-up air-dried product was sequenced in ABI 3500 DNA Analyzer (Applied Biosystems) using Sanger DNA sequencing method. The sequence quality was checked using Sequence Scanner Software v1 (Applied Biosystems). Sequence alignment and required editing of the obtained sequences were carried out using Geneious Pro v5.1 (Drummond et al., 2010).

Phylogenetic analysis of 16srRNA sequence: For the identification of the isolate, the 16s rRNA sequence obtained was subjected to phylogenetic analysis. Similar sequences were searched using NCBI nucleotide BLAST (https://www.ncbi.nlm.nih.gov/blast) and phylogenetic tree was constructed by NCBI distance tree of results using BLAST pairwise alignments.

Optimisation of various parameters for protease production

Single parameter optimisation was carried out to determine the optimum parameters for protease production such as the media pH, incubation temperature, carbon source, nitrogen source, and incubation period. Each parameter was varied systematically while keeping other conditions constant.

Effect of pH on protease production

The growth medium (nutrient broth supplemented with casein) was prepared and adjusted to different pH values (4, 5, 6, 7, 8, and 9) using 0.1N HCl or 0.1N NaOH.50 ml of the adjusted medium was dispensed into sterile 250 ml Erlenmeyer flasks and inoculated with 1% (v/v) of the bacterial inoculum (standardised to OD600 = 0.5). Flasks were incubated at room temperature (30°C) for 24 hours under shaking conditions (150 rpm). After incubation, the culture broth was centrifuged at 10,000 rpm for 15 minutes at 4°C, and the supernatant was collected for protease assay. Protease activity was measured using a modified method (Johnvesly et al., 2002), and the optimal pH was determined by identifying the pH condition that resulted in maximum protease activity (U/ml).

Effect of temperature on protease production

The optimised growth medium (pH 7.0) was inoculated with 1% (v/v) bacterial inoculum and incubated at different temperatures (room temperature, 45°C, 37°C, and 4°C). Flasks were incubated under shaking conditions (150 rpm) for 24 hours. After incubation, the culture was centrifuged, and the protease activity was quantified. The temperature at which the highest protease production was observed was considered optimal.

Effect of carbon sources on protease production

To assess the effect of different carbon sources, the optimised medium (pH 7.0, temperature 30°C) was prepared using various carbon sources (glucose, lactose, sucrose, and maltose) at a final concentration of 1% (w/v). Flasks were inoculated, incubated at 30°C for 24 hours under shaking conditions, and then centrifuged. Protease activity was measured, and the carbon source yielding maximum enzyme production was considered optimal.

Effect of nitrogen sources on protease production

To determine the best nitrogen source, the optimised medium was supplemented with different nitrogen sources (Urea, casein, and yeast extract) at a final concentration of 1% (w/v). Flasks were incubated at the previously determined optimal pH and temperature for 24 hours. Protease activity was assayed, and the nitrogen source that resulted in the highest enzyme yield was identified as optimal.

Effect of incubation period on protease production

The optimised culture conditions (pH, temperature, carbon, and nitrogen sources) were used to investigate the effect of incubation time on enzyme production. Flasks were inoculated and incubated for 24, 48, 72, and 96 hours under shaking conditions. At each time interval, a sample was withdrawn, centrifuged, and assayed for protease activity. The incubation period that resulted in peak enzyme production was considered optimal.

Statistical analysis

All experiments were conducted in triplicates, and the results were expressed as mean ± standard deviation (SD).

Results

Isolation of protease-producing bacteria

Thirteen morphologically different bacteria were isolated from the soil sample of Thangu valley, Sikkim. Among them only two isolates '3' and '5' showed clearance zone in casein agar media during primary screening (Figure 1). Isolate 3 produced a larger zone of hydrolysis than the isolate 5. It means that isolate 3 is a better protease producer (Figure 2). To confirm this, both the isolates were subjected to secondary screening to choose the promising protease producer.

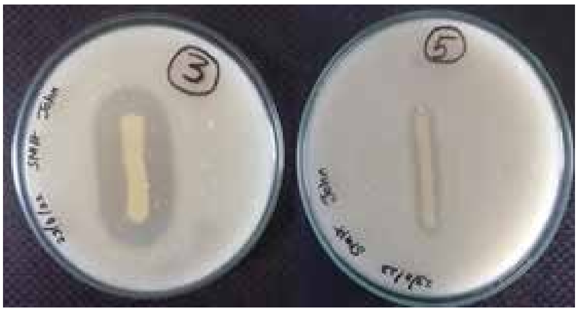

Figure 1 : Zone of hydrolysis of bacterial isolates 3 and 5 on casein agar plate.

Secondary screening to produce the most potent protease producer

The protease activity of bacterial isolate 3 was found to be 55.24 U/ml and the protease activity of bacterial isolate 5 was found to be 14.51 U/ml. So, bacterial isolate 3 was chosen for further studies.

Identification of the protease-producing isolate

The selected bacterial isolate '3' was identified using polyphasic approach.

Phenotypic Identification of the protease-producing bacterial isolate

On nutrient agar media the bacteria '3' formed medium, round, off white colonies with umbonate elevation and undulate margin. Microscopic, and biochemical test results of the isolate are given in Table 1. The biochemical test results, such as Gram reaction, motility, sugar fermentation patterns, and enzymatic activities, align with known characteristics of *Serratia*, providing phenotypic confirmation of the molecular identification.

Figure 2 : Protease-producing bacteria '3' on nutrient agar plate.

Table 1: Biochemical test results of the bacterial isolate '3'

Test	Observation/result
Gram staining	Negative
Spore staining	Endospore absent
Shape	Rod
Motility	Motile

Cultural characteristics	Opaque, off-white, round colonies
Glucose fermentation	Acid positive and gas negative
Lactose fermentation	Acid positive and gas negative
Sucrose fermentation	Acid positive and gas negative
Maltose fermentation	Acid positive and gas negative
Indole	Negative
MR Test	Negative
VP Test	Negative
Citrate utilisation Test	Positive
Nitrate reduction Test	Positive
Urease Test	Negative
Oxidase Test	Positive
Catalase Test	Negative
TSI Test	Acid butt, Alkaline slant

Molecular identification of the protease-producing bacterial isolate

Genomic DNA of the selected bacterial isolate '3' was isolated and PCR amplification of 16s rRNA was carried out. The 16s rRNA gene sequencing was done at RGCB (Rajiv Gandhi Centre for Biotechnology), Thiruvananthapuram, and 16s rRNA nucleotide sequence in FASTA format was obtained (Figure 3).

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>Protease isolate '3' 16S rRNA

TCTGGGTGACGAGCGGCGGACGGGTGAGTAATGTCTGGGAAACTGCCTGATGGAGGGGGATAACTACT
AATACCGCATAATGTCTACGGACCAAAGTGGGGGACCTTCGGGCCTCACGCCATCAGATGTGCCCAGA
TAGGTGGGGTAATGGCTCACCTAGGCGACGATCCCTAGCTGGTCTGAGAGGATGACCAGCCACACTGG
TCCAGACTCCTACGGGAGGCAGCAGTGGGGAATATTGCACAATGGGCGCAAGCCTGATGCAGCCATGC
AAGGCCTTAGGGTTGTAAAGCACTTTCAGCGAGGAGGAAGGGTTCTGTGTTAATAGCACTGTGCATTG
AAGAAGCACCGGCTAACTCCGTGCCAGCAGCCGCGGTAATACGGAGGGTGCAAGCGTTAATCGGAATT
CGCACGCAGGCGGTTTGTTAAGTCAGATGTGAAATCCCCGCGCTTAACGTGGGAACTGCATTTGAAAC
TCTTGTAGAGGGGGGTAGAATTCCAGGTGTAGCGGTGAAATGCGTAGAGATCTGGAGGAATACCGGTG
CCTGGACAAAGACTGACGCTCAGGTGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTC
ATGTCGATTTGGAGGTTGTGCCCTTGAGGCGTGGCTTCCGGAGCTAACGCGTTAAATCGACCGCCT
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Figure 3 : 16SrRNA sequence of bacterial isolate '3'.

The sequence data were blasted in NCBI database. The query nucleotide sequence showed 100% similarity with *Serratia plymuthica* 16S rRNA gene. Phylogenetic tree was constructed by NCBI distance tree of results. The Neighbor-Joining method was used to determine the evolutionary history. BLAST compute pairwise alignment between the query and database sequences was searched. The phylogenetic tree thus obtained is shown in Figure 4.

Based on morphological, biochemical, and molecular16s rRNA sequencing the isolate '3' producing protease was identified as *S. plymuthica*.

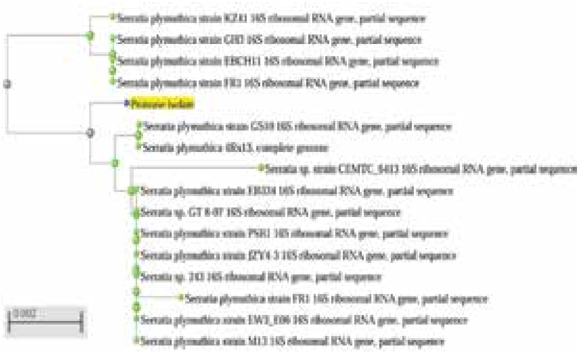

Figure 4 : Phylogenetic tree constructed by NCBI distance tree of results using BLAST pairwise alignments.

Optimisation of various parameters for protease production

The selected isolate '3' showed maximum enzyme production at pH 7 (Figure 5.) An enzyme activity of 60.42 U/ml was observed at pH 9 which is the highest enzyme activity for the isolated organism. The enzyme activity was low at acidic and alkaline pH. Neutral pH was found to be optimum for maximum enzyme production. Maximum enzyme production was observed when incubated at room temperature (Figure 6.). Of the different carbon sources tested, lactose was found to be the best one for protease production of about 58.55 U/ml which is comparable to results given by glucose of about 57.89 U/ml (Figure 7). Among the different nitrogen sources analysed, casein was found to be the most suitable nitrogen source for protease production (Figure 8). Protease production was found to be maximum after an incubation period of 24 h (Figure 9). Prolonged incubation resulted in reduction of protease activity.

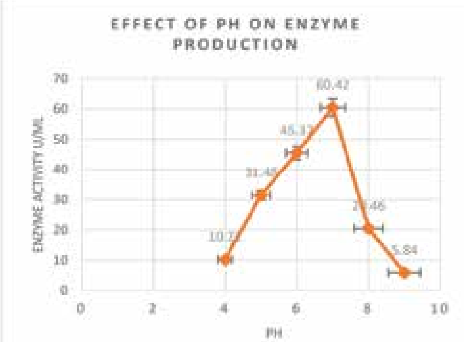

Figure 5 : Effect of pH on protease production.

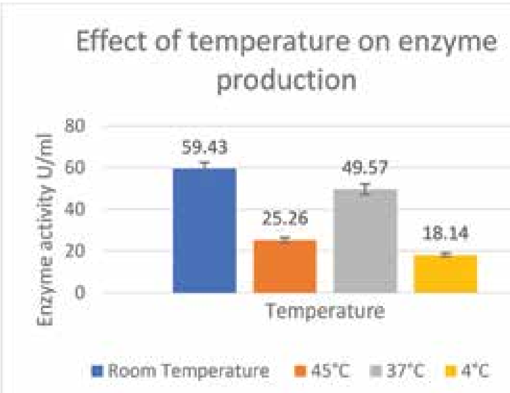

Figure 6 : Effect of temperature on protease production.

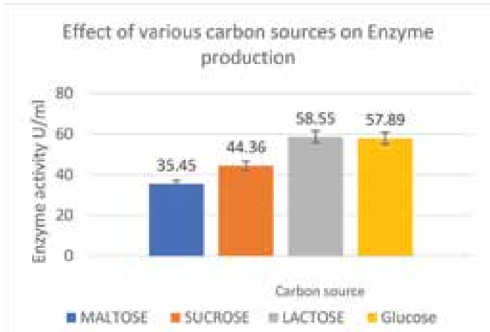

Figure 7 : Effect of various carbon sources on protease production.

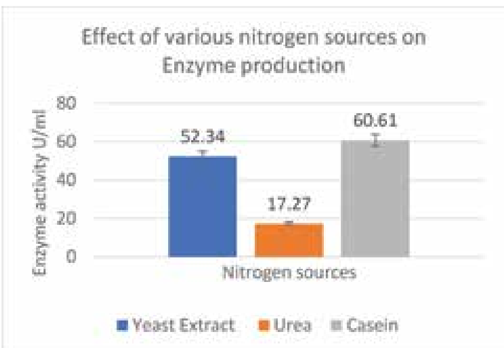

Figure 8 : Effect of various nitrogen sources on protease production.

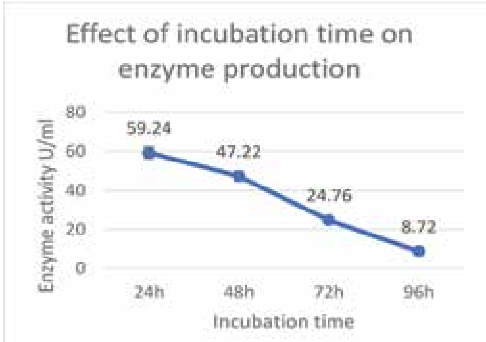

Figure 9 : Effect of incubation time on protease production.

Discussion

We successfully isolated and identified a protease-producing bacterium, *S. plymuthica* from the high-altitude soil of Thangu Valley, Sikkim, an under-explored ecosystem rich in microbial biodiversity. Isolation of bacteria was followed by the selection of a high-yield protease producer through a systematic screening process, including plate assays and enzyme activity quantification. The steps again illustrate the application of complementary qualitative and quantitative methodologies in enzyme discovery. Skim milk agar proved effective as a preliminary screening medium, highlighting protease activity through hydrolysis zones – an internationally recognised and reliable visible indicator of proteolytic function (Sharma et al., 2015). Out of the 13 bacterial isolates, isolate '3' showed better proteolytic activity during primary and secondary screenings. It showed giving a maximum yield of 55.24 U/ml of protease, far better compared to the yield given by isolate '5'. *S. marcescens*, *S. liquefaciens*, *S. plymuthica*, and *S. marinorubra* were previously reported to produce proteinases (Grimont et al., 1977). Further, 16S rRNA sequencing and phylogenetic analysis showed that isolate '3' is closely related to the known *Serratia* species – '*S. plymuthica*'. The 100% sequence similarity with reference strains reveals the strength of molecular method of bacterial identification, when compared to phenotype and biochemical tests alone.

Optimisation experiments revealed a few significant factors of environment and nutrition-influencing protease production. Indeed, neutral pH and room temperature were favourable for the production of this enzyme, which is consistent with the results of previous research on mesophilic bacteria, including the *Serratia* genus (Miyata et al., 1970). The choice of lactose and casein as the most promising sources of carbon and nitrogen correspondingly allowed assuming that substrates easily metabolised by the bacteria support better biosynthesis of proteases. The comparative activity observed with glucose suggests metabolic flexibility in *S. plymuthica*, which may increase its industrial applicability.

Thus, the protease activity of *S. plymuthica* isolate 3 compares quite favourably with other high-yield strains documented in industrial microbiology. For instance, *Bacillus subtilis* (Pant et al., 2015) and *Pseudomonas aeruginosa* (Zambare et al., 2011), two well-known organisms for their proteolytic abilities, produce enzymes under comparable conditions of pH and temperature and thus prove that *S. plymuthica* may be used for industrial production as well. As it is able to utilise some economical substrates, such as lactose, this makes it even more suitable for large-scale production, as one of the main economic limitations to enzyme production will be minimised (Fasim et al., 2021).

Results also proved that this strain could have possible applications where high-level, rapid protease synthesis is necessary since maximum activity occurred within 24 hours of incubation. Loss of activity with further incubation periods can be attributed to the effects of protease autolysis or loss of nutritional factors, a limitation to which more emphasis has to be paid. The potential problems involved could be lessened with techniques such as fed-batch fermentation or methods for immobilisation (Gupta et al., 2002).

Conclusion

The discovery of so marked a potential of enzymatic activities in *S. plymuthica* certainly adds to the ever-growing repertoire of industrially important microorganisms. These substantial protease activities in soil samples from high altitudes, as found in *S. plymuthica*, reveal one more example of the untapped possibilities for extreme environments to act as sources of valuable microbial resources. The isolation of *S. plymuthica* from high-altitude soil was also indicative of ecological adaptation for protease-producing bacteria. Such environments, where temperatures and nutrient availability are at their low, may harbour microbes that possess unique enzymatic properties, including cold-active proteases.

Future studies need to focus on improving protease yield and its activity by response surface methodology (RSM) based optimisation and strain improvement. Studies on the thermostability, pH tolerance, and substrate specificity of the enzyme need to be done. It also broadens the utility of this strain for pharmaceuticals, food processing, and bioremediation. In addition, research on the synergistic effect with other microbial enzymes could create novel biocatalysts in complex industrial processes.

In summary, this work identifies *S. plymuthica* as a promising protease-producer. It has filled certain gaps between basic microbial research and industry by pointing out the importance of systematic screening, molecular characterisation, and optimisation. It reemphasises the importance of systematic microbial exploration in under-researched environments.

Acknowledgements

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Surface Plasmon Resonance Studies of Silver Nanoparticles Synthesised by Chemical Reduction of Silver Nitrate with Sodium Citrate and Ascorbic Acid

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Abstract

Silver nanoparticles of different sizes were synthesised by the chemical reduction of silver nitrate with trisodium citrate as reducing agent and ascorbic acid as stabilising agent. The reaction was carried out at different temperatures 30°C, 50°C, 70°C, and 100°C, and by varying the concentration of reducing agent and stabilising agent (Suriati et al., 2014). The samples were characterised by UV–Visible absorption spectra, and it was found that the surface plasmonic peaks of the samples were sensitive to the relative concentration of reducing agent, stabilising agent, and reaction temperature. The size of the nanoparticles was measured from UV–Visible spectra using Mie scattering theory and was confirmed by taking HRTEM images of the sample. We found that they matched the measurements from Mie scattering (Amirjani et al., 2020; Mansouri & Ghader, 2009).

Keywords: Silver nanoparticles, Chemical synthesis, Surface plasmon resonance.

Introduction

The synthesis of noble metal nanoparticles in a variety of sizes and shapes is increasingly becoming because of their potential uses in physics, chemistry, biology, materials science, and medicine. Because we can readily adjust the surface plasmonic peaks and control the optical, electrical, and catalytic properties, controlled synthesis of nanoparticles of various sizes and shapes is crucial. The collective oscillation of electron clouds on a nanoparticle's surface is known as surface plasmon resonance. The size, shape, and kind of atoms that make up the nanostructure all affect the resonance frequency. Therefore, we may adjust the resonance frequency according to our needs by changing the size and form of nanoparticles, and as a result, we can regulate the electrical and optical characteristics. The most used characterisation method for examining the optical characteristics of nanoparticles is

UV–Visible absorption spectroscopy. When a sufficient wavelength of electromagnetic radiation strikes a colloidal form of metal nanoparticle, resonance absorption occurs when the frequency of the incident radiation matches the frequency at which the plasmons on the metal nanoparticle surface vibrate. which correlate to one of the visible absorption peaks in the UV spectrum.

The colour change in the solution is an obvious indication that nanoparticles have developed. The solution's hue changes from colourless to pale yellow to dark brown as a result of the silver nanoparticles. The intensity of the surface plasmon peak depends on several factors, including the solvent type and surface functionalisation, in addition to the size and shape of the nanoparticles (Mansouri & Ghader, 2009). The preparation of silver nanoparticles of different sizes is necessary to examine the size dependency of their surface plasmonic properties. One of the popular techniques for producing silver nanoparticles is the chemical reduction of silver nitrate, because it is relatively easy to modify the size and shape of nanostructures, by changing the reaction parameters. By varying the reaction conditions, including the temperature and the concentration of the stabilising and reducing chemicals, silver nanoparticles of different sizes were produced. In order to produce silver nanoparticles, trisodium citrate was used as a reducing agent and ascorbic acid as a stabilising agent to reduce silver nitrate. The samples were characterised using their UV–Visible absorption spectra.

Mie scattering theory can be used to estimate the size of nanoparticles. Mie scattering is a phenomenon where light interacts with a particle's surface, creating an electromagnetic field. Named after German physicist Gustav Mie, this phenomenon is based on the size and wavelength of the incident light. The Mie scattering pattern provides information about the material's size distribution. Some materials absorb light, leading to Fraunhofer theory calculations. Light can also be reflected from a substance's surface, but this is a separate issue. A third interaction occurs when a material is transparent, allowing light to pass through the particle, adding to the Mie scattering/diffraction pattern Mie theory offers an analytical solution for Maxwell's equations when light is incident upon a spherical particle. It can be applied to homogeneous spheres and spheres with core spheres and outer shells. Mie theory can compute absorption, scattering, and extinction cross-sections. It can be used to model complex structures like nano disks and nanorods. It can be combined with effective medium theories like Maxwell-Garnett theory to model regular or random arrays of particles on a substrate (Gupta et al., 2018).

Experimental Preparation of Ag colloids

Silver nitrate, trisodium citrate, and ascorbic acid were purchased from Sigma-Aldrich. Colloidal silver nanoparticles were prepared by the reduction of silver nitrate with trisodium citrate as reducing agent and ascorbic acid as stabilising agent. In a typical reaction process, 100 ml of 1 mM silver nitrate was taken in a beaker and was heated to 70^{o}C by placing it on a magnetic stirrer with hot plate. In another beaker a mixture of 20 ml of 1 mM trisodium citrate and 1 mM ascorbic acid was taken and also heated to 70^{o}C. Then 5 ml of the above mixture was added to the silver nitrate solution drop by drop accompanied by vigorous stirring. The colour of the mixture changes from colourless to light yellow and then to light brown by the addition of the mixture of reducing agent and stabilising agent, which confirms the formation of silver nanoparticles in the solution. The final confirmation of the formation of silver nanoparticles was done by taking the HR TEM image of the sample, and it was found that the nanoparticles have an average size of 30 nm.

The above reaction was repeated by varying the temperature and concentrations of reducing agent and stabilising agent.

To study the dependence of reaction temperature on the synthesis process, the above reaction was carried out at different temperatures: room temperature, 50^{o}C, 70ºC, and 100ºC. The UV–Visible absorption spectra of the samples were analysed; the result shows that the reaction temperature has a significant role in the reaction process.

For studying the effect of the concentration of reducing agent on the reaction, the reaction was carried out at different trisodium citrate concentrations, viz. 1 mM, 2 mM, 3 mM, and 4 mM. It was noted that there is a considerable change in the colour of the reaction mixture with varying concentrations of reducing agent. UV–Visible absorption spectra of the colloids were taken and it was shown that there is a remarkable change in the absorbance peak.

In order to study the effect of stabilising agent concentration on the reaction, the reaction was carried out at different concentrations of ascorbic acid, viz. 1 mM, 2 mM, 3 mM, and 4mM. It was found that the concentration of ascorbic acid also strongly influences the reaction. The UV–Visible spectrum analysis also shows how the concentration of ascorbic acid affects the reaction.

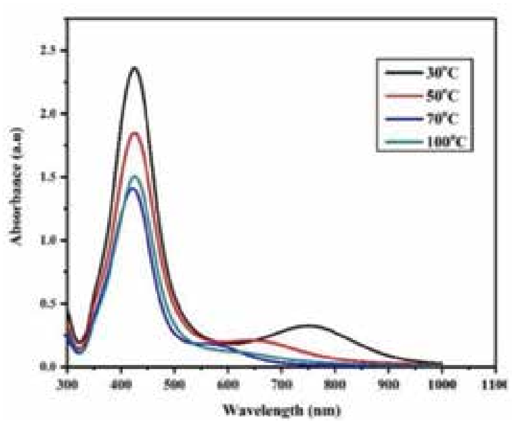

Figure 1 : UV–Visible absorption spectra of Ag nanoparticles synthesised at different temperatures.

Instrumentation

The silver nanoparticles thus synthesised were characterised by UV–Visible absorption spectroscopy using high performance Thermoscientific Nicolet iS50 Carry 5000 UV-Vis- NIR spectrophotometer in a 1 cm optical path quartz cuvette. To confirm the size of the nanoparticles HRTEM image of the samples were taken.

Results and Discussion

Figure 1 shows the UV–Visible absorption spectra of silver nanoparticles synthesised by reducing 1 mM silver nitrate with 1 mM trisodium citrate and 1 mM ascorbic acid at different temperatures. The UV–visible spectrum analysis shows that the absorbance peak decreases with an increase in temperature. Also, it was found that there is a blue shift in the SPR peak with an increase in temperature. This is because with an increase in temperature, the rate of reaction increases, the number of silver atoms in the solution increases, and nanoparticle formation increases. But due to the presence of surfactants in the solution, as soon as the nanosized particles were formed in the solution, they were suddenly coated by the charged surfactants, preventing them from growing into larger-sized nanoparticles. The blue shift of the SPR peak is an indication of a decrease in

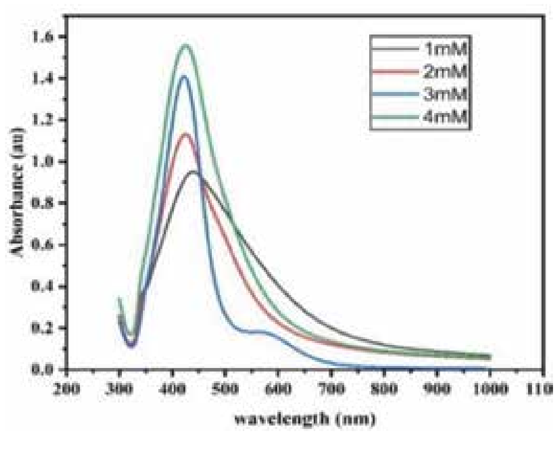

Figure 2 : UV–Visible absorption spectra of Ag nanoparticles synthesised at different concentrations of trisodium citrate at 70°C.

particle size. At lower temperatures, a second peak around 700 nm was observed. This is due to the presence of larger particles in the solution because at a lower temperature, the rate of reaction decreases and hence there is enough time for the particles to aggregate together to form larger particles. An increase in the absorbance peak indicates there is a greater number of nanoparticles in the solution.

Figure 2 shows the UV–Visible absorption spectra of silver nanoparticles synthesised at different concentrations of trisodium citrate, by keeping the temperature at 70ºC. From this figure it is found that with increase in the concentration of reducing agent there is an increase in absorbance peak and there is blue shift in the peak. That means increase in concentration of reducing agent decreases the particle size and increases the number of particles in the solution.

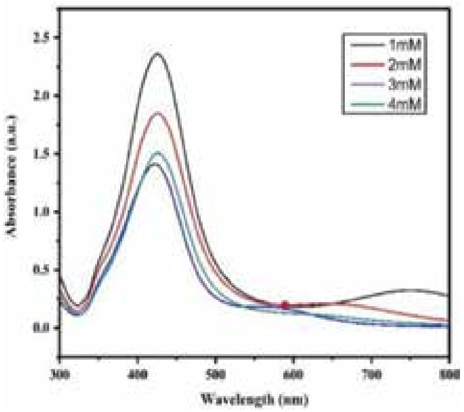

Figure 3 : UV–Visible absorption spectra of Ag nanoparticles synthesised at different ascorbic acid concentrations at 70°C.

Figure 3 shows the UV-Visible absorption spectra of silver nanoparticles synthesised at different ascorbic acid concentrations. The figure shows that increase in concentration of ascorbic acid causes a blue shift in SPR peak which means decrease in particle size.

HR-TEM analysis

The morphological characteristics of the produced silver nanoparticles were examined using the HR-TEM, as shown in Figure 4. The silver nanoparticles were quasi-spherical in shape and varied somewhat in size, as shown by the TEM micrograph. Their size of the nanoparticle was measured roughly around 25 nm.

Particle size determination from Mie scattering theory

From UV–Visible absorbance data, we can calculate the particle size using Mie scattering theory (Baset, n.d.). The application of classical electrodynamics to solid state clusters with a simple spherical shape is the main focus of Mie scattering theory. For noble metals, the particle dimension has a significant influence on the optical absorption bands in the UV–Visible spectrum. The absorption cross-section can be expressed as follows if the nanoparticles are widely distributed and spherical in shape (the distance between particles is significantly larger than the particle diameter).

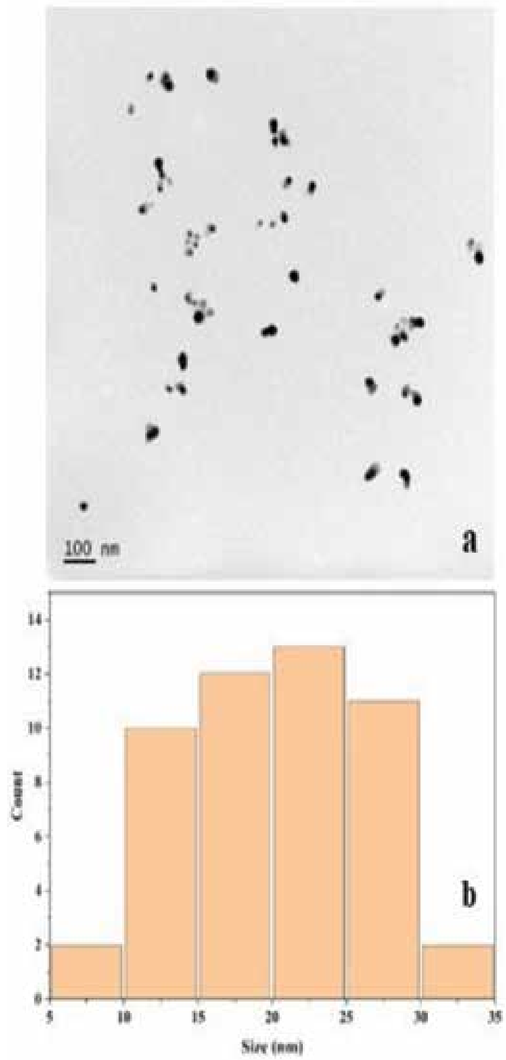

Figure 4 : (a) TEM image and (b) size distribution of colloidal Ag nanoparticles synthesised by 1 mM trisodium citrate and 1 mM ascorbic acid at 70°C (<r>=25.26 nm).

$$\sigma_{abs} = 9\frac{w}{C}\varepsilon_m^{3/2}v_0\frac{\varepsilon_2(\omega)}{[\varepsilon_1(\omega)+2\varepsilon_m]^2+\varepsilon_2^2(\omega)}$$

where υ_0 is the volume of spherical particles, ε_m and $\varepsilon_m=\varepsilon_1(\omega)+i\varepsilon_2(\omega)$ represents the dielectric functions of the medium surrounding and material particles, respectively. The resonance frequency of the dipole is found out by a condition $\varepsilon_1(\omega) = -2\varepsilon_m$ provided by the condition $\varepsilon_2(\omega)$ is not very large and does not vary near the resonance frequency with in the Lorentz-Drude-Sommerfeld free electron model (Krishnan et al., 2014) ε(ω) is given by

$$\varepsilon(\omega) = 1-\frac{\omega_p^2}{\omega^2+i\omega\gamma}$$

where ω_p is the plasma frequency which depends on the electron density (n) on the effective mass of electrons and γ is the Drude frequency which is given by $\gamma = \frac{v_f}{L\infty}$ where v_f is the fermi velocity and L_∞ is the mean free path of the electron in bulk material (Baset, n.d.). If the particle size becomes comparable with L_∞, the interaction of the conduction electron with the particle surface becomes important as an additional collision process and increased γ which depend on the cluster size $\gamma(R) = \gamma_0 + (Av_F)/R$

where A is ascribed to scattering process having a value of ¾ for silver and γ_0 is the bulk scattering velocity, for silver which is equal to $5\text{x}10^{12}\ s^{-1}$ and v_f, the fermi velocity which is equal to $1.39\text{x}10^6$ m/s for silver. From this equation the average particle size of silver nanoparticles in the suspension can be calculated as follows (Tables 1 and 2).

Table 1 : Results of size measurements using Mie theory

Tempera-ture (°C)	Conc. of $AgNO_3$ (mM)	Conc. of TSC (mM)	Conc. of ascorbic acid (mM)	Reaction time (min)	λ_{max} (nm)	υ_{max} s^{-1} ($x10^{13}$)	Estimated average particle size (nm)
30	1	1	1	30	426.27	7.037	30.18
50	1	1	1	30	426.07	7.041	30.65
70	1	1	1	30	425.47	7.051	31.38
100	1	1	1	30	422.61	7.098	31.51
70	1	1	1	30	425.47	7.051	30.18
70	1	2	1	30	424.02	7.075	25.93
70	1	3	1	30	423.66	7.081	21.42
70	1	4	1	30	423.43	7.084	20.44
70	1	1	1	30	425.47	7.051	30.18
70	1	1	2	30	422.46	7.101	25.37
70	1	1	3	30	417.70	7.182	23.46
70	1	1	4	30	414.82	7.232	20.12

Table 2 : Literature data for comparison

Date	Position of peak (nm)	Width (nm)	Width(s^{-1})	Estimated size (nm)
First day	410	108.21	2.8×10^{14}	4.1

Second day	411.91	92.7	2.6×10^{14}	4.4
Third day	412.28	75.1	2.0×10^{14}	6.0
Fourth day	413.8	65	1.6×10^{14}	7.9
Tenth day	413.9	60	1.56×10^{14}	8.1

Conclusion

In this work, we describe a new and easy way to measure the particle size of semiconductor and metal nanoparticles. Chemical route is adopted for the synthesis of silver nanoparticles. UV–Visible spectroscopy is used as the basic tool to confirm the formation of silver nanoparticles. The experiment is repeated by varying concentration of reagents and temperature. Mie theory was applied to measure the size of metal nanoparticles from UV–Visible spectra and was shown to have excellent agreement with the experimentally obtained TEM picture. Reference data from the literature are also given in a separate table where the particles size is only a few nanometres. In this study, the size of the nanoparticles was of the order of 20–30 nm in diameter.

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Dielectric Loss Analysis of Zinc Sulfide Nanoparticle Having Different Average Particle Sizes

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Abstract

Zinc sulfide nanoparticles were synthesized using a controlled chemical precipitation method. Nanoparticle samples with different average particle sizes were synthesized by annealing the as prepared sample at different temperature in inert atmosphere. The AC electrical measurements were carried out between 313 and 423 K in vacuum at different frequencies ranging from 100 Hz to 1 M Hz. The dielectric losses (tand) of the samples at different temperatures were analysed. The variations in dielectric loss of samples with frequency of the applied signal and average particle size were also studied in detail.

Keywords: Semiconductor nanoparticle, Zinc sulfide, Dielectric loss.

Introduction

The dielectric characteristics of semiconductor nanoparticles are significantly different from those of their bulk counterparts (Sharma & Garg, 2023; Thaker et al., 2023). When a dielectric material is exposed to an alternating electric field, it experiences energy loss, resulting in energy dissipation within the material. Several mechanisms like polarisation, grain boundary effects, and interfacial traps contribute to the dielectric loss in semiconductors. Accurate characterisation of the dielectric loss is indispensable in supercapacitor research and related fields because the inherent losses within nanomaterials can significantly affect the high energy storage capacity and the power density of nanostructured materials. Zinc sulfide is a wide band gap semiconductor and a promising candidate for high performance sensing applications. In recent times, a diverse array of ZnS nanostructures, encompassing nanorods, nanowires, nanobelts, nanoribbons, nanotubes, and hollow spheres have found extensive applications across various domains (Zhang et al., 2005; Shuai & Shen, 2011). In applications like catalysis, photo detection, and gas sensing, where high sensitivity and selectivity are crucial, zinc sulfide nanoparticles have proven to be an excellent choice (Long et al., 2020; Zhang et al., 2017). This article discusses the study of dielectric loss of consolidated nanoparticles of ZnS having different average particle sizes. The variations of the dielectric loss of samples with frequency of the applied signal, temperature and average particle sizes were studied in detail.

Materials and Method

ZnS nanoparticles were synthesised through controlled precipitation method, using zinc chloride and sodium sulfide as starting materials. Nanoparticle samples of different average grain sizes were prepared by annealing the as prepared sample at different temperatures in an inert atmosphere. X-ray diffraction pattern of the samples was recorded and reported elsewhere (Sutheertha S. Nair, 2024). The average particle sizes were calculated using Scherrer Equation (Sutheertha S. Nair, 2024). Table 1 lists the sample codes, average particle sizes, and annealing temperatures.

Table1: Sample codes assigned to nanostructured zinc sulfide samples used for the ac electrical measurements

Sample code	Average particle size (nm)	Annealing temperature (° C)
Z1	3	As prepared
Z2	5	400
Z3	7	500
Z4	12	600

AC electrical measurements were performed under vacuum between 313 and 423 K. The complex impedance Z* and phase angle q corresponding to each sample were measured at different frequencies ranging from 100 Hz to 1 MHz using HIOKI model 3531 Z-Hi Tester. The dielectric losses (tand) of the samples at different temperatures were calculated using the relation tan δ = (1/ tan θ).

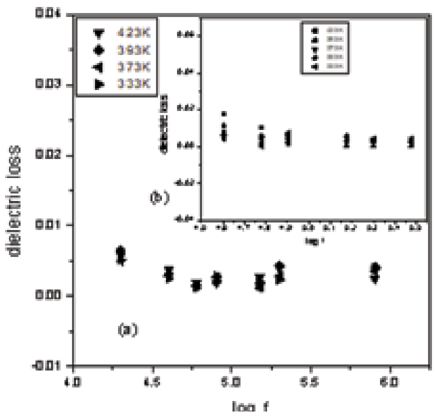

Figure 1 : Variation of dielectric loss with frequencies for samples (a) Z1 and (b) Z2.

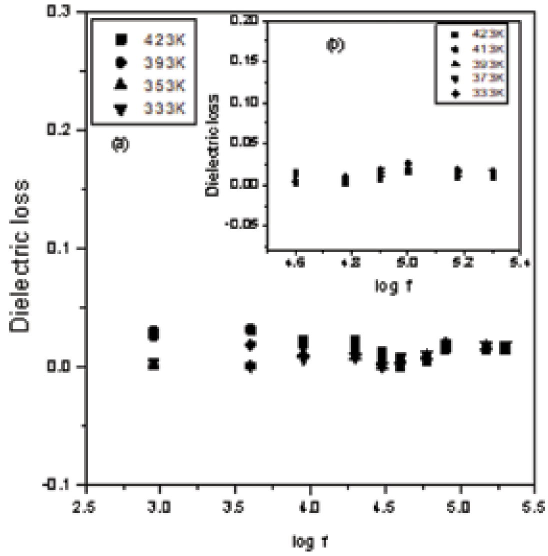

Figure 2 : Variation of dielectric loss with frequencies for samples (a) Z 3 and (b) Z4.

Results

The variation of dielectric loss with frequencies at different temperatures for nanostructured ZnS samples (Z1 and Z2) is shown in Figure 1(a) and 1(b), respectively. Figure 2(a) and 2(b) show the variation of the dielectric loss with frequencies for the samples Z3 and Z4 at different temperatures. From the figures it can be observed that the values of dielectric loss and tan d of all the samples were very small and these values varied only slightly with frequency of the applied signal.

The variations of dielectric loss of the samples with temperature are shown in Figure 3 (a), 3(b) and Figure 4(a), 4(b), respectively. It can be observed from the figures that the value of the dielectric loss remains fairly constant over the temperature range from 333 K to 423 K.

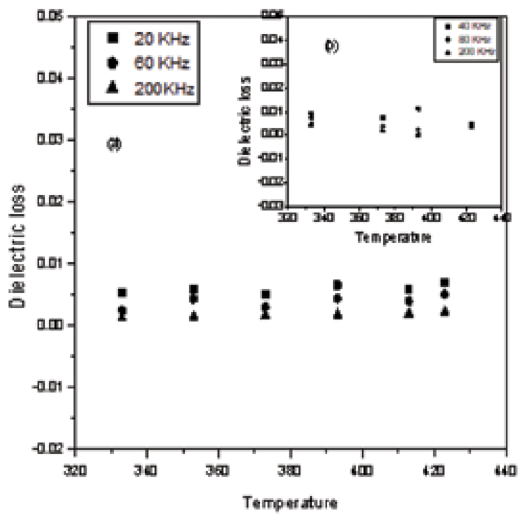

Figure 3 : Variation of dielectric loss with temperature for samples (a) Z1 and (b) Z2.

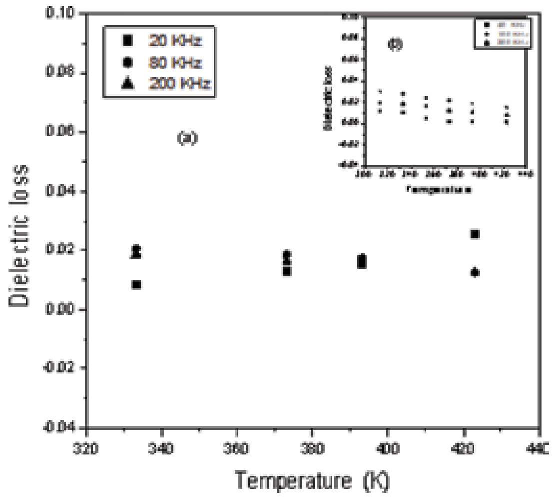

Figure 4 : Variation of dielectric loss with temperature for samples (a) Z3 and (b) Z4.

Discussion

According to Samara the small particles of ZnS were quite lossy at room temperature with tan d having a value of @ 0.15 at 100 kHz, which decreased to 0.07 at 75.7 K (Samara, 1983). In this study it was found that, dielectric loss (tan d) was considerably less compared to the corresponding values for bulk single crystals reported in literature (Samara, 1983).

The polarisation mechanism in semiconductor nanoparticles must be different from that of their single crystalline counterparts. Because of the defective structure of the grain boundary region, it contains numerous empty electron states lying below the Fermi level. Electrons flow from the grains to fill these empty states in the grain boundary region (Pike, 1984; Ce-Wen et al., 1984). The high density of atoms at grain boundaries in nanostructured materials makes them electrically active due to charge trapping. The orientation of these atoms along the direction of applied electric field requires a part of the electrical energy to overcome the forces of internal friction which involve energy losses. The defective states at the grain boundaries together with the space charge polarisation produce an absorption current resulting in a dielectric loss. With the increase in the frequency of the applied signal at different temperatures, the contribution by rotational polarisation and space charge increases at the interface causing variations in the value of dielectric loss.

Conclusion

The variations in dielectric loss of nanoparticles of zinc sulfide samples with different average particle sizes were studied over a frequency range 100 Hz to 3 MHz at different temperatures ranging from 313 to 423 K. The dielectric losses, tan δ, of all the samples were very small and these values varied only slightly with increase in frequency of the applied signal for different temperatures.

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Emotional Trauma Among Idiopathic Infertile: An Exploration

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Abstract

Emotional trauma is common among infertile people. Infertility is a condition of the male or female reproductive system characterised by the inability to conceive after 12 months or longer of consistent unprotected sexual intercourse. Emotional trauma is the emotional response to a stressful or dangerous event that can make one feel unsafe or helpless. The objective of the study is to explore emotional trauma in idiopathic infertile individuals. A qualitative design was used here. A semi-structured interview was done among 15 infertile females between the ages of 25 and 40. Thematic analysis was used for the analysis of the data. The main themes were: 1) deep sadness, 2) age-related concerns, 3) guilt, 4) worry, 5) anxiety and 6) financial strain. Results show that all respondents are facing some sort of emotional trauma. The study concluded that emotional trauma is common and exists in different levels in people with idiopathic infertility. Given the high occurrence of emotional trauma among infertile women and its impact on health and quality of life, this issue calls for careful attention and strategic intervention, particularly in low- and middle-income countries.

Key words: Infertility, Sadness, Guilt, Worry, Anxiety

Introduction

Mental health pertains to the way in which individuals process their thoughts, emotions and actions. Achieving mental well-being allows individuals to effectively manage life's challenges, recognise their talents, acquire knowledge, perform efficiently, and positively impacts the community (World Health Organization, 2024). Our emotional, psychological, and social well-being is all components of mental health. Trauma severely affects mental health. Its effects can happen in a flash and be unexpected and shocking, or it can happen continuously or repeatedly, such as in surviving an abusive relationship.

Emotional trauma is common among infertile people. The diagnosis of infertility can be a burden for couples. Infertility is a condition of the male or female reproductive system characterized by the inability to conceive after 12 months or longer of consistent unprotected sexual intercourse (World Health Organization, 2024). Infertility is estimated to affect one in six individuals of reproductive age globally at some point in their lives. Idiopathic infertility affects 30% of infertile couples globally and is characterised by the inability of the person to conceive even after at least 12 cycles of unprotected sexual activity or after six cycles in women over 35 whose standard evaluations are normal, and the absence of a clear cause for the infertility (Sadeghi, 2015). In Kerala, 11.1% of currently married women in the 20–49 age range who had been married for two or more years had experienced infertility. According to Chilean research, 26% of women had a conception delay greater than 12 months, yet only 4% of them were infertile during the first eight years of marriage (Fuentes & Devoto, 1994).

Infertility and infertility treatment have impact on women's overall well-being, including their mental, emotional, sexual and spiritual health (Assaysh-Öberg, et al., 2023). Despite not being an illness, infertility and its treatment can have an impact on many facets of a person's life, leading to a variety of psychological and emotional diseases or outcomes, such as anxiety, despair, hopelessness, guilt, and a sense of worthlessness.

Trauma can be referred to as an occurrence, sequence of events, or collection of circumstances that a person perceives as physically or emotionally dangerous or threatening and that has a long-lasting negative impact on their functioning and physical, social, emotional, or spiritual well-being. According to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), trauma is defined as when an individual person is exposed "to actual or threatened death, serious injury, or sexual violence" (American Psychiatric Association, 2013). Extremely stressful situations that break our sense of security and leave us feeling powerless in a frightening environment can cause emotional and psychological trauma. When we are in a traumatic condition, the emotional and psychological symptoms include- shock, denial, disbelief, confusion, difficulty in concentrating, anger, irritability, mood swings, anxiety and fear, guilt, shame, self-blame, withdrawing from others, feeling sad or hopeless, feeling disconnected, or numb.

A number of studies have established a link between infertility and emotional trauma (Bradow, 2012). Infertility has an impact on women's overall well-being including their emotional health (Carol, 2016). Depression, anxiety, and stress are very common among females suffering from infertility (Yusuf, 2016). Up to 40% of women experiencing infertility have a psychiatric diagnosis, most often depression or anxiety (National Infertility Association, America). Lead researcher, Dr. Sofia Gameiro from Cardiff University found that over 60% of patients' highlighted aspects of amplified emotional trauma. Eisner studied 20 infertile women and 20 matched fertile women using the Rorschach test and found that all of the infertile women revealed more emotional disturbances. It is possible that infertility resulted in emotional problems. The degree of stress and desperation felt by infertile couples is emphasised by the fact that suicide among childless couples is approximately twice as frequent as among couples with offspring (Mai, et al., 1972). Findings confirmed the predictive effects of infertility-related stress on both emotional and marital distresses. The result shows that infertility-related stress was found to have more impact on emotional distress (Gana & Jakubowska, 2016). The results of a study indicated that depression, anxiety, and stress were more prevalent in infertile women than in infertile men (Khalesi & Kenarsari, 2024).

Objective

The objective of the study is to explore emotional trauma in idiopathic infertile individuals.

Methodology

Participants

Fifteen idiopathic infertile females aged 25-40 participated in these semi-structured interviews. Only females were included in the study.

Data collection

The individuals who are idiopathic infertile were identified by professionally qualified doctors in Reproductive medicine with the consent from CRAFT Hospital, Kodungalloor, Kerala. Participants provided informed consent. The study included only heterosexuals as participants.

The study adopted an inclusion-exclusion criterion. Idiopathic infertile females undergoing fertility treatment with age range between 25 and 40 years from Kerala who were ready to give consent to participate were included for the study. Homosexuals were excluded.

Analysis/Methods

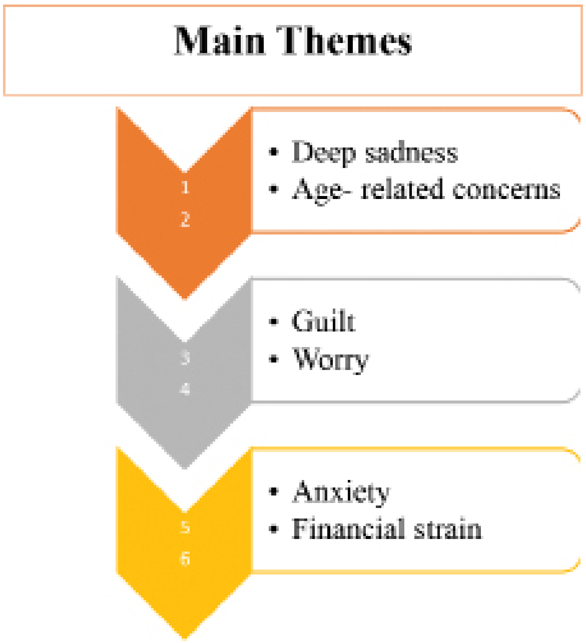
The research design used for the study was a qualitative one. A semi-structured interview with open-ended questions was used as the tool for data collection. The collected data were analysed qualitatively using thematic analysis.

The question used for the purpose of semi-structured interview in "Emotional trauma" is

"What are the main aspects related to your emotional trauma caused by your infertile condition?"

Results and Discussion

The thematic analysis done to the collected data indicated that all the respondents are facing some sort of trauma as part of their infertile condition. The main themes identified included deep sadness, age- related concerns, guilt, worry, anxiety, and financial strain. Each of these is explained in detail.



Deep sadness

According to Cambridge Dictionary, sadness is defined as the feeling of being unhappy, especially because something bad has happened. Deep and sustained sadness may slip into depression. In the study, deep sadness emerged as a theme, which formed a prominent part of the participants' mental state. In the transcripts, seven of the participants' responses are as follows.

"Because I was suffering from endometriosis and surgery, I expect some sort of pregnancy constraints. So, I was not that much sad. But definitely I feel sad as I am a woman who face infertility issues"

"I am sad. My husband is abroad and I need to face the troubles alone."

"In the initial years, I had hope about having

a normal pregnancy. But as years passed, I realize that it is difficult or even impossible. That makes me so desperate and totally disturbed. This makes me sad."

"I become very sad all the time."

"I feel very sad."

"I feel very sad. I mean it is really very sad. But I can control my sadness myself."

"Yes, I was very sad. My husband was not with me and that makes me even sadder. Because I was going to college it subsides a little bit."

Earlier studies have revealed that depressive symptoms are common in infertile women than normal healthy women (Domar, et al., 1992). Infertile women were found to have a greater frequency of depression than the overall population. The study by Kiani, et al., 2021 suggested that to lessen connected issues, suitable planning, policies, and procedures that address the detrimental impacts of depression on the lives of infertile women should be implemented, particularly in low- and middle-income nations.

Age- related concerns

The monthly risk of a woman in her early to mid-20s becoming pregnant is between 25% and 30%. A woman's fertility usually begins to gradually diminish in her early 30s, and the diminishing picks up speed after the age of 35. Only around 5% of women over 40 will become pregnant during any given month. Women with age more than 35 were very much concerned with their age and doubtful about the chance of pregnancy.

Two participants reported the following:

"In initial stage I had hope about normal pregnancy. But as years passed, we realise that it is difficult or even impossible. That makes me so desperate and totally disturbed."

"This is our second marriage (both of us). We got married at the age of 38. At first, we had a feeling that we would not have children because of our age. I was worried about it."

Guilt

Guilt, a negative, moral emotion, has powerful functions. Being conscious that one has done, may do, has benefited from, or may benefit from an action or omission that has caused or may cause harm or inequity to another person is what causes guilt (Huhmann & Brotherton, 1997).

One participant reports her guilt like this:

"My husband has no problem. I am responsible for what we are facing now. I feel so guilty".

Lalos, et al. (1986) proved that feelings of guilt were more common among the infertile women than infertile men.

Worry

Worry is the state or feeling of anxiety and unhappiness caused by the problems that you have or by thinking about unpleasant things that might happen. This keeps people alert to potential threats to themselves. Anxiety disorders often involve worrying as a prominent aspect. Worry from childhood through adolescence is crucial in order to avoid lasting negative consequences later (Rabner, et al., 2017).

Three out of fifteen participants reported the following:

"In the first days of marriage, it was found in the scan that there was a cyst in the uterus. I felt very sad when I found out that the chances of getting pregnant in the normal way are low. I worried a lot."

"I got married at the age of 30. Since then, we have been trying to conceive. When it didn't happen, I was worried."

"This is our second marriage (both of us). We got married at the age of 38. At first, we had a feeling that we would not have children because of our age. I was worried about it."

Feeling worried while attempting to conceive is quite common. The potential impact of this on fertility is a topic of debate (Hubayter, 2020).

Anxiety

Anxiety is an emotion characterised by feelings of tension, worried thoughts, and physical changes like increased blood pressure. Anxiety is a feeling of fear, tension, or worry that occurs as a response to real or perceived threats (American Psychological Association, 2021). Two participants explained that:

"Of course, there was trouble. We went to many hospitals and took treatment and became conceived twice. But it lost. This is my last attempt. After taking the treatment, I feel that the body will not stay any longer. I feel so anxious. If there are no children, it will be seen as God's certainty."

"It was a difficult time. When I started consulting the doctor of an infertility centre at the age of 26, that time I was extremely anxious and sad."

The relationship between stress and infertility has been debated for years. Women who experience difficulties in conceiving often struggle with emotional distress such as anxiety and experienced a lower quality of life in various domains (Bahadur, et al., 2024). Infertile women are exposed more frequently to anxiety risk than are infertile men (Kiani, et al. 2021). Difficulties in conceiving naturally may lead to emotions of shame, guilt, and reduced self-worth. These unfavourable emotions could result in feelings of anxiety (Rooney & Domar, 2018).

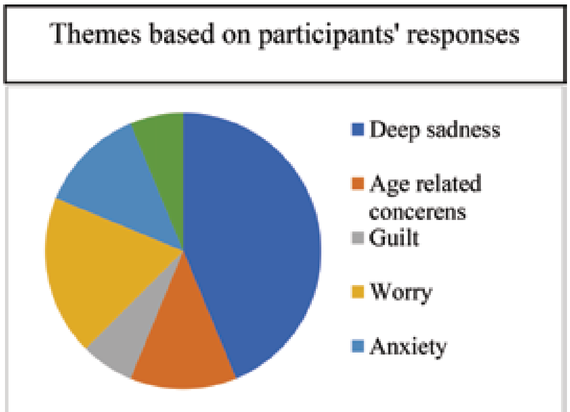
Financial strain

Financial strain occurs when individuals face challenges in covering essential expenses such as food, clothing, housing, transportation, furniture, leisure activities, and bills, due to an imbalance between their income and the total cost of living. Financial strain is when someone feels like they are unable to meet their financial needs and responsibilities, which can lead to negative impacts on their health (Garey, et al., 2017).

One participant reported:
"Of course, there was difficulty. Then there was some peace because I knew about the treatment. But finances is the problem"

Greater financial strain and less social support were associated with poorer health-related quality of life. Direct medical costs paid by patients for infertility treatment are significantly higher than annual average income and GDP per capita of most middle-income and low-income countries, pointing to unaffordability and the risk of catastrophic expenditure for those in need (Njagi, et al.,2023).

Women noted that there were insufficient governmental policies that aided them and that they were required to utilise sick days and leaves during the days of treatment (Kim, et al., 2020). They also perceived a lack of government assistance regarding finances, and the treatment resulted in financial hardships for some (Mete, et al., 2020). Clear-cut strategies should be implemented by the government so that the treatments will become accessible for all especially for people from low financial background.



Conclusion

The study concluded that emotional trauma is common and exists in different levels in participants. Increased psychological anguish is caused by a variety of factors, including physical pain and suffering from medical procedures, uncertainty about treatment outcomes, fatigue from trying to conceive, and the financial strain (Verhaak, et al., 2007). As a result, managing infertility might be viewed as a stressful event (Renzi, at al., 2020). Given the high occurrence of emotional trauma among infertile women and its impact on health and quality of life, this issue calls for careful attention and strategic intervention, particularly in low- and middle-income countries.

Implications

1) Infertility has significant negative impacts on the lives of infertile couples and particularly women, who frequently experience violence, divorce, social stigma, emotional stress, depression, anxiety, and low self-esteem. It needs to be addressed.

2) Authorities should provide a basic foundation of information and knowledge about infertility and associated mental, physical, and social problems.

3) All patients should get proper medication along with psychological support.

4) Government should introduce effective policies in terms of affordable treatment package which will be accessible to all.

5) Upcoming generation should get the awareness that infertility is merely a medical problem, not a social evil.

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Differential Effect of Age on Menstrual Symptoms: A Comparative Study

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Abstract

This study aims to explore the variability of menstrual symptoms across different age groups, in a sample of women from the Thrissur district of Kerala. A purposive sampling method was utilised. The study selected 125 participants from three age groups: adolescents, young adults, and adults. The primary instrument used for data collection was the Menstrual Symptom Questionnaire (MS), developed by Margaret Chesney in 1975, which measures spasmodic menstrual pain and congestive menstrual pain. The study utilised non-parametric statistical tests, including the Mann-Whitney U test and Kruskal-Wallis one-way ANOVA to interpret the data. The findings suggested significant differences in menstrual symptoms based on marital status and employment status, but not on educational and socioeconomic status. Specifically, unmarried individuals reported *higher spasmodic pain than their married counterparts, and non-working individuals experienced more overall menstrual symptoms than working individuals. Significant age-related differences were found in spasmodic pain, with adolescents and young adults reporting higher severity of pain compared to adults.*

Keywords: Menstrual symptoms, Age, Adolescents, Young adults, Adults

Introduction

The term menstruation originated from a Latin word called *menstrualis*, meaning monthly. This period is a really hard and hectic time for women because they have to go through various symptoms for 5–7 days. Menstruation is an important indicator of reproductive health. The menstruation that starts in the adolescent period, which is the transition period between adolescence and puberty. During this stage, many changes will happen in the body, both physiologically and psychologically. The starting period of menstruation is called menarche (Omidvar et al., 2018). The menarche usually occurs at the age of 10–16. Women have a long reproductive lifespan of an average of 36 years, from menarche to menopause. The menopause will occur approximately at the age of 51 (Mihm et al., 2011).

Menstrual symptoms that cause impairments in the activities of daily living in the premenstrual and menstrual periods. Menstrual symptoms, such as physical discomfort like headaches, cramps, backache, reduced concentration, and performance; behavioural changes such as avoidance of social activities and staying at home; and autonomic reactions such as fainting, sweats, water retention, and negative moods were highly prevalent during the menstrual period (Weon & Son, 2023). Dysmenorrhea, fatigue, irritability, and anxiety were the most prevalent physical and psychological symptoms of premenstrual syndrome (PMS) (Abbas et al., 2020). The studies have shown that there are differences in their perception of pain and the length of the ovulation according to their age. As age increases, there will be considerable variations in hormone levels (Li et al., 2023). Age can affect menstrual symptoms in different dimensions, like physiological, psychological, social, and cultural densities.

The menstrual cycle and numerous hormones are included in the hormonal theory of menstruation. A significant role is played by hormones such as progesterone, estrogen, gonadotropin-releasing hormone (GnRH), follicle-stimulating hormones (FSH), luteinising hormones (LH), and estrogen. The levels of estrogen rise and fall twice during the menstrual cycle (Reed & Carr, 2015). Mid-follicular phase is when estrogen levels increase to maximum, and post-ovulatory phase is when they decrease. However, the levels fall near the end of the menstrual cycle and rise through the mid-luteal phase. The fluctuations in the hormones during the menstruation period lead to the activation of neural mechanisms which result in both physical (pain and swelling) and psychological symptoms (mood changes and negative emotions).

Inflammation and immune response theory states that menstrual symptoms can be affected by the body's immune system and inflammation. The increase in discomfort is caused by the imbalance in the system. Oertelt-Prigione (2012) examined the impact of the cycle on the number and makeup of immune cells. As shown in the case of regulatory T cells, the menstrual cycle can affect the number of immune cells and vary their activity during the duration of the four-week cycle. The effects of such variations are especially important when it comes to chronic illnesses that impact women who are reproductive.

Menstruation and Socioeconomic Status

A study by Tosun and Çitfçi (2022) stressed the socioeconomic status and family structures that affect the young girls' healthy living behaviours and menstrual symptoms. The study was conducted with 1130 students. It was found that socioeconomic status had a negative impact on menstrual symptoms and healthy behaviours. A study conducted by Jang et al. (2013) examined whether factors like age, menstrual pattern, and obstetric history had a relationship with dysmenorrhea in women. Elshiekh and Mohammed (2011) examined the relationship between socioeconomic status at the age of menarche and the duration of menstrual bleeding. The statistical analysis shows significant differences in age at menarche between those whose parents had a higher educational level and those with a lower educational level, as well as the economic status and size of the family. Randhawa et al. (2016) found that a healthy diet and socioeconomic status are positively correlated with menstrual disorders.

Menstruation, Education, and Occupation

A cross-sectional study conducted by Moen et al. (2015) found no significant relationship between menstrual characteristics and night shift among nurses. They also found that the menstruation does not depend on the shift work also. According to Kwak et al. (2017), irregular menstrual patterns are present according to occupational status. The findings show that compared to daytime workers, shift workers and unemployed women have irregular menstrual patterns. Also, part-time workers had an oddly irregular pattern of menstruation compared to full-time workers. Nishikitani et al. (2017) conducted a survey to determine the relationship between menstruation and working status of women and found that long work hours and short intervals of time lead to menstrual problems among workers.

Marital Status and Menstruation

According to Omidvar and Begum (2011), the prevalence of menstrual patterns among unmarried women from South India is high. Common symptoms of dysmenorrhea include tiredness, anger, and backache. Women also experienced severe pain, abdominal cramps, vomiting, and loss of appetite.

Research Gap

Previous studies focused primarily on menstrual problems and symptoms and their impact on education, employment, and quality of life. The majority of the research emphasised the connection between menstruation symptoms and social and economic status. Furthermore, the impact of hormones and contraceptive treatments on menstruation has been the topic of multiple studies. A few researches also highlight the association between menstruation and mental health. However, none of the studies addressed how age affects menstruation symptoms. Age was a factor in most of the variables that were used in the prior studies. Additionally, an overview of earlier research revealed that the majority of the studies involved adolescents. Studies involving young adults and adult women were fewer. So, three primary populations are the focus of this study: adolescents, young adults, and adult women.

If most of the research focuses only on one population, mainly adolescents or the population in their menarche phase, this is a comparative one in which different age groups are selected. Also, the study mainly intended to measure two types of pain called spasmodic pain and congestive pain. Understanding how age varies menstrual symptoms helps to improve the quality of life and the psychological and emotional considerations of women. The pain that causes during menstruation is tiring and hectic and causes difficulty in the functioning of the body. Understanding how different age groups of women felt the menstrual symptoms will help to focus on age-related remedies and health measures.

Objectives

- To find out the variations in menstrual symptoms with respect to age

- To find out the variation in menstrual symptoms with respect to marital status, employment status, educational status, and socioeconomic status

Hypotheses

H1: There will be a significant difference in type of pain with respect to marital status.

H2: There will be a significant difference in type of pain with respect to employment status.

H3: There will be a significant difference in type of pain with respect to educational status.

H4: There will be a significant difference in type of pain with respect to socioeconomic status.

H5: There will be a significant difference in type of pain with respect to age.

Method

The research design was explorative in nature. Dependent variable was menstrual symptoms and independent variable were age, marital status, employment status, socio economics status, and educational status.

Sample

The participants were selected from the district of Thrissur in Kerala. A purposive random sampling was adopted to collect the data. As it was a comparative study, the participants were grouped into three age groups: 15-17 Adolescents group**,** 20-27 Young adults' group**,** and 28 and above adults' group. From these three age groups, the participants were selected on the basis of purposive random sampling method. Each group consisted of 40 participants.

Instruments

Personal data sheet: The personal data schedule developed by the researcher consists of information like age, socioeconomic status, marital status, education, and occupation of the participants. The informed consent was collected from the participants along with the personal data schedule.

Menstrual Symptom Questionnaire : The Menstrual Symptom Questionnaire (MSQ) was developed by Margaret Chesney in 1975 (Chesney & Tasto, 1975). The MSQ consists of 25 items used to measure two dimensions of menstrual pain: spasmodic, which is experienced as spasms on the first day of menstruation, and congestive, which occurs during the premenstrual cycle and experienced as heaviness in the abdomen, breasts, and ankles. For each of the 24 items, it indicates how often you have had the experience: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always. For the final question, indicate the type most closely experienced.

Procedure

A total of 125 participants, including adolescents, young adults, and adults, were selected for the study. The data were collected by providing a printed questionnaire. Instructions were given to the participants clearly. After making sure that the instructions were clearly understood, the researcher asked the participants to complete the questionnaire. Their responses were scored according to the scoring system mentioned in the tool.

Data Analysis

The data were analysed on the basis of Mann-Whitney U test (Mann & Whitney, 1947), and Kruskal-Wallis one-way ANOVA (Kruskal & Wallis, 1952) using JAMOVI 2.5.5 (The Jamovi Project, 2024). The Shapiro-Wilk normality test conducted on the data showed that the scores did not follow a normal distribution. Hence, non-parametric tests was used to analyse the data.

Results and Discussion

The results indicate the variation in menstrual symptoms with respect to different variables.

Table 1 : Mean, SD, and U-values: Menstrual symptoms based on marital status

Variable	Marital status	N	Mean	SD	w	U	Sig.
Total	Unmarried	69	76.9	7.23	0.146	1650	0.162
	Married	56	74.9	7.40			
Spasmodic pain	Unmarried	69	34.8	8.75	0.286	1379	0.006*
	Married	56	30.2	8.55			
Congestive pain	Unmarried	69	38.3	9.14	0.180	1585	0.085
	Married	56	41.2	10.16			

*p < .05.

Table 1 indicates the findings regarding the significant difference in menstrual symptoms with respect to marital status. Mann-Whitney U test was used to evaluate the difference between the two groups. The results show a significant difference in spasmodic symptoms (U = 1379, p = 0.006*), indicating that unmarried individuals have higher mean scores compared to that of married individuals. However, there is no significant differences found in total menstrual symptoms (U = 1650, p = 0.162) and congestive symptoms (U = 1585, p = 0.085) between unmarried and married individuals. This indicates that the Hypothesis 1 is partially accepted.

This finding aligns with the previous research by Gupta at al. (2018) who studied the impact of psychosocial factors on menstrual symptoms and found that stress and anxiety tend to be higher among unmarried individuals due to various social and personal factors and have an impact on the spasmodic symptoms during menstruation.

Table 2 : Mean, SD and U-values: Menstrual symptoms based on employment status

Variable	Employment status	N	Mean	S			
Total	Working	34	73.1	8			
	Non-working	91	77.1	6			
Spasmodic pain	Working	34	31.4	9.79	0.1290	1348	0.269
	Non-working	56	30.2	8.55			
Congestive pain	Working	34	38.7	10.58	0.0782	1426	0.503
	Non-working	91	40.0	9.36			

*p < .05.

Table 2 shows the findings of the difference in menstrual symptoms with respect to employment status. Mann-Whitney U test was used to assess the difference between the two groups. The results show a significant difference in total menstrual symptoms (U = 1135, p = 0.022*), indicating that non-working individuals have higher mean scores compared to working individuals. However, there are no significant differences found in spasmodic menstrual symptoms (U = 1348, p = 0.269) and congestive symptoms (U = 1426, p = 0.503) between working and non-working individuals. This indicates that employment status may selectively influence overall symptom severity, with non-working individuals experiencing higher symptoms. Thus, H2 was partially accepted.

A study by Vlahos et al. (2016) found that non-working women have a higher level of menstrual symptoms. This may be because of lower levels of physical activity and a higher level of stress related to household and financial responsibilities. Kim and Park (2018) also suggested that working women may experience lower menstrual symptoms due to their daily regular physical activity that is associated with their jobs.

The possible explanation for this could be the better of access of working women to the health care system and social network compared to the non-working women. Factors such as psychosocial stress, financial stress, increased household responsibilities, and, health behaviour

Table 3 : Mean, SD and one-way analysis of variance: menstrual symptoms based on educational status

Variable	Educational status	N	Mean	SD	χ^2	S
Total	MSc/higher education	39	74.5	9.31	1.713	0
	BSc/other professions	40	76.1	6.42		
	High school	46	77.2	6.0		
Spasmodic pain	MSc/higher Education	39	32.0	7.78	0.540	0
	BSc/other professions	40	33.1	9.61		
	High school	46	33.0	9.35		
Congestive pain	MSc/higher Education	39	38.7	9.57	0.561	0
	BSc/other professions	40	39.6	10.3		
	High school	46	40.4	9.38		

*p < .05.

SD	w	U	Sig.
.28	0.2663	1135	0.022*
.70			

Table 3 shows the findings of the difference between the different educational status groups and menstrual symptoms. One-way ANOVA (Kruskal-Wallis) test was used to assess the difference among the three groups. The results show no significant differences in total menstrual symptoms (χ^2 = 1.713, p = 0.425), spasmodic symptoms (χ^2 = 0.540, p = 0.764), or congestive symptoms (χ^2 = 0.561, p = 0.755) across the different levels. This indicates that the level of education attained by the individuals does not significantly impact their experience of menstrual symptoms. Thus, the hypothesis that there is a significant difference in menstrual symptoms (types of pain) with respect to educational status was not supported. Hence, H3 was rejected.

A study by Zhang et al. (2017) reported no significant association between education and menstrual symptoms. According to this study, factors such as genetics and lifestyle factors have more impact on menstrual symptoms than education. However, a study by Johnson et al. (2019) indicated that higher education was associated with reduced menstrual symptoms. This may be because of the higher health literacy rate and better access to healthcare sources that more educated individuals possess. Several factors can explain why educational status did not show a significant impact on menstrual symptoms.

Table 4 : Mean, SD and one-way analysis of variance: menstrual symptoms based on socio economic status

Variable	Socio economic status	N	Mean	SD	χ^2	Sig.
Total	High	2	71.0	8.49	1.49	0.476
	Middle	122	76.1	7.3		
	Low	1	72.0	0		
Spasmodic pain	High	2	35.5	4.9		
	Middle	122	32.6	8.9		
	Low	1	43.0	0		

Congestive pain	High	2	30.5	3.54	3.77	0.152
	Middle	122	39.9	9.66		
	Low	1	28.0	0		

*p < .05.

Table 4 presents the findings of the difference in socioeconomic status and experiencing of menstrual symptoms. One-way ANOVA (Kruskal-Wallis) test was used to assess the difference among the three groups. The results show no significant differences in total menstrual symptoms ($\chi^2 = 1.49$, $p = 0.476$), spasmodic symptoms ($\chi^2 = 1.92$, $p = 0.382$), and congestive symptoms ($\chi^2 = 3.77$, $p = 0.152$) across the different levels. This indicates that socioeconomic status is not a significant factor that influences the severity of menstrual symptoms among individuals. Thus, the hypothesis that there is a significant difference in menstrual symptoms with respect to socioeconomic status was not supported. Hence, H4 was rejected.

Hallman and Matthews (2009) found that women from lower socioeconomic backgrounds reported higher levels of menstrual discomfort and pain, due to higher stress levels, limited access to health care, and poor health practices. The present result suggests that there are no significant differences. So, it reveals that socioeconomic status alone is not a determinant of menstrual symptoms.

There are several other factors that can explain the result such as better access to healthcare, because the healthcare system has improved across different socioeconomic levels, and the presence of support networks that help the individual manage their stress and menstrual health. The increased health education and awareness about menstruation and related topics also lead to better management of symptoms. All these factors reduce the potential impact of socioeconomic disparities.

Table 5 : Mean, SD and F-values: menstrual symptoms based on age

Variable	Age	N	Mean	SD	χ^2	Sig.
Total	Adult	40	75.4	6.76	1.59	0.451
	Young adult	45	75.3	8.54		
	Adolescents	40	77.5	6.37		
Spasmodic pain	Adult	40	29.5	8.09	7.54	0.023*
	Young adult	45	34.2	8.86		
	Adolescents	40	34.3	9.14		
Congestive pain	Adult	40	42.3	10.2	5.01	0.082
	Young adult	45	37.5	9.50		
	Adolescents	40	39.4	8.97		

*p < .05.

Table 5 presents the findings regarding the difference in menstrual symptoms with respect to age. One-way ANOVA (Kruskal-Wallis) test was used to assess the difference among the three age groups. The results show a significant difference between age grows with respect spasmodic symptoms ($\chi^2 = 7.54$, $p = 0.023$). However, no significant differences were found in total menstrual symptoms ($\chi^2 = 1.59$, $p = 0.451$) and congestive symptoms ($\chi^2 = 5.01$, $p = 0.082$).

The Kruskal-Wallis test indicated there is a significant difference between age and menstrual symptoms ($\chi^2 = 7.54$, $p = 0.023$), which reveals that the severity of spasmodic pain symptoms varies across the age groups. Adolescents and young adults reported higher mean scores for spasmodic pain compared to adults. However, no significant differences were found in total menstrual pain ($\chi^2 = 1.59$, $p = 0.451$) and congestive menstrual pain ($\chi^2 = 5.01$, $p = 0.082$) among age groups.

Therefore, the hypothesis that there will be a significant difference between age and menstrual symptoms is partially supported. Hence, H5 partially accepted. According to Klein and Litt (2019), adolescents often report higher levels of menstrual pain due to hormonal fluctuations and the establishment of regular ovulatory cycles. This study supports the current finding that adolescents and young adults experience more severe spasmodic symptoms compared to adults.

Conversely, the lack of significant differences in total and congestive pain symptoms contrasts with the previous studies. A study by Campbell and McGrath (2014) suggested that the total menstrual symptom severity tends to decrease with age because women develop better coping mechanisms. This study did not find any significant age-related differences in the specific areas.

Further tests may be warranted to explore the detailed insights into the differences between the specific groups for spasmodic pain symptoms. For this, a Dwass-Steel-Critchlow-Finger (DSCF) paired comparison is used.

Table 6 : *Pairwise Comparisons – Spasmodic Pain*

Pair	W	P
Adult vs young adult	3.377	0.045*
Adult vs adolescents	3.365	0.046*
Young adult vs adolescents	0.175	0.992

*p < .05.

Table 6 shows the pairwise comparison between the different age groups (adults, young adults, adolescents), to determine the difference in the spasmodic pain symptoms. For this, DSCF pairwise comparison is used. The findings show significant difference between adults and young adults (W = 3.377, p = 0.045*) . This indicates the young adults are experiencing higher levels of spasmodic pain than adults. Similarly, a significant difference was found between adults and adolescents (W = 3.365, p = 0.046*), indicating higher spasmodic pain scores in adolescents compared to adults. No significant difference was found between young adults and adolescents (p = 0.992), suggesting the same level of spasmodic pain among the groups.

The findings show that severity of spasmodic symptoms varies across age groups. Adolescents and young adults reported higher mean scores for spasmodic symptoms compared to adults. However, no significant differences were found in total and congestive menstrual symptoms. Further analysis using the DSCF pairwise comparisons revealed significant differences in spasmodic symptoms between adults and young adults (W = 3.377, p = 0.045) and adolescents (W = 3.365, p = 0.046), with young adults and adolescents experiencing higher levels of spasmodic pain symptoms compared to adults. No significant difference was found between young adults and adolescents (p = 0.992), indicating similar levels of spasmodic pain between these groups.

A study by Klein and Litt (2019) found that younger women, particularly adolescents, often report higher levels of spasmodic menstrual pain due to hormonal fluctuations and the establishment of regular ovulatory cycles.

Conclusion

The study reveals findings regarding menstrual symptoms across different age groups. Unmarried individuals exhibit higher levels of spasmodic menstrual pain compared to married individuals. While non-working individuals report more menstrual symptoms than those who are employed. Among age groups, adolescents and young adults experience spasmodic menstrual pain compared to adults. These findings show the importance of healthcare interventions and support systems, particularly focusing on psychosocial factors and age. Future researchers should further explore this relationship with larger and more diverse samples to validate and expand upon these insights.

Limitations and Future Suggestions

There are various limitations to the study that need to be taken into consideration. Some groups, especially those with high and low socioeconomic status, had small sample sizes, which could affect the reliability of the results. Additionally, the research was constrained by limited time availability to complete the entire study process. For future research, several factors could enhance understanding and management of menstrual symptoms. Including more diverse participant samples from various socioeconomic and educational backgrounds would improve the applicability of findings. Longitudinal studies could explore how marital status, employment status, and age interact with menstrual symptoms over time. Qualitative methods could capture personal experiences and perceptions of menstrual symptoms.

Implications

The study's findings have several important implications. Healthcare interventions can be provided based on marital and employment status to better manage menstrual symptoms. Psychosocial support systems are important, especially for unmarried women experiencing higher stress and anxiety related to spasmodic pain symptoms. Educational programmes focusing on menstrual health could also benefit people across all educational levels equally. Public health policies should ensure equitable access to menstrual health. Healthcare providers can develop personalised treatment plans accounting for marital status, employment, and age-enhancing care for managing menstrual symptoms. Support networks like counselling and peer groups are also important for younger women dealing with spasmodic pain.

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Generativity in Old Age: A Literature Review

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Abstract

Generativity is a psychosocial concept that refers to concern for and commitment to the well-being of future generations, leaving a legacy behind. Erik Erikson proposed that it is a key developmental task of middle adulthood, but later researchers proposed broad dimensions to the concept by suggesting more importance to the context than chronological age. This literature review aims to provide an overview of generativity among older adults by synthesizing findings from 50 empirical studies published between 2000 and 2023. It focuses on methodological approaches, as well as the cultural contexts through which generativity is explored. The findings revealed that the research was predominantly conducted in Western countries, and methodologically quantitative approaches were the most common. The existing body of research has associated generativity with positive mental and physical health outcomes, resilience, civic engagement, and successful aging among older adults, along with fostering intergenerational relationships. However, it also indicates challenges and gaps in methodological issues, cultural variations, and contextual influences, suggesting directions for future research.

Keywords: Generativity, Old age, Successful aging

Introduction

Generativity is a multifaceted concept introduced by developmental psychologist and psychoanalyst Erik Erikson in his most influential theory of psychosocial development. He proposed that each stage of life deals with a unique challenge or crisis, which must be resolved for healthy development. Coping with these crises provides individuals with opportunities for growth and learning and strengthens their sense of self and relationships with others (Erikson and Erikson, 1997).

Among the eight stages of psychosocial development described in contrasting polarities, generativity versus stagnation was the seventh stage, characterising middle adulthood (35 and 65 years). Erikson defined generativity as the concern for establishing and guiding the next generation through parenting, mentoring, teaching, or other forms of social contribution that outlive one's self. The person who successfully fulfils the generative goals moves to the next stage of ego integrity, while failing to achieve it leads to stagnation, a state of self-absorption, and a lack of interest in the welfare of others. In his later work, Erikson et al. (1986) proposed a second chance of generativity through grandparenting (grand generativity), where he emphasised maintaining a dignified generative function in later years.

As an extension of Erikson's theory, Joan Erikson introduced the ninth stage of development, in which dystonic (negative) elements assume greater prominence than syntonic (positive) elements because of the challenges associated with aging. She proposed that the decreased energy and adaptability in the aging process naturally incline individuals to withdraw. This tendency, when combined with society's disregard, can lead to a sense of uselessness and stagnation (Erikson and Erikson, 1997).

Consistent with Erikson's theory, most research on this psychosocial construct has focused on mid-life, developing a broader conceptual theory for generativity and a prototype of generative adulthood (e.g., McAdams & de St. Aubin, 1992; Peterson & Stewart, 1990: Bradley & Marcia, 1998). The primary reason for positioning generativity in adulthood is the societal expectation that adults will take responsibility for the next generation through the roles of parents, teachers, or mentors. However, Erikson's idea of clearly demarcating life stages with precise goals has been challenged by many developmental psychologists.

Kotre (1984) pioneered among those who markedly built upon Erikson's ideas and redefined generativity as "a desire to invest one's substance in forms of life and work that will outlive the self". He proposed four distinct forms of generativity: biological, parental, technical, and cultural. He also distinguished generativity based on the focal point to which it was directed: agentic (self-oriented) and communal (oriented to generative object) modes of generativity. These types of generativity need to be in a balanced equilibrium with both agency and communion to deliver authentic generative expressions, which can be observed at any stage of life.

Later, Dan McAdams & de St. Aubin (1992) contributed to this body of research using a process model of generativity with seven interlinked features (Figure 1): social expectations and norms of roles and responsibilities (cultural demand), along with a person's intrinsic motivation and satisfaction (inner desire), when combined with optimism and faith in humanity (belief in the species), help to create empathy and interest in people and their well-being (generative concern). This concern leads to dedication and responsibility towards generative goals (commitment) and results in actual behaviours of creating, maintaining, or offering for the next generation (generative actions). Later, they construct and express their life stories (narration) that describe their generative efforts and the possible outcomes of outliving themselves. (McAdams & de St. Aubin, 1992). They also developed assessment methods for measuring the features of generativity.

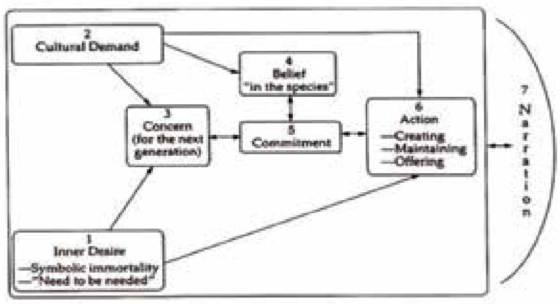

Fig. 1. Seven features of generativity (from McAdams, Hart, & Maruna, 1998, p. 9).

Figure 1 : Seven features of generativity (from McAdams et al., 1998, p. 9).

Further, Vaillant (2002) proposed six adult life tasks: identity, intimacy, career consolidation, generativity, keeper of the meaning, and integrity, among which the 'keeper of the meaning' is a characteristic of old age. He symbolised this task as a wise judge, who focused on the conservation and preservation of culture and its institutions.

The different components in these theoretical models are important at different stages of life, as per the cultural context. According to Kotre (1984), the issue in Erikson's conceptualisation of generativity is the lack of this differentiation, which varies according to demographics such as age, gender, and culture. Thus, attributing generativity solely to a specific age becomes less relevant (Villar et al., 2021). Even though Kotre and McAdams did not explicitly mention it, they paved the way for research on generativity in later life. However, most early empirical studies did not examine generativity in adults aged 60 years and over.

Generativity in Later Life

Considering these theoretical approaches, it can be observed that while the core principles of generativity remain constant, the nature of generative expression evolves as individuals grow older. Unlike in middle adulthood, generativity takes a more reflective approach in old age, where they may prioritise sharing life experiences and wisdom with younger generations through grandparenthood, mentoring, and community services, rather than child rearing and career development. However, declining physical health, financial constraints, and negative societal stereotypes may pose challenges to these efforts. Understanding and supporting these meaningful contributions by elderly have become increasingly relevant as the global population ages.

According to the World Health Organization, the elderly population (over 60 years old) is a growing demographic group, increasing from 12% to 22% by 2050. This implies a need for policies that promote healthy aging and social inclusion among older people. However, due to changes in family structure, older people in many parts of the world have become marginalised, separated, and segregated into groups constituted solely of older people (Doyle et al., 2015). Leading a good life in old age requires opportunities to establish and maintain social relationships, engage in the fulfilment of the interests of the self and others, take responsibility, and actively contribute to the development of society (Arendt, 1960). To enhance their vital involvement in old age, generative acts could be promoted, which may enhance their psychological well-being and sense of worth as a person. For the proper utilisation of the concept, a clear understanding of the theoretical foundations and existing knowledge is required.

Objectives

This review aims to analyse the existing knowledge of generativity in old age, available in the form of articles published during a specific period in academic journals. It focuses on methodological approaches, as well as the cultural contexts through which generativity is explored.

Method

The researchers conducted a search combining the keywords 'generativity', 'old age', 'older adults', and 'later life' using suitable Boolean operators (AND, OR) in the Google Scholar, EBSCOhost, and Taylor and Francis databases. Articles of empirical studies (quantitative, qualitative, or mixed methods), focusing on generativity among older adults, published in English between 2000 and 2023, were included in the search. Documents, such as book reviews, commentaries, conference proceedings, and editorials, and those published in languages other than English and outside the specified timeframe were excluded. Filters (language, year, document type) were used to limit the search according to the inclusion and exclusion criteria. Thus, considering the relevance to the objectives and availability of the full text, 50 articles were selected for the literature review.

Results and Discussion

Generativity is a complex and multifaceted construct that represents a way of living that shift from personal interests to embracing a broader sense of responsibility and meaning (Erikson, 1963; Kotre, 1984; McAdams & de St. Aubin, 1992). It has been studied by many researchers from different perspectives since Erikson's original formulation. Studies on generativity in older adults conducted in varying geographical locations, with different methodologies and associated variables, have explored various factors that influence generativity (such as personality traits, life events, cultural values, and environmental conditions), as well as the outcomes and benefits of generativity (psychological well-being, social integration, civic engagement, or ecological awareness). Table 1 indicates the characteristics of the studies on generativity and later life.

Table 1 : Characteristics of the studies on generativity and later life

Country			
United states	16	India	2
Canada	3	Sri Lanka	1
Argentina	1	Nepal	1
Europe	3	Japan	3
Germany	3	China	1
Spain	4	Hong Kong	4
Czech	3		
Context		Methodology	
Family	21	Quantitative	27
Community	20	Qualitative	19
Hospital	8	Mixed methods	4
Data collection method			
Loyola Generativity Scale	13	Semi-structured interviews	11
Generativity Behaviour Checklist	2	Q sort	1
Novel writing	2	Others	3
Specific populations			
Grandparents	5	Retired professors	1
With Diseases	6	Childless adults	1
Participants of political organisations	1	University students	2
LGBT	1	Prison inmates	1

Culture and context of the studies

Generativity is not an independent entity; rather, it is influenced by cultural and environmental factors that shape the opportunities and challenges for each generation (Crăciun, 2023). This is particularly evident when examining the geographical distribution of the research in this field (Table 1). In this review, most studies were conducted in Western countries, where the United States is prominent, followed by European countries. Studies in Asian countries are still in their nascent stage. Even though this is not an extensive review of literature on the construct, a scoping review conducted by Villar et al. (2021) observed a similar proportion of studies in these countries. Some comparative studies have also been conducted among different countries, mostly between European and Asian countries, to understand the cultural differences in generativity (Au et al., 2020; Hofer et al., 2014).

Cultural variations were observed in terms of generative and altruistic concerns. Studies conducted in Asian countries have focused more on family and community contexts with variables such as grand parental involvement (Thiele & Whelan, 2008; Hebblethwaite & Norris, 2011; Villar et al., 2012; Morita & Fujiwara. 2021; Dohlman et al., 2022), perceived respect, rejection from the target group of generativity (Cheng et al., 2008; Tabuchi et al., 2015; Scott et al., 2023), and so on. The interdependent self-construal of individuals in these collectivistic culture views generativity as a collective force within and between generations (Villar et al., 2024). However, in individualistic cultures where life interest is retained in the self (Kotre, 1984), studies have focused on retired academicians (Lemmer, 2014; Melo et al., 2008), participants of political organisations (Serrat et al., 2017), late-life learners (Navarro-Prados et al., 2018; Šatiene, 2021), prison inmates (Benedict, 2009), childless adults (King, 2011) and LGBT individuals (Bower & Lewis, 2018). In addition, generativity in specific populations such as dementia (Doyle et al., 2015), Alzheimer's (Walker et al., 2023), palliative care (Vuksanovic et al., 2015) and HIV AIDS patients (Emlet & Harris, 2020) have also been studied. A balanced equilibrium between these tendencies is essential for producing an authentic generative expression (Kotre, 1984).

Moreover, around half of the studies focused on generativity without a specific context, as if it is an inner reserve, like personality. This viewpoint overlooks the importance of social context, which may enhance or hamper the generative expressions of an individual. Studies focusing on deprived older adults are scarce in the literature. Focusing on social structure is essential to understanding the opportunities and challenges that determine an individual's generativity. Thus, to utilise generativity from a policy perspective, it is essential to understand the manifestations of generativity in different cultures and life circumstances, so that it could enhance both personal development and social development in later life (Villar et al., 2024).

Methodology used in the studies

Most studies employed quantitative measures (54%) as an option 'by default' to explore generativity, followed by qualitative (38%) and mixed methods (8%). While most studies adopted a cross-sectional method, some of them adopted a longitudinal method (Hösch et al., 2023) to understand generativity in different life stages, as well as the effect of different life stages in the development of generativity. Some studies also used secondary data from a larger longitudinal study (e.g., MIDUS) to conduct a cross-sectional analysis of the construct. Most studies have focused specifically on adults aged 60 years and above, and some have conducted comparative studies with different age groups (Nguyen et al., 2021; Zinck & Neel, 2020).

Generativity has been the most studied predictor or mediator variable for different psychological constructs, such as subjective well-being, positive emotions, psychophysical health, life satisfaction, and adherence to healthcare. Concerning the theoretical components, the generative concern proposed by McAdams is the most studied construct, followed by generative and altruistic behaviours. However, Kotre's concept of cultural generativity has rarely been examined.

The Loyola Generativity Scale (LGS) developed by McAdams, was the most popular measure of generativity. Researchers have adapted the scale for various purposes by choosing specific questions or translations to match their cultural contexts. In addition to LGS, the generative behaviour checklist and Q sort measures (Newton et al., 2020) were also used, along with researcher-developed questionnaires to meet the research objectives. However, these popular scales were originally developed for use with middle-aged adults. To tackle this issue, instruments specifically adapted to older people have been developed by researchers, such as Schoklitsch and Baumann (2012), but they have not been widely used (Villar, 2021).

Semi-structured interview methods were employed by researchers to obtain an in-depth understanding of generativity in their sample. Other qualitative measures included open-ended questions, life-story interviews, creative storytelling (Kim et al., 2020), and novel writing interventions (Moieni, 2017). Observations (Doyle et al., 2015) and focus group discussions (Carragher, 2017) were also rarely used. These qualitative measures were used as both a data collection method and intervention strategy.

A recent study in patients with Alzheimer's disease used neuropsychological methods to assess the influence of generativity on purpose in life as mediated by social support and moderated by prefrontal connectivity between the ventromedial prefrontal cortex and right dorsolateral prefrontal cortex (Walker et al., 2023).

Benefits and implications of generativity

Generativity was found to have significant benefits for mental, physical, and social well-being as well as intergenerational relationships. Older adults who engage in generative activities experience reduced depressive symptoms, psychological distress, loneliness, greater perceived social support, better mental well-being, enhanced posttraumatic growth in cancer survivors, and a higher quality of life (Chen et al., 2023; Serrat et al., 2017; Moieni, 2017; Bellizzi, 2004; Østbye et al., 2018). Research has also found an increase in participation in social activities along with more positive expectations regarding aging in the physical health domain (Moieni, 2017). Generativity also serves as a bridge between generations, thereby reducing age stereotypes, promoting social connectedness and fostering mutual support (Ehlman et al., 2015; Knight et al., 2014). Effective programmes such as The Intergenerational School in Cleveland, Ohio (George et al., 2011) and 'Let's Re-Generate' project in Italy (Santini et al., 2018) have found beneficial in promoting generativity in older adults, identity formation in younger adults, and psychosocial benefits for both generations (Knight et al., 2014). Owing to these benefits, generativity in older adults can be fostered through intergenerational programmes, reminiscence activities, writing-based interventions, and community engagement through mentoring, volunteering, and grandparenting.

Apart from the bright side of generativity, Villar et al. (2021) pointed out the dark side of generativity. There may be contexts in which people may not be able or willing to become generative. Studies should also be conducted on such groups of individuals. Moreover, leaving a legacy for outliving oneself may not always involve prosocial behaviours for the benefit of the community. It may also include behaviours stemming from excessive narcissism that are solely aimed at personal benefits. For example, Hitler left a heritage of active destruction from his principle of intense rejectivity towards non-Aryans. He could also consider himself as generative (Schoklitsch & Baumann, 2012). As Kotre (1984) suggests, generativity is "an impulse that can be channeled into vice as well as into virtue." This alternative side of generativity could also be a possible research area.

Conclusion

The review analysed the existing literature on generativity among older adults and pointed towards the need for more research in diverse populations, including different cultures, marginalised groups, varying social contexts, and underlying values. In addition, employing a wide range of methodological approaches can provide deeper insights into the construct. As the population continues to age, a more nuanced approach to studying generativity has become crucial. Therefore, effective policies and interventions to promote positive aging experiences must be implemented to ensure meaningful engagement in later life.

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Psychological Capital, Stress Tolerance, Help-Seeking among Adolescence

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Abstract

Adolescence is a crucial developmental stage marked by increased psychological stress. Adolescents are in a vulnerable stage as they are undergoing a period of storm and stress, which makes them more prone to be addicted. High pleasure-seeking behaviour, heightened emotionality, and need for peer relations make them more vulnerable to different types of addictions. In this scenario, the researchers aim to study some protective factors (psychological capital and help-seeking intention) and their relation to stress tolerance, which improves the well-being of adolescence. Psychological Capital (PsyCap) promotes hope, resilience, optimism, and self-efficacy, which are necessary for overcoming stress and challenges. Help-seeking behaviour enables adolescents to access support systems that promote mental well-being. The participants were 250 adolescents enrolled in Grades 9–12 and ranged in age from 13 to 18 years from various schools in the Kollam district of Kerala through simple random sampling. Results were analysed using correlation and regression analysis. The findings suggest that psychological capital has a positive correlation with stress tolerance and help-seeking intention, and also a positive correlation was found between stress tolerance and help-seeking intention. Help-seeking intention moderates the relationship between stress tolerance and psychological capital.

Keywords: Psychological capital, Stress tolerance, Help-seeking intention, Adolescence

Introduction

Adolescence is a distinct and important developmental stage. The physical, emotional, and social transformations experienced during this time, along with factors such as poverty, abuse, or violence, can leave adolescents susceptible to mental health issues. It is essential to shield adolescents from adverse experiences, support socio-emotional learning and psychological health, and guarantee access to mental health services for their overall health and well-being throughout their adolescence years and adulthood (WHO, 2021).

Worldwide, around one in seven (14%) individuals aged 10-19 are believed to suffer from mental health issues (WHO 2021), but these conditions often go unrecognised and untreated. Adolescents with mental health challenges are especially at risk for social isolation, discrimination, stigma (which impacts their willingness to seek assistance), academic struggles, engaging in risky behaviours, physical health problems, and violations of their human rights. Adolescents are especially susceptible to stress and mental health issues as a result of the combination of developmental challenges and external influences (Steinberg, 2008). Their capability to handle these difficulties is influenced by psychological assets, including resilience and self-efficacy, which affect their coping strategies and overall mental health. Examining adolescence from a psychological perspective offers an important understanding of fostering positive behaviours and aiding in healthy transitions into adult life.

Help-Seeking

Seeking help for mental health concerns is critical for improving well-being and preventing the development of mental health disorders, yet many adolescents fail to seek help. Identifying factors delaying help-seeking is important. According to data from the 2007 National Survey of Mental Health and Well-being, the high prevalence of substance use disorder and the low rates of help-seeking linked to them are the main causes of the help-seeking gap among young people with mental health issues. Rickwood et al. (2005) define help-seeking as "the process of seeking assistance from outside sources for personal, emotional, or psychological problems." In his 'theory of planned behavior', Ajzen (1991) describes intention as a motivating component that influences behaviours such as help-seeking. According to Wilson et al. (2005), help-seeking intention is the expressed willingness to engage in support-seeking behavior, based on perceived need and availability of help. This behaviour is crucial for tackling personal, academic, or psychological issues. Adolescents who actively seek help are more capable of managing stress and developing successful coping strategies. Radez et al. (2021) found that teenagers who have strong support networks and high self-efficacy tend to seek professional help for mental health difficulties. However, stigma and a lack of understanding frequently serve as hurdles to getting help (Tunks et al., 2023).

Stress Tolerance

Adolescence is a time of increased 'storm and stress' that is evaluated based on current studies (Arnett, 1999). "The term Stress tolerance refers to a person's ability to withstand stress without becoming seriously impaired" (Carson et al., 2000, p.148). Stress tolerance is the capacity of a person to handle and regulate stress successfully without feeling overwhelmed or resorting to unhealthy coping mechanisms. In a study conducted by Roy et al. (2015) on the prevalence of stress tolerance in adolescent boys, it was found that a notable proportion of stressed teenage boys (55.5%) reported having low levels of stress tolerance (41%). The adolescents showed heightened worries regarding their parents' financial circumstances, socioeconomic status, and the pressures associated with academics. Another study conducted by Wills and Shinar (2000) found a notable connection between stress tolerance and adaptive coping strategies, highlighting the importance of interventions aimed at building resilience. Adolescents' stress tolerance is a critical component of their overall development and well-being.

Psychological Capital (PsyCap)

Psychological capital encompasses the four HERO positive psychological resources. Based on positive psychology, psychological capital refers to an individual's positive psychological state, which is characterised by hope, self-efficacy, resilience, and optimism. Hope, efficacy, resilience, and optimism have shared characteristics, including a sense of control, intentionality, and goal-directed action. They all have a common theme of "positive evaluation of situations and the likelihood of achieving success based on motivated effort and perseverance" (Luthans et al. 2007, p. 550). Recent research suggests that teenagers' mental health is protected by psychological capital. For instance, Song et al. (2021) suggests that PsyCap and positive coping as promising areas for interventions aimed at reducing depression among adolescent girls. Furthermore, Gebregergis et al. (2024) showed that promoting PsyCap within educational environments led to increased academic engagement and improved overall well-being among students. These results highlight the significance of PsyCap in strengthening coping strategies and encouraging help-seeking behaviours.

The goal of this study is to determine the relationship between help-seeking intention, stress tolerance, and psychological capital. Understanding these relationships helps develop targeted interventions that increase psychological capital, stress tolerance, and help-seeking intention, ultimately leading to better adolescence mental health outcomes.

According to research, while psychological capital can raise stress tolerance, help-seeking plays a significant role in deciding how stress affects teenagers, which can either increase or diminish psychological capital's protective advantages (Guo et al., 2023). Thus, this study fills a critical gap in our understanding of the psychological factors that influence adolescence help-seeking and suggests avenues for effective interventions and improved mental health outcomes. More research on these relationships will help teenagers' stress-management skills and resilience.

Need and Significance

This study is considered as the need of the hour as many adolescents are into many addictions, wasting their time, energy, and resources in their addictions. Therefore, the study aims to understand the importance of promoting protective factors (psychological capital) to prevent adolescents from addiction or to prevent adolescents who are already addicted. Its findings can contribute to positive psychology research and help design mental health interventions that enhance resilience and encourage coping strategies.

Objectives

- To determine the relationship among psychological capital, stress tolerance, and help-seeking intention among adolescents.
- To assess the role of stress tolerance and help-seeking as predictors of psychological capital among adolescents.
- To analyse the moderation effect of help-seeking intention in the relationship between stress tolerance and psychological capital among adolescents.

Hypotheses

- There will be a significant relationship between psychological capital, stress tolerance, and help-seeking intention among adolescents.
- Stress tolerance and help-seeking intention will significantly be predictors of psychological capital among adolescents.
- Help-seeking intention will significantly moderate the relationship between stress tolerance and psychological capital among adolescents.

Methodology

Participants

The sample comprises 250 students aged 13–18.

Sampling method

The simple random sampling method was used.

Research design

The research design used here is descriptive.

Measures

The socio-demographic data sheet was included to gather background information of participants. While not directly analysed in the correlation and regression models, these factors provide context for understanding the sample characteristics and potential influences on psychological capital, stress tolerance, and help-seeking intentions.

The Academic Psychological Capital Questionnaire (Luthans et al., 2007)

Psychological capital was measured using the Adolescence Psychological Capital Questionnaire, which assesses four core components: self-efficacy, optimism, hope, and resilience. The 24-item scale used a 6-point Likert format, with higher scores indicating greater PsyCap. The scale demonstrated strong reliability ($\alpha = 0.91$) and acceptable convergent validity (0.5). Participants' responses provided a comprehensive measure of their psychological capital.

The Stress Tolerance Scale

Stress tolerance was measured using the Stress Tolerance Scale by Resmy & Sananda (1999), which assesses an individual's ability to cope with and adapt to stressful situations. The 24-item scale used a 5-point Likert format. It included self-reported perceptions of stress management and emotional resilience. The scale demonstrated strong psychometric properties, with a criterion-related validity of 0.72 and a split-half reliability coefficient of 0.82.

General Help-Seeking Questionnaire (GHSQ) (Wilson et al., 2005)

The help-seeking intention was measured using the General Help-Seeking Questionnaire (GHSQ), which assesses an individual's likelihood of seeking help from formal and informal sources during psychological distress. It includes various help sources such as counsellors, family, friends, or no one, allowing participants to specify different problem types and preferred support options. Responses were recorded as 'yes' or 'no' for each help source. The scale demonstrated strong reliability (Cronbach's alpha = .85, test-retest reliability = .92) and a validity score of .42.

The study adhered to ethical guidelines by obtaining institutional approval, securing informed consent from participants and guardians, ensuring confidentiality, allowing voluntary withdrawal, and providing mental health support resources.

Procedure

Out of 211 academic institutions in Kollam, six were randomly selected using simple random sampling for the study. Among the 250 participants who provided consent, the Academic Psychological Capital Questionnaire (Luthans et al., 2007) for measuring psychological capital, The Stress Tolerance Scale (Resmy & Sananda, 1999) for measuring Stress Tolerance, and the General Help Seeking Questionnaire (Wilson et al., 2005) for measuring general help-seeking was administered to them. The collected data were then analysed.

Statistical techniques

The obtained data from the participants were statistically analysed using IBM SPSS and Karl Pearson's Product Moment Correlation; stepwise regression analysis was used.

Results and Discussion

This section presents the study findings, examining the relationships between psychological capital, stress tolerance, and help-seeking intention among adolescents. The results include correlation, regression, and moderation analyses to understand how these variables interact. Tables 1 and 2 summarise the statistical findings.

Table 1 : Correlation between psychological capital, stress tolerance, and help-seeking intention

Correlation coefficient		Psychological capital	Stress tolerance	Help-seeking
	Psychological capital	( )	.470**	.721**
Pearson correlation	Stress tolerance	--	( )	.615**
	Help-seeking intention	--	--	( )

Note. ** Correlation is significant at the 0.01 level (2-tailed).

Table 2 : Step-wise regression analysis with psychological capital as dependent variable

(N = 250)

Analysis	R	R²	Adjusted R²	β (stress tolerance)	p tol
Regression model 1 (stress tolerance → Psychological capital)	.470	.221	.218	.470	<
Regression model 2 (stress tolerance, help-seeking → psychological capital)	.722	.521	.517	.044	
Moderation analysis (help-seeking as a moderator)	-	-	-	↓ (from .470 to .044)	

Correlation analysis

The Pearson correlation analysis confirms the hypothesis. Table 1 reveals significant positive relationships among psychological capital, stress tolerance, and help-seeking. Psychological capital and stress tolerance are moderately correlated ($r = .470$, $p < .01$), indicating that adolescents with higher psychological capital exhibit greater tolerance to stress. Tugade and Fredrickson (2004) found that resilient individuals demonstrated higher stress tolerance, which supports the finding. A strong positive correlation is found between psychological capital and help-seeking ($r = .721$, $p < .01$), suggesting that adolescents with greater psychological capital are more likely to have help-seeking intentions when facing difficulties. Moreover, stress tolerance and help-seeking show a moderate positive correlation ($r = .615$, $p < .01$), suggesting that adolescents with higher stress tolerance seem to engage in help-seeking intention as they recognise the need for external support for maintaining their well-being. Hubbard et al., 2018 demonstrated that college students with higher stress tolerance were more likely to perceive help-seeking as a constructive coping mechanism.

Regression analysis

Table 2 shows the results of stepwise regression and moderation analyses assessing the predictive relationship between the variables by keeping psychological capital as the dependent variable and stress tolerance and help-seeking intention as independent variables. Stress tolerance as the only predictor of psychological capital accounted for 22.1% of the variance ($R^2 = 0.221$, adjusted $R^2 =.218$), demonstrating a significant positive contribution to psychological capital ($\beta = .470$, $p < .001$). The study of (Heerde et al. 2018) emphasised the role of help-seeking and social support may have potential benefits in reducing the likelihood of poor psychosocial outcomes among adolescents. When help-seeking was added, a significant improvement in the model ($R = .722$, $R^2 = .521$, Adjusted $R^2 = .517$) explains 52.1% of the variance in psychological capital. The beta value for stress tolerance decreased substantially ($\beta = .044$, $p = .434$), indicating that its direct effect on psychological capital became statistically insignificant when help-seeking was included. Meanwhile, help-seeking showed a strong positive effect ($\beta = .694$, $p < .001$), meaning that adolescents having help-seeking intention benefit more in developing psychological capital. Wills and Shinar (2020) found that adolescents with high stress tolerance sought help more frequently, as they viewed it as an effective way to address stressors.

The moderation analysis reveals that help-seeking intention acts as a significant moderator. The direct impact of stress tolerance on psychological capital weakened (β reduced from .470 to .044, $p = .434$) when help-seeking was added. Thus adolescents who seek assistance from friends, instructors, and professionals are more likely to transform their stress tolerance into psychological assets like optimism and resilience. Rabenu et al., (2016) demonstrated that adolescents with high PsyCap and strong help-seeking tendencies showed greater stress tolerance, indicating a synergistic effect. Thus, in addition to stress tolerance training, interventions that encourage help-seeking behaviours might be more successful in increasing the well-being of adolescence.

Conclusion

The study reveals a significant relationship between psychological capital, stress tolerance, and help-seeking intention among adolescents, with help-seeking intention moderating the link between psychological capital and stress tolerance. The results show that getting help is essential for building psychological capital, even though stress tolerance is also significant. According to study findings, social support is essential for managing stress (Wills & Shinar, 2000), and programmes that increase psychological capital can enhance the mental health of adolescents (Finch et al., 2020). Educators and mental health professionals should integrate cognitive-behavioural strategies and peer support initiatives in school programmes to reduce stigma and promote well-being. Future research should explore the long-term impact of these interventions on adolescent mental health and academic success.

Limitations of the study

This study relies on self-reported measures, which may introduce response bias. The accuracy and broader applicability of the research's conclusions may be jeopardised by its constraints, which include a limited sample size and measurement issues.

Suggestions for further research

Future research should concentrate on longitudinal studies that engage different groups and monitor changes in stress management, psychological capital, and help-seeking intention throughout adolescence to maximise the usefulness of findings. Moreover, creating specific interventions might offer important new perspectives on promoting the mental health and resilience of adolescence.

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Perfectionist Paradigms: Decoding the Dynamics of Rigid, Critical, and Narcissistic Perfectionism in Youth Sports Engagement

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Abstract

The study explored how different forms of perfectionism affect young sports players' engagement in sports. By examining 104 athletes aged 18-30, the research employed a correlational design to analyze the relationships between rigid, critical, and narcissistic perfectionism and athletic engagement. The findings revealed that rigid perfectionism positively correlates with athletic engagement, while critical perfectionism negatively impacts it through self-doubt and fear of failure. In contrast, narcissistic perfectionism showed no significant effect, suggesting that external validation does not drive sustained participation. These results highlighted the dual nature of perfectionism: while striving for excellence can enhance performance, self-critical tendencies may hinder enjoyment and persistence. The study emphasized the need for tailored interventions to foster healthy perfectionism among young athletes, ultimately promoting their well-being and success in sports.

Keywords: Perfectionism, Rigid perfectionism, Critical perfectionism, Narcissistic perfectionism, Athletic engagement, Performance, Self-critical tendencies.

Introduction

Sports persons are individuals who participate in organised physical activities with a competitive aspect, striving for excellence in performance and achievement (Weinberg & Gould, 2019). What unites them across these diverse domains is their shared passion for movement, their commitment to personal growth and development, and their embodiment of the values of dedication, discipline, and perseverance (Coakley, 2017).

Athlete engagement (AE) is a stable and enduring positive sports experience encompassing confidence, dedication, enthusiasm, and vigour (Lonsdale et al., 2007a, 2007b). Confidence reflects the belief in one's ability to perform and achieve goals, while dedication involves the commitment of time and effort towards meaningful objectives. Vigour denotes physical and mental liveliness, and enthusiasm reflects excitement and enjoyment (Lonsdale et al., 2007a). For young sportspersons, engagement is often fuelled by a combination of intrinsic passion, external reinforcement, and personal aspirations (Appleton et al., 2009). High engagement fosters resilience, skill mastery, and long-term success, while disengagement can lead to dropout, burnout, and psychological distress (Crane & Temple, 2015).

In sports settings, studying athletic engagement (AE) assumes pivotal importance due to its relationship with performance level (Russell et al., 2007). However, with few exceptions, little empirical research has been conducted in the sports field to understand the role of athletes' engagement in a sports environment. Of the few studies on this topic, Hodge et al. (2009) focused on an elite sports context and identified the antecedents (basic psychological needs) and consequences (dispositional flow) of athlete engagement. As youth sports continue to grow in competitiveness, understanding the psychological factors that shape engagement has become a crucial area of research. One of the most influential yet paradoxical psychological constructs affecting athletic engagement is perfectionism (Hill et al., 2020).

Perfectionism is a multidimensional personality disposition that includes unrealistically high standards accompanied by overly harsh evaluation (Frost et al., 1990; Stoeber & Childs, 2010; Flett & Hewitt, 2002; Hill et al., 2018). Since 1980, numerous researchers have sought to assess perfectionism. In sports, it is associated not only with emotions (Stoeber., 2011; Flett et al., 1991; Einstein et al., 2018) and motivations (Hill et al., 2018) but also with performance (Stoeber, 2011; Waleriańczyk & Stolarski, 2021) and engagement (Hodge et al., 2009).

Considering that high personal standards and striving for flawlessness are the central components of perfectionism (Frost et al., 1993; Flett & Hewitt, 1991; Stoeber, 2018), it is surprising that engagement has not been a central area of research on perfectionism in sports (Martins et al., 2014). In contemporary society, pursuing perfection has become increasingly prevalent, especially within competitive domains such as youth sports.

It has two main dimensions: perfectionistic concerns and perfectionistic strivings (Frost et al., 1993; Flett & Hewitt, 1991; Stoeber & Otto, 2006). Perfectionistic concerns are associated with negative aspects, while strivings are associated with positive aspects (Perry, 2024). People with no perfectionism show low levels of striving (Stoeber & Otto, 2006). Earlier research (Frost et al., 1993) showed that strivings can have positive effects, challenging the belief that perfectionism is purely harmful (Stoeber, 2018).

Perfectionism has long been linked to psychopathology, with early theories viewing it as a neurotic trait. Freud (1920) conceptualised perfectionism as a psychological conflict arising from the id and superego tensions. According to his psychodynamic theory, perfectionism results from repressing instincts and unrealistic moral demands, leading to rigid and self-critical behaviours (Cohen, 2019). Freud's perspective aligns with the notion that perfectionism can be driven by deeply ingrained unconscious mechanisms shaped by early childhood experiences (Winter, 2009). Expanding on this, Adler (1927) viewed perfectionism as an innate striving for self-improvement, with both adaptive and maladaptive expressions. He emphasised that perfectionism could serve as a motivational force for personal growth and societal progress when approached in a healthy manner (Akay & Bratton, 2017).

Hamachek (1978) proposed two types: normal, where high standards enhance self-esteem, and neurotic, marked by unrealistic goals and dissatisfaction. In contrast, Karen Horney (1950) characterised perfectionism as a neurotic defense mechanism, driven by unmet childhood needs and a deep-seated fear of failure. She described perfectionism as "the tyranny of the should," wherein individuals impose unattainable standards upon themselves, fostering self-criticism, alienation, and emotional exhaustion (Binder et al., 2023). From a cognitive perspective, the perfectionistic cognitions theory (PCT) (Shafran et al., 2010) highlights the role of maladaptive thought patterns in perfectionism. This theory posits that perfectionists engage in rigid, dichotomous thinking, perceiving any deviation from their standards as failure, which fuels anxiety and self-doubt. The 1980s largely labelled perfectionism as dysfunctional, but this shifted in the 1990s with multidimensional models.

While Frost et al. (1990) identified six aspects of perfectionism, including personal standards and concern over mistakes, Flett and Hewitt (1991) proposed three dimensions: self-oriented, socially prescribed, and other-oriented. Hamachek's distinction remains influential, with modern terms like adaptive (positive) and maladaptive (negative) perfectionism (Rice et al., 2011). In 2016, Smith and colleagues consolidated the three core dimensions of perfectionism – self-oriented, socially prescribed, and other-oriented (Flett & Hewitt, 1991) – to propose a framework comprising rigid perfectionism (RP), self-critical perfectionism (SCP), and narcissistic perfectionism (NP) (Smith et al., 2016a). Rigid perfectionists demand flawless, error-free performance. Self-critical perfectionists doubt their abilities, harshly critique their work, and react negatively to failure, believing they never meet their high standards (Richardson & Rice, 2015; Dunkley et al., 2003). Narcissistic perfectionists expect perfection from others in an entitled, critical manner, marked by superiority and judgment of flaws (Feher et al., 2020).

Perfectionism varies across life domains such as work, sports, academics, and relationships (Yang & Stoeber, 2012). In the hypercompetitive world of youth sports, perfectionism has emerged as a double-edged sword, influencing both performance and psychological well-being (Flett & Hewitt, 2005). Despite the wealth of research on perfectionism, there remains a critical gap in understanding how these distinct paradigms influence youth sports engagement. While some athletes excel under perfectionistic tendencies, others experience performance anxiety, emotional exhaustion, or complete withdrawal from sports (Gotwals et al., 2012).

By exploring the specific dimensions of perfectionism – rigid, critical, and narcissistic – this study provides a deeper understanding of how these traits manifest within the youth sports environment. By decoding the dynamics of these perfectionist paradigms in youth athletic engagement, the study can identify specific factors that may predispose young athletes to adverse outcomes, as well as protective factors that promote resilience and positive development. This study explores the mechanisms and effects of rigid, critical, and narcissistic perfectionism in youth sports to develop evidence-based interventions for fostering a healthier approach to perfectionism. The goal is to enhance young athletes' well-being and performance by promoting balanced perfectionism. The findings aim to help coaches, parents, and sports organisations create supportive environments that nurture athletes' potential, encourage positive engagement, and foster resilience.

Despite the growing recognition of perfectionism in sports psychology, there is a dearth of research specifically focusing on the rigid, critical, and narcissistic dimensions within the youth sports context. By filling this gap, the study can contribute to theoretical advancements and practical interventions aimed at promoting positive youth development in sports.

Objectives

1. To explore the dimensions of perfectionism (rigid, critical, and narcissistic) in youth sports engagement.
2. To examine the relationship between rigid perfectionism and athletic engagement.
3. To examine the relationship between critical perfectionism and athletic engagement.
4. To examine the relationship between narcissistic perfectionism and athletic engagement.

Hypotheses

1. There is a significant correlation between rigid perfectionism and athletic engagement.
2. There is a significant correlation between critical perfectionism and athletic engagement.
3. There is a significant correlation between narcissistic perfectionism and athletic engagement.

Methodology

A correlational research design was employed.

Sample

The sample consisted of 104 sports players within the age range of 18–30 years.

Inclusion criteria

Sports players aged 18 to 30.

Exclusion criteria

1. Sports players having less than 1 year of active experience in their respective fields.
2. Sports players having other physical and psychological conditions.

Sampling technique

The sample was selected using a purposive sampling technique through online questionnaires. Participants were contacted online via email and social media, including WhatsApp and Telegram. Offline recruitment involved directly engaging with athletes in sports clubs and colleges.

Measures

Personal data sheet

A six-item personal data sheet was prepared. It consisted of sociodemographic data of the sample including name, age, sex, number, and names of the sports the participants are active in, and the duration they have been active in their respective sports.

The big three perfectionism scale

The big three perfectionism scale (BTPS), developed by Smith, Saklofske, Stoeber, and Sherry in 2016, is a self-report measure designed to assess three dimensions of perfectionism, namely, rigid, critical, and narcissistic perfectionism through distinct sub-dimensions: rigid perfectionism includes self-oriented perfectionism (SOP) and self-worth contingent perfectionism (SWC); Critical perfectionism covers concern over mistakes (COM), discounting achievements and abilities (DAA), and hyper-criticalness (HC); narcissistic perfectionism consists of grandiosity (GRAN), self-centred perfectionism (SC), other-oriented perfectionism (OC), and entitlement (ENT). The BTPS consists of 45 items, rated on a five-point Likert scale. The Cronbach's alpha for the scale ranged from 0.80 to 0.92 and correlated with other constructs, indicating good reliability and validity.

Athletic Engagement Questionnaire (AEQ)

Lonsdale, Hodge, and Jackson developed the athletic engagement questionnaire in 2007. This scale comprises 16 items organised into four dimensions: confidence, dedication, vigour, and enthusiasm, rated on a five-point Likert scale. The Cronbach's alpha for this study was 0.963, and the KMO was 0.955, indicating robust reliability and validity.

Data analysis

The data collected from the sample were analysed with the help of Spearman's correlation coefficient using the Statistical Package for Social Sciences (SPSS).

Spearman's correlation was chosen as the primary analysis method due to its suitability for assessing relationships between variables that may not follow a linear pattern or meet parametric assumptions (Field, 2018). Given the psychological constructs under investigation, such as narcissistic perfectionism and athletic engagement, which may involve ordinal or non-normally distributed data, Spearman's rho provides a robust measure of association (Dancey & Reidy, 2017). Additionally, prior research in sports psychology has utilised Spearman's correlation to explore similar constructs, reinforcing its appropriateness in this context (Hill et al., 2020).

Results and Discussion

Rigid perfectionism and athletic engagement

Rigid perfectionism has a significant positive correlation with athletic engagement, with a correlation coefficient of 0.349 at a 0.01 level of significance, which, according to Cohen's guidelines (1988), falls within the small to moderate effect size range. The 95% confidence interval is [0.165, 0.505], meaning the true correlation in the population is likely between these values. This suggests a reliable positive relationship between rigid perfectionism and athletic engagement. Therefore, we fail to reject Hypothesis 1.

The dimension of rigid perfectionism was derived from 'perfectionistic striving', which is often conceptualised as a 'positive' or 'healthy' form of perfectionism (DiBartolo et al., 2004a, 2004b; Flett et al., 2014, & Smith et al., 2016a, 2016b). The significant positive correlation between rigid perfectionism and athletic engagement suggests that athletes who exhibit high levels of rigid perfectionism are more likely to be deeply engaged in their sport. This finding aligns with existing literature that positions perfectionistic striving as a beneficial trait in performance-oriented domains, including athletics (DiBartolo et al., 2004a, 2004b; Stoeber, 2011).

Unlike maladaptive perfectionism, which is associated with fear of failure and self-criticism, rigid perfectionism is characterised by high personal standards, self-discipline, and an unwavering commitment to excellence (Flett et al., 2014). These qualities may explain why athletes with rigid perfectionism are more likely to demonstrate persistence, dedication, and a strong work ethic, ultimately leading to greater athletic engagement.

Table 1 : Spearman's correlation of athletic engagement by the big three dimensions

		Rigid perfectionism	Critical perfectionism	Narcissistic perfectionism
Athletic engagement	Correlation coefficient	0. 349**	-0.203*	0.186
	Sig. (2-tailed)	0.000	0.039	0.059
N		104	104	104

*Correlation is significant at the 0.01 level (2-tailed).

**Correlation is significant at the 0.05 level (2-tailed).

From a theoretical perspective, Adler's (1927) theory of striving for superiority provides insight into why rigid perfectionism enhances athletic engagement. According to Adler, individuals who experience feelings of inferiority seek to overcome them through self-improvement and mastery. In the context of sports, this can manifest as a relentless pursuit of skill refinement, training consistency, and resilience in the face of challenges (Akay & Bratton, 2017).

Athletes with rigid perfectionism, therefore, may view engagement in sports as a means of self-enhancement, pushing themselves to achieve excellence as a way to validate their competence and self-worth (Gotwals & Dunn, 2009).

Moreover, research supports the notion that perfectionistic striving is positively linked to motivation in sports (Mouratidis & Michou, 2011). Athletes who set exceptionally high standards for themselves tend to exhibit strong intrinsic motivation, as they derive satisfaction from personal mastery and goal attainment. This intrinsic drive fuels consistent training, skill development, and psychological resilience, all of which contribute to higher levels of athletic engagement (Dunn et al., 2017). The self-imposed discipline associated with rigid perfectionism ensures that athletes remain committed to their sport, even in the face of obstacles or failures.

In addition to motivation, rigid perfectionism has been found to foster psychological resilience and adaptive coping strategies in competitive sports. Dunn et al. (2017) found that perfectionistic striving was positively associated with self-compassion and optimism following personal performance setbacks. This suggests that rigid perfectionists may be better equipped to handle failure constructively, using setbacks as learning experiences rather than sources of self-doubt. This ability to recover and maintain focus likely contributes to sustained athletic engagement, as these athletes are less likely to disengage from their sport due to perceived failures.

Additionally, the structured and disciplined nature of rigid perfectionists aligns well with the demands of competitive sports. Success in athletics often requires meticulous training regimens, strategic goal-setting, and mental fortitude – all qualities inherent to individuals high in rigid perfectionism (Flett et al., 2014). Coaches can harness these traits by implementing structured training and adaptive coping strategies to sustain motivation and performance (Dunn et al., 2017).

Considering that the correlation is obtained, this is consistent with the research that has shown a positive correlation between perfectionist striving and athletic engagement (Gotwals & Dunn, 2009).

Critical Perfectionism and Athletic Engagement

Critical perfectionism has a significant negative correlation with athletic engagement, with a correlation coefficient of -0.203 at a 0.05 level of significance, which is considered a small effect size. The 95% confidence interval is [-0.387, -0.006], indicating a weak but statistically significant negative association. This means that higher critical perfectionism is linked to lower athletic engagement. Therefore, we fail to reject Hypothesis 2.

Self-critical perfectionism is derived from 'Perfectionistic Concerns', which is often conceptualised as a 'negative' or 'unhealthy' form of perfectionism (Dunkley et al., 2000). The significant negative correlation between critical perfectionism and athletic engagement indicates that athletes with high levels of self-critical perfectionism are less likely to actively participate in sports. This finding aligns with existing research that positions perfectionistic concerns as a maladaptive trait that undermines motivation, performance, and well-being (Dunkley et al., 2000; Stoeber & Eismann, 2007).

Unlike perfectionistic striving, which can fuel motivation and persistence, self-critical perfectionism is driven by fear of failure, harsh self-evaluations, and excessive concern over mistakes (Flett & Hewitt, 2002). These tendencies create a psychological burden that can discourage sustained athletic engagement.

Blatt's (1995) theory of self-critical perfectionism offers a developmental perspective on how early experiences of rejection, excessive parental expectations, or harsh criticism shape an individual's tendency to set unrealistic standards and engage in relentless self-scrutiny. This internalised pressure creates a paradoxical effect in sports: while the athlete may desire excellence, their fear of failure and negative self-perception lead to avoidance behaviours, decreased confidence, and ultimately, disengagement (Fekih-Romdhane et al., 2023). Athletes with critical perfectionism may also exhibit lower self-efficacy, doubting their abilities and hesitating to take risks necessary for improvement (Gotwals et al., 2012).

Moreover, empirical research supports the notion that self-critical perfectionism negatively impacts athletic engagement and performance. Anshel and Mansouri (2005) demonstrated that perfectionistic athletes who received critical feedback exhibited poorer motor performance and were more likely to attribute failures internally, reinforcing a cycle of self-doubt and disengagement. This tendency to internalise setbacks can result in learned helplessness, where athletes perceive themselves as incapable of meeting their unrealistic standards, leading to withdrawal from their sport (Hill et al., 2010).

The psychological toll of critical perfectionism is further evidenced by its links to anxiety, depression, and burnout. Hill et al. (2010) found that perfectionistic concerns were associated with increased psychological distress, reducing an athlete's capacity to handle pressure and setbacks. Similarly, Stoeber and Eismann (2007) reported that self-critical perfectionists were more prone to burnout, a state of emotional and physical exhaustion that leads to decreased motivation and engagement. These findings suggest that the excessive self-imposed pressure characteristic of critical perfectionism ultimately erodes an athlete's intrinsic motivation, making them more likely to disengage from their sport (Madigan et al., 2018).

Another factor contributing to decreased athletic engagement among critical perfectionists is their tendency towards rumination and pessimism. Dunn et al. (2017) found that athletes high in perfectionistic concerns exhibited greater levels of rumination following poor performance, leading to persistent self-doubt and reduced enjoyment in their sport. Instead of focusing on skill improvement, these athletes may fixate on their perceived inadequacies, further reinforcing disengagement. The negative thought patterns associated with self-critical perfectionism can also impair resilience, making it difficult for athletes to recover from setbacks and remain committed to long-term athletic participation (Flett & Hewitt, 2002). The fear of making mistakes or falling short of expectations can cause athletes to withdraw from competitive situations, hesitate during performance, or even abandon their sport altogether (Sapieja et al., 2011).

Additionally, self-critical perfectionism may lead to avoidance behaviours in sports. This avoidance tendency is particularly detrimental in high-pressure sports environments, where confidence and adaptability are key to sustained engagement. The unwillingness to take risks or accept constructive feedback can stifle progress, making long-term athletic commitment unsustainable (Stoeber & Otto, 2006). The psychological burden of critical perfectionism, characterised by excessive self-criticism and fear of failure, discourages sustained athletic engagement (Flett & Hewitt, 2002). Coaches and trainers should implement interventions that promote self-compassion and adaptive goal-setting to mitigate its negative effects, fostering resilience and sustained participation (Madigan et al., 2018).

Since athletic performance is positively correlated with athletic engagement (Gu & Xue, 2022), our findings are consistent with these studies.

Narcissistic perfectionism and athletic engagement

Narcissistic perfectionism has no significant correlation with athletic engagement. Since the correlation is zero, the effect size is negligible. The 95% confidence interval is [-0.129, 0.258], showing that the true correlation could be anywhere within this range, including zero. This confirms that there is no meaningful relationship between narcissistic perfectionism and athletic engagement. Therefore, we reject Hypothesis 3.

Narcissistic perfectionism involves a combination of perfectionistic tendencies and narcissistic traits, such as a sense of entitlement, grandiosity, and a need for admiration (Stoeber & Otto, 2006). Blatt (1995) suggests that individuals with narcissistic tendencies pursue perfectionism to bolster fragile self-esteem and maintain a grandiose self-image, masking fears of inadequacy and worthlessness. In athletics, narcissistic perfectionism can yield both benefits and drawbacks. While it may foster motivation, competitiveness, and a strong drive for success (Stoeber & Otto, 2006), the reliance on external validation can increase vulnerability to setbacks, criticisms, and failure (Stoeber & Otto, 2006).

Beck’s cognitive theory also offers insights into how narcissistic perfectionism may influence athletic engagement. According to Beck, individuals with narcissistic tendencies may have distorted and unrealistic beliefs about their abilities, importance, and entitlement (Beck, 1967). This cognitive distortion can manifest in perfectionistic tendencies, where individuals constantly need to prove their superiority and seek external validation.

However, despite these tendencies, our study has shown that there is no correlation between narcissistic perfectionism and athletic engagement, indicating that it neither facilitates nor hinders commitment to sports. This suggests that while narcissistic perfectionists seek external validation and superiority (Stoeber & Otto, 2006), these traits do not directly influence intrinsic motivation or sustained participation. Their engagement may fluctuate based on social recognition rather than personal mastery, explaining the absence of a meaningful relationship. Additionally, their sensitivity to setbacks and criticism (Gustafsson et al., 2016) may contribute to inconsistent levels of athletic involvement.

This finding is particularly important in understanding how different dimensions of perfectionism operate within the realm of youth sports. Unlike other forms of perfectionism, which may be linked to intrinsic motivation or fear of failure, narcissistic perfectionism is characterised by a strong desire for external validation, grandiosity, and fragile self-esteem (Stoeber & Otto, 2006). Athletic engagement, however, is typically driven by intrinsic motivation, personal mastery, and enjoyment (Lonsdale et al., 2007b). The lack of correlation suggests that narcissistic perfectionism does not inherently contribute to or detract from an athlete's engagement in sports, as its primary focus on external validation may not align with the internal motivations necessary for sustained athletic participation.

Self-perception may also play a critical role in how narcissistic perfectionists engage with sports. Individuals with high narcissistic perfectionism often seek admiration and superiority, which may lead to an appearance of engagement rather than genuine commitment (Nealis et al., 2016). These athletes may participate in sports primarily for social recognition, status, or the opportunity to demonstrate dominance rather than for the intrinsic value of athletic participation. Consequently, their engagement levels may fluctuate based on the extent to which their self-image is reinforced by external validation, which could explain the absence of a significant relationship between narcissistic perfectionism and athletic engagement.

Another explanation lies in the moderating role of external factors such as coach feedback, peer recognition, and competition level. Narcissistic perfectionists are known to thrive in environments where they receive continuous praise and admiration (Blatt, 1995). However, competitive sports environments often involve criticism, failure, and the need for resilience (Gustafsson et al., 2016). Because narcissistic perfectionists are particularly sensitive to setbacks and negative evaluations, their engagement may wane in the face of criticism or lack of external reinforcement. This vulnerability to fluctuating engagement levels may contribute to the observed non-significant correlation. Thus, coaches should focus on fostering intrinsic motivation, providing balanced feedback, building resilience, emphasising teamwork, and monitoring engagement levels to help narcissistic perfectionists maintain consistent athletic involvement.

In essence, these findings shed light on the distinct impacts of rigid, critical, and narcissistic perfectionism on youth sports engagement. Rigid perfectionism appears to fuel dedication and persistence, reinforcing consistent participation. In contrast, critical perfectionism acts as a psychological burden, fostering self-doubt, fear of failure, and avoidance behaviours that hinder long-term involvement. Meanwhile, the lack of a significant link between narcissistic perfectionism and engagement suggests that external validation, rather than intrinsic motivation, governs participation. These insights underscore the role of coaching and training in cultivating a balanced approach—leveraging the motivational benefits of rigid perfectionism, reducing self-critical tendencies through self-compassion and adaptive goal-setting, and fostering intrinsic motivation and resilience in narcissistic perfectionists to ensure long-term athletic engagement.

Conclusion

To conclude, rigid perfectionism enhances athletic engagement, while critical perfectionism undermines it through self-doubt and fear of failure. Narcissistic perfectionism has no significant impact, suggesting external validation does not drive sustained participation.

Implication

It is a foundation for developing interventions and support systems to promote a healthier and more sustainable sports experience.

Limitations

1. While this study examined athletes across various sports, the absence of a focus on a specific

sport may influence the extent to which findings apply to particular athletic contexts.

2. The study may not control for all relevant variables that could influence the relationship between perfectionism and engagement, such as competition level, social-media influence, or coaching style.

Suggestions for further research

1. Future research could focus on specific sports to determine whether perfectionism influences engagement differently in individual vs. team-based or high-contact vs. low-contact sports.

2. Long-term studies could examine the impact of perfectionism on performance and mental health over time.

3. Future studies should consider factors such as age, gender, competition level, social media influence, and coaching style. Using multiple regression or structural equation modeling could help clarify their impact on the perfectionism-engagement relationship. Beyond correlation, these approaches would clarify whether certain perfectionistic traits exert a stronger influence when other factors are controlled.

4. Moderation and mediation analyses could reveal the role of self-efficacy, resilience, coaching style, or social support in the perfectionism-engagement link.

5. Additionally, Psychological interventions like mindfulness and CBT could help reduce maladaptive perfectionism while enhancing adaptive forms.

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A Review of Melatonin's Biological Impact in Mammalian Models: From Physiology to Disease Modulation

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Abstract

Melatonin (N-acetyl-5-methoxytryptamine), an indoleamine neurohormone synthesised in the pineal gland, regulates circadian rhythms and mediates various biological functions through receptor-dependent and independent mechanisms. Studies using mammalian *models, including mice, rats, hamsters, and humans reveal melatonin's roles in oxidative stress reduction, neuroprotection, immune regulation, and metabolic health. This review consolidates findings from preclinical and clinical studies to highlight melatonin's therapeutic potential and translational significance.*

Keywords: Melatonin, Circadian rhythms, Oxidative stress, Immune modulation, Neuroprotection

Introduction

First identified by Lerner et al. (1958) in bovine pineal gland extracts, melatonin has since emerged as a key regulator of circadian biology and a potent antioxidant. Early studies in the 1970s and 1980s elucidated its synthesis pathway, revealing its production from serotonin via the enzymes serotonin N-acetyltransferase (AANAT) and hydroxyindole-O-methyltransferase (HIOMT) (Axelrod, 1974; Klein, 1978). The discovery of melatonin in a range of mammalian species, including humans, rodents, and primates, underscored its evolutionary conservation and physiological significance (Reiter, 1991; Klein & Bailey, 2019a). In the 1990s and early 2000s, research expanded to explore melatonin's role in regulating sleep-wake cycles, immune responses, and mitochondrial homeostasis (Pandi-Perumal et al., 2006; Hardeland et al., 2011). These studies revealed that melatonin's actions are mediated through MT1 (melatonin receptor 1) and MT2 (melatonin receptor 2) receptors, as well as through direct radical scavenging (Dubocovich & Markowska, 2018b). Recent studies have further elucidated melatonin's therapeutic potential across various conditions. For instance, melatonin has shown promise in mitigating neuroinflammation and oxidative stress in neurodegenerative diseases, such as Alzheimer's and Parkinson's (Lahiri et al., 2022a, 2002b; Reiter et al., 2021c). In cancer therapy, melatonin has been reported to enhance the efficacy of chemotherapy while reducing its side effects, attributed to its antioxidant and immunomodulatory properties (Sanchez-Barcelo et al., 2021). Additionally, melatonin has demonstrated benefits in metabolic disorders, including diabetes and obesity, by improving insulin sensitivity and regulating adipocyte function (Fernandez et al., 2023). Its role in COVID-19 management has also been explored, with studies suggesting that melatonin may reduce cytokine storms and improve clinical outcomes (Zhang et al., 2022).

This review explores melatonin's diverse actions in mammalian models, focusing on its molecular mechanisms and translational implications, with an emphasis on its emerging therapeutic applications.

Biosynthesis and Regulation of Melatonin

Melatonin biosynthesis occurs in the pineal gland via a multistep enzymatic process involving serotonin as a precursor. The rate-limiting enzyme, arylalkylamine N-acetyltransferase (AANAT), converts serotonin to N-acetylserotonin, which is subsequently methylated to melatonin by hydroxyindole-O-methyltransferase (HIOMT) (Klein & Bailey, 2019b; Lahiri et al., 2022a, 2002b). This process is regulated by the suprachiasmatic nucleus (SCN), the central circadian clock, which modulates AANAT activity in response to light cues (Hardeland, 2023). In nocturnal species such as hamsters, melatonin production increases significantly during long nights, emphasising its role in photoperiodic regulation (Dubocovich & Markowska, 2018a). SCN lesions in rats disrupt melatonin rhythms, highlighting its dependency on circadian signaling pathways (Reiter et al., 2021b).

Physiological Functions of Melatonin

Table 1 : Summary of Melatonin's biological inpact in mammclian models analysis/ methods

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Topic	Key findings
Circadian rhythm regulation	Synchronises sleep-wake cycles via MT1/MT2 receptors. Modulates clock gene expression (e.g., BMAL1, CLOCK).
Neuroprotection	Reduces amyloi… Inhibits alpha-sy… Mitigates excito… els.
Antioxidant and anti-inflammatory properties	Scavenges free … Upregulates ant… Reduces pro-inf…
Immune modulation	Enhances innate and adaptive immunity. Regulates cytokine production and immune cell activity.
Metabolic regulation	Improves glucose homeostasis and insulin sensitivity. Reduces obesity-related metabolic dysfunction.
Melatonin and cancer therapy	Inhibits tumour growth and angiogenesis. Enhances efficacy of chemotherapy and reduces side effects.
Cardiovascular benefits	Reduces blood pressure and oxidative stress in hypertension models. Protects against ischemia-reperfusion injury.

Circadian Rhythm Regulation

Melatonin is a pivotal chronobiotic agent, synchronising endogenous circadian rhythms with external light-dark cycles. Studies in C57BL/6J mice demonstrate melatonin's ability to phase-shift circadian rhythms, particularly under disrupted lighting conditions (Zhang et al., 2021) (Table 1). In Siberian hamsters, melatonin's influence extends to seasonal breeding behaviours, linking circadian and reproductive biology (Hardeland, 2023).

Neuroprotection

Melatonin's neuroprotective actions are extensively documented in mammalian models. APP/PS1 transgenic mice, a model for Alzheimer's disease, showed reduced amyloid-beta accumulation and cognitive deficits following melatonin treatment (Lahiri et al., 2022a, 2022b). Similarly, melatonin reduced neuronal death in rat models of ischemic stroke by mitigating oxidative stress and excitotoxicity (Simoes et al., 2024a; Gonzalez et al., 2019) (Table 1). In models of Parkinson's disease, melatonin inhibited alpha-synuclein aggregation, a hallmark of the disease, and preserved dopaminergic neurons (Reiter et al., 2021c) (Fig.1). These findings highlight its potential as an adjunct therapy in neurodegenerative diseases.

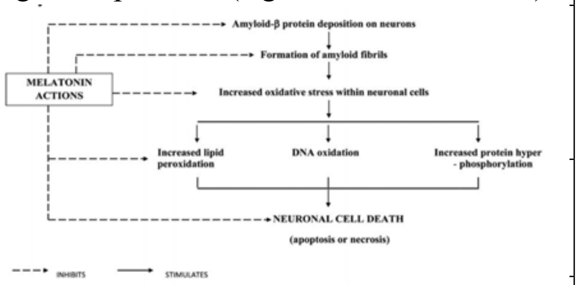

Figure 1: Mechanisms of melatonin's neuroprotective actions.

Antioxidant and Anti-inflammatory Properties

Melatonin's antioxidant properties are both receptor-dependent and receptor-independent. It scavenges reactive oxygen species (ROS) and upregulates antioxidant enzymes, such as superoxide dismutase and glutathione peroxidase (Galano et al., 2021). In diabetic rat models, melatonin attenuated lipid peroxidation and restored redox balance in hepatic tissue (Sewerynek et al., 2021a). Anti-inflammatory effects are evident in colitis-induced murine models, where melatonin suppressed proinflammatory cytokines like TNF-α and IL-6 while preserving epithelial integrity (Carrillo-Vico et al., 2019) (Table 1).

Immune Modulation

Melatonin regulates immune responses by enhancing innate immunity and modulating adaptive immune processes. In septic hamster models, melatonin administration increased survival by mitigating cytokine storms and preserving organ function (Hardeland, 2023). Murine studies demonstrate its ability to balance pro- and anti-inflammatory cytokine levels, preventing immune dysregulation in chronic inflammatory conditions (Dubocovich & Markowska, 2021) (Table 1).

Metabolic Regulation

Melatonin plays a crucial role in glucose metabolism and adiposity regulation.

Zucker diabetic rats treated with melatonin exhibited improved insulin sensitivity and reduced oxidative stress in pancreatic tissue (Sewerynek et al., 2021b) (Table 1). In high-fat diet-induced obese hamsters, melatonin supplementation reduced adipose inflammation and restored lipid profiles (Pandi-Perumal et al., 2020).

Melatonin and Cancer Therapy

As an adjuvant in cancer therapy, melatonin inhibits tumour growth through multiple pathways. In murine xenograft models of breast cancer, melatonin reduced tumour volume and enhanced the cytotoxic effects of chemotherapeutic agents (Hill et al., 2020) (Table 1). Prostate cancer models highlight melatonin's role in reducing metastatic potential and promoting apoptosis (Springer, 2023). Melatonin's ability to modulate angiogenesis by suppressing vascular endothelial growth factor (VEGF) expression adds another dimension to its anticancer effects (Gonzalez et al., 2018).

Cardiovascular Benefits

Melatonin protects against cardiovascular diseases by reducing oxidative damage and modulating endothelial function. In rat models of myocardial infarction, melatonin reduced infarct size and inflammation while preserving cardiac function (Simoes et al., 2024b). Human studies corroborate these findings, showing improved blood pressure regulation and vascular compliance with melatonin supplementation (Paulis & Simko., 2007) (Table 1).

Applications in Human Health

Clinical trials indicate melatonin's efficacy in treating sleep disorders, including insomnia and jet lag (Zisapel, 2020). Additionally, its role in managing neurodegenerative diseases, diabetes, and cardiovascular conditions has been supported by translational studies (Reiter et al., 2021a). However, interspecies variations in receptor distribution and pharmacokinetics necessitate tailored therapeutic approaches.

Conclusion

Research on mammalian models underscores melatonin's diverse physiological roles and therapeutic potential. Its ability to regulate circadian rhythms, mitigate oxidative stress, and modulate immune responses makes it a promising candidate for treating multifactorial diseases. Future research should focus on receptor-specific actions, long-term safety, and novel delivery systems to harness its full clinical potential.

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Prioritising Fundamental Motor Skills (FMS): The Need of the Hour and the Role of Physical Education Professionals

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Abstract

Fundamental motor skills (FMS) are the foundation for confident, enjoyable, and skilful participation in physical activities across the lifespan. Despite their significance, global studies reveal alarmingly low levels of FMS proficiency among children and adolescents, raising concerns about their physical literacy, health, and future engagement in physical activity. This article explores the critical role of FMS in physical education, highlights the consequences of neglecting motor skill development, and proposes a systematic approach for integrating FMS training into educational curricula to address this urgent need.

Keywords: Fundamental motor skills (FMS), Physical literacy, Locomotor skills, Stability skills, Public health, Teacher training in PE

Introduction

Fundamental movement skills (FMS) are basic motor patterns involving the coordinated use of large muscle groups. They are foundational for physical activity and include three categories:

1. Locomotor skills: Movements that propel the body from one place to another, such as running, skipping, hopping, and jumping. These enhance agility, speed, and coordination, building the basis for many

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sports and activities.

2. Object-control skills: Skills involving manipulation of objects, like throwing, catching, kicking, or striking. They are crucial for interacting with equipment in sports and improve hand-eye coordination, timing, and precision.

3. Stability skills: Movements emphasising balance and body control, such as twisting, turning, or maintaining postures like balancing on one foot. These develop core strength, spatial awareness, and the ability to maintain stability in dynamic or static conditions.

Mastery of these movements supports the development of advanced physical abilities, enabling participation in a wide range of activities and sports. These skills form the foundation for participating in physical activities and sports, supporting holistic development in children. Mastery of FMS depends on quality instruction and practice opportunities, promoting physical fitness, self-confidence, and lifelong activity. They are critical in physical education and positively influence physical and cognitive health.

The Importance of FMS

FMS competency is closely linked to:

1. Physical literacy: The ability to move with competence and confidence in various physical activities. A study was conducted to examine the role of physical literacy in the context of health and its utilisation in clinical and public health settings. The results revealed that physical literacy, as a multidimensional concept, provides a holistic foundation for lifelong engagement in physical activity. The study mapped the conceptualisation of physical literacy in relation to health and identified its application by healthcare providers in promoting physical activity and health outcomes. Key findings indicated a strong relationship between physical literacy and physical activity levels, with higher physical literacy associated with improved health indicators. Additionally, the study highlighted gaps in the integration of physical literacy into healthcare practices, suggesting a need for targeted interventions to enhance its use in clinical and population health programming. These findings underscore the potential of physical literacy as a critical tool in fostering health and well-being across diverse populations (Cornish et al., 2020).

2. Health outcomes: Higher FMS proficiency is associated with improved fitness, healthier body composition, and reduced risk of chronic diseases. This relationship is evident in a study conducted on U.S. Navy Explosive Ordnance Disposal (EOD) technicians, which demonstrated that individuals with better fitness levels, particularly higher cardiorespiratory fitness ($\dot{V}o2max$) and lower body fat percentage, exhibited greater proficiency in functional movement as measured by the functional movement screen (FMS) and Y-balance test (YBT). The study revealed that poor cardiorespiratory fitness was strongly associated with lower FMS and YBT scores, indicating that a minimum level of aerobic capacity is critical for achieving effective movement patterns. Additionally, while muscular strength is an important aspect of fitness, it did not show a direct correlation with FMS, underscoring the more significant impact of body composition and cardiorespiratory fitness on functional movement (Hernández et al., 2022). These findings highlight the role of FMS proficiency not only in enhancing fitness but also in promoting health outcomes by reducing injury risk and supporting long-term physical activity engagement.

3. Psycho-social benefits: Confidence in movement skills enhances self-esteem, social interaction, and overall mental well-being. The effects of a 10-week integrated neuromuscular training (INT) programme on FMS and physical self-efficacy in 6- to 7-year-old children were investigated . The study found that children in the INT group showed significantly greater improvements in both process and product measures of FMS compared to those in the control group.

These improvements included better sprint times, enhanced jumping abilities, and greater throwing performance, reflecting increased movement competence. Moreover, the study revealed that participation in the INT programme led to a significant increase in physical self-efficacy in boys, indicating that enhanced confidence in movement skills positively influenced their self-perception. While the effect on physical self-efficacy was not significant for girls, the overall findings suggest that skill development through structured training programmes contributes to improved self-confidence (Duncan et al., 2018). This confidence can, in turn, facilitate better social interaction and mental well-being, as children who feel capable in physical activities are more likely to engage with peers, enjoy physical play, and develop a positive sense of self. These outcomes highlight the importance of fostering movement competence through targeted interventions like INT to promote holistic developmental benefits in children.

4. Lifelong physical activity: Mastery of FMS in childhood predicts sustained engagement in sports and exercise into adulthood. FMS, encompassing locomotor (e.g., running, skipping), object-control (e.g., throwing, catching), and stability (e.g., balancing, twisting) skills, serve as the building blocks for motor development. Proficiency in these skills enables children to develop specialised movements necessary for organised and recreational activities (Logan et al., 2018). By promoting physical competence, confidence, and a positive attitude towards physical activity, FMS lay the groundwork for a lifelong active lifestyle.

Current Challenges

Global trends: Research highlights a consistent decline in FMS proficiency worldwide, with many children failing to meet developmental benchmarks. A study links FMS proficiency to lifelong physical activity and highlights a decline in FMS mastery among children over the past 15 years, contributing to low activity levels. An 11-week study of after-school programmes found significant improvement in FMS among children in a low-organised games programme, while no improvement was observed in a sports-based programme (Burrows et al., 2014). The findings suggest that low-organised games may better support FMS development, emphasising the need for better training of programme leaders to effectively teach these essential skills.

Barriers to FMS development are

- Limited physical education (PE) time in schools.
- Insufficient teacher training on FMS instruction.
- Overemphasis on competitive sports at the expense of skill development.
- Reduced outdoor play and increased screen time.

The Role of Physical Education.

Physical education (PE) is critical in addressing the decline in FMS proficiency among children. By adopting structured and evidence-based approaches to teaching FMS, PE can ensure skill deficits are effectively addressed. Focusing on foundational skills like locomotion, object control, and stability within PE curricula equips children with the physical competencies required for a range of activities. This not only helps develop their motor skills but also builds confidence, fostering positive attitudes towards physical activity.

Prioritising FMS within PE ensures equitable skill development, benefiting children of all athletic abilities. A well-designed curriculum can provide inclusive opportunities for practice and progression, enabling even less active or skilled students to improve. Early mastery of FMS creates a strong foundation for lifelong participation in sports and physical activities, reducing sedentary behaviour and promoting overall health and fitness. This proactive approach positions physical education as a cornerstone for combating inactivity and enhancing public health.

Proposed Framework for FMS Development

1. Systematic teaching approach:

- Assessment and feedback: Regular assessment of FMS proficiency to identify skill gaps and provide personalised feedback.
- Progressive skill development: Sequential teaching of FMS, starting with basic skills and progressing to more complex combinations.

2. Active learning environments:

- Engaging and inclusive activities that emphasise fun, exploration, and creativity.
- Opportunities for practice in diverse settings (e.g., playgrounds, gymnasiums, open fields).

3. Integration across ages:

- Early childhood programmes focusing on play-based FMS activities.
- Middle and high school curricula incorporating FMS in sport-specific contexts.

4. Teacher training and resources:

- Professional development for PE teachers to improve their understanding and delivery of FMS instruction.
- Access to age-appropriate teaching aids and resources.

5. Community involvement:

- Partnerships with parents and local organisations to promote FMS beyond school hours.
- Community programmes encouraging active play and participation in sports.

Implications for Policy and Practice

Governments and educational institutions must recognise FMS development as a public health priority. Policies should allocate adequate time for PE in school schedules, support teacher training, and promote community-based initiatives for motor skill development.

Conclusion

FMS proficiency is fundamental to physical literacy and lifelong physical activity. Addressing the current deficits in motor competency among children and adolescents requires an urgent, coordinated effort. Physical education must prioritise FMS through systematic instruction, inclusive practices, and collaboration with.

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Influence of Centre of Gravity and Release Height on Javelin Throw Performance Among Intercollegiate Athletes

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Abstract

Javelin throw performance is influenced by several kinematic variables, particularly the height of the centre of gravity (CG) at release and release height. This study aims to analyse the impact of these two variables on javelin throw performance among intercollegiate male javelin throwers. Utilising high-speed motion analysis software, data were collected from ten athletes during the release phase of the throw. Results indicate a significant correlation between both the height of the CG and release height and throw distance, highlighting their combined importance in optimising javelin throw technique. This study emphasises the necessity for targeted training that considers these kinematic factors for improving javelin performance.

Keywords: Javelin throw, Centre of gravity, Release height, Kinematic analysis

Introduction

The javelin throw is a complex athletic event requiring the synthesis of speed, strength, and technique. The performance in javelin throwing is influenced by various kinematic and biomechanical factors, particularly during the release phase (Payton, 2007). Among these factors, the height of the centre of gravity at release and release height have emerged as critical determinants of throw distance, yet their specific contributions remain underexplored in the literature.

Objectives of the study

The objectives of this study are

1. To assess the relationship between the height of the centre of gravity at release and throw distance.
2. To evaluate the influence of release height on javelin throw performance.
3. To understand the combined effects of these two variables on optimising javelin throw technique.
4. To understand the combined effects of these two variables on optimising javelin throw technique.

Significance of the study

Identifying the impact of the height of the CG and release height on javelin throw performance can significantly enhance training methodologies. By understanding these relationships, coaches can tailor training programmes to maximise performance outcomes for their athletes, thereby contributing to the broader field of sports biomechanics.

Methodology

Selection of subjects

Ten male javelin throwers aged 18–25 years from the Second Intercollegiate Athletic Championship of APJ Abdul Kalam Technological University participated in this study. All subjects were elite athletes, selected to minimise variability in skill level and experience.

Variables

Criterion variable: Javelin throw performance (distance).

- Independent variables:
  - Height of the centre of gravity at release (m)
  - Release height (m)

Data collection

High-speed digital cameras (Sony A73) were used to capture the final delivery phase of each throw. Videos were analysed using Kinovea motion analysis software to obtain precise measurements of the height of the CG and release height.

Statistical analysis

Data were analysed using SPSS software (version 20.0). Descriptive statistics were calculated, and Pearson's correlation coefficient was employed to assess relationships between the independent variables and throw distance. The significance level was set at 0.05.

Results

Descriptive statistics

Table 1 summarises the descriptive statistics for the height of the centre of gravity and release height.

Table 1 : Descriptive statistics

Variable	**Mean**	**SD**
Height of CG at re-lease (m)	1.15	0.05

Release height (m)	2.20	0.10

Pearson correlation coefficient

The correlation coefficients between the kinematic variables and javelin throw performance are presented in Table 2.

Table 2 : Correlation coefficients

Variable	**Correlation with Performance**
Height of CG at release	0.44
Release height	0.47

Regression analysis

The regression analysis indicated that both the height of the centre of gravity and release height significantly contributed to predicting javelin throw performance (Table 3). However, the combined model explained only 30% of the variation in performance.

Table 3 : Regression analysis results

Model	**R^2**	F	**p-value**
CG and release height mode	0.300	4.235	0.045

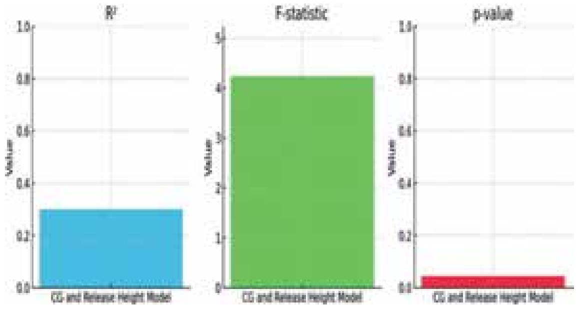

Figure 1: Regression Analysis

Discussion

The results suggest that both the height of the centre of gravity at release and release height are crucial determinants of javelin throw performance. The positive correlations indicate that a higher CG and release height can enhance the distance of the throw. This aligns with previous research, indicating that the height of release affects the trajectory and, consequently, the distance covered by the javelin (Ikegami et al., 1981).

Implications for training

Coaches should emphasise drills that improve athletes' release height and CG positioning. Strength and conditioning programmes can be tailored to enhance overall body control, promoting a higher CG at the point of release. Additionally, technical training should focus on optimising body mechanics during the throwing motion.

Conclusion

This study highlights the significant roles of the height of the centre of gravity at release and release height in determining javelin throw performance among intercollegiate athletes. Both variables showed positive correlations with throw distance, emphasising the need for a comprehensive training approach.

Recommendations

1. Training programmes: Coaches should integrate exercises that enhance both the height of the CG and release height into their training regimens.
2. Further research: Future studies should expand the sample size and explore additional kinematic variables to gain a more comprehensive understanding of javelin performance.
3. Technological integration: Continued use of advanced motion analysis technologies can further refine training techniques and athlete assessments.

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The ETF Paradox: Why Mutual Funds Remain the Leading Choice?

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Abstract

This study examines why mutual funds continue to dominate over Exchange-Traded Funds (ETFs) despite ETFs' advantages like lower costs, tax efficiency, and trading flexibility. While ETFs have gained popularity for their transparency and ease of trading, mutual funds maintain higher assets under management, especially among long-term and retirement investors. The research identifies key factors behind this trend, including mutual funds' reputation for consistent returns, perceived lower risks, and reliance on experienced fund managers. Additionally, established distribution networks and advisory services make mutual funds more accessible to retail investors. Conversely, ETFs face slower adoption due to limited investor awareness, lack of financial literacy, and the absence of personalized advisory services. The study highlights that younger, tech-savvy investors prefer ETFs, while traditional investors favor mutual funds. It recommends *enhanced investor education and targeted communication strategies to promote ETFs' benefits, fostering a more competitive and inclusive investment landscape.*

Keywords: Exchange-Traded Funds (ETFs), Mutual Funds, Investment Vehicles, Investor Preferences, Active Management, Financial Advisors, Market Dynamics

Introduction

Exchange-Traded Funds (ETFs) have revolutionised the investment landscape by offering low-cost, tax-efficient, and flexible investment options, attracting significant attention in recent decades. Despite their rapid growth and various advantages, ETFs still lag behind mutual funds in terms of assets under management, particularly among long-term and retirement investors. This paradox stems from factors such as investor preference for active management, trust in experienced fund managers, established distribution networks, and product familiarity. Mutual funds are often perceived as more stable and reliable for long-term financial goals, while ETFs face slower adoption due to limited investor awareness and the lack of personalised advisory services. Understanding these dynamics highlights the need for greater investor education and more effective promotion of ETFs' benefits in today's financial market.

Review of Literature

Mutual Funds vs. ETFs

This theme explores the comparative analysis between mutual funds and ETFs. Ippolito (1992) examines investor behaviour towards underperforming mutual funds, revealing limited responsiveness to poor performance and a tendency to remain loyal to familiar funds. Agapova (2011) compares conventional mutual index funds and ETFs, highlighting the differences in cost, trading flexibility, and investor preferences. Elton et al. (2002) analyse SPDRs (a type of ETF) and their advantages over mutual funds, such as lower costs and higher tax efficiency, while acknowledging trade-offs for active investors. Collins and Plantier (2014) focus on the impact of fees on mutual fund performance, demonstrating the detrimental effect of high fees on investor returns and the need for transparency.

ETF structure and mechanics

This section delves into the structure and mechanics of ETFs. Gastineau (2001) provides an in-depth overview of ETFs, their structure, and how they differ from traditional mutual funds, along with the challenges they face. Madhavan (2016) offers a detailed exploration of *Exchange-Traded Funds and the New Dynamics of Investing*, covering ETF structures, trading mechanisms, and their influence on market stability and liquidity.

Performance and efficiency of ETFs

The performance and efficiency of ETFs in different markets are analysed in this section. Huang et al. (2012) examine ETF performance in the Chinese market, highlighting the role of market efficiency, investor behaviour, and regulatory factors. Agapova (2011) demonstrates that ETFs provide similar index-based exposure to mutual index funds but cater to different investor needs.

Investor behaviour and market adoption

This section focuses on investor behaviour and market adoption of ETFs. Choi et al. (2004) investigate how plan design in retirement savings influences investor behaviour, with implications for ETF adoption. Ippolito (1992) explores how investor loyalty affects decision-making in the context of underperforming mutual funds.

Market trends and future outlook

This theme addresses market trends and the future outlook of ETFs. Hill et al. (2019) discuss the rise of ETFs and their impact on modern investing, highlighting future trends and developments. BlackRock (2022) provides an overview of the ETF market's growth. The literature review highlights the rising significance of ETFs in the financial market due to their cost efficiency, tax benefits, and liquidity. The studies emphasise the structural aspects, trading mechanisms, and market efficiency that contribute to ETF adoption and performance.

Statement of the Problem

ETFs have emerged as a dynamic investment alternative, offering lower costs, tax efficiency, and trading flexibility. However, despite their rapid growth and widespread appeal, ETFs continue to lag behind mutual funds in terms of overall assets under management and investor preference, particularly in long-term savings plans and retirement portfolios. This paradox raises a critical research gap. While the benefits of ETFs are well-documented, the underlying reasons for their limited penetration in certain investor segments remain inadequately explored. The persistent dominance of mutual funds suggests that factors beyond cost and efficiency, such as investor behaviour, regulatory frameworks, distribution networks, and structural advantages, play a pivotal role in shaping investment choices. This study seeks to bridge this research gap by examining the key drivers sustaining mutual funds' supremacy, identifying the challenges ETFs face in closing this gap, and evaluating the future potential of ETFs to disrupt the traditional investment landscape.

Objectives

1. To Identify the Key Factors Contributing to Mutual Funds' Dominance Over ETFs
2. To Collect and Analyse Investor Preferences and Perceptions Regarding Mutual Funds and ETFs

Methodology

Participants: The intended audience for this study was ETF and mutual fund investors in the Thiruvananthapuram district of Kerala. The sample included 15 ETF customers and 15 mutual fund customers selected through purposive sampling to ensure representation across key demographics.

Data collection/materials: Data were collected using structured questionnaires featuring closed-ended and open-ended questions. Secondary data on assets under management, market share, and fund performance were sourced from platforms like MoneyControl.com and Morningstar.

Analysis/methods: Quantitative analysis was conducted using IBM SPSS to calculate descriptive statistics, Sharpe ratios, and hypothesis testing

Analysis and Discussions

Table 1: Mutual funds

Fund name	type	NAV	1 Day change(%)
Bandhan Infrastructure Fund Direct Plan – Growth	Infrastructure Equity	₹63.351	+1.08
ICICI Prudential Infrastructure Direct – Growth	Infrastructure Equity	₹210.95	+0.00
Nippon India Small Cap Fund Direct – Growth	Small Cap Equity	₹200.03	+1.17
DSP The Infrastructure Growth and Economic Reforms Regular Fund Direct – Growth	Infrastructure Equity		
Invesco India Infrastructure Fund Direct – Growth	Infrastructure Equity		

Source: primary data

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Table 2: Exchange Traded Funds

ETF Name	Type	NAV (₹)	1-Day change (%)
CPSE ETF	Public Sector Undertaking	₹97.2371	-0.13%
SBI Nifty Next 50 ETF	Equity	₹795.4161	+1.09%
Mirae Asset Nifty Next 50 ETF (MANXT50ETF)	Equity	₹766.0225	+1.09%
Nippon India ETF Nifty Next 50 Junior BeES	Equity	₹803.0203	+1.09%
Motilal oswal Nifty Midcap 100 ETF	Equity	₹63.3258	+0.97%
Source: Moneycontrol.com			

The comparative analysis highlights that ETFs focusing on broader indices like Nifty Next 50 and midcap stocks generally exhibited positive performance, with the highest daily gain of +1.09% from the Motilal Oswal Nifty Midcap 100 ETF. In contrast, mutual funds emphasising small-cap and infrastructure sectors, such as the Nippon India Small Cap Fund (+1.17%), showed strong investor interest. The NAV comparison indicates that the Nippon India ETF Nifty Next 50 Junior BeES holds the highest NAV among ETFs, while the DSP Infrastructure Growth and Economic Reforms Fund lead among mutual funds. The decline in CPSE ETF (-0.13%) suggests potential concerns in public sector investments, while the overall positive sentiment across most funds signals investor confidence in the current market landscape. This analysis provides valuable insights for investors to navigate sector-specific opportunities and make informed investment decisions.

Hypothesis1(H1): There are significant factors (such as fees, management style, and historical performance) that contribute to the dominance of mutual funds over ETFs in the investment market.

Sharpe Ratio Calculation

Mutual Funds

1. Bandhan Infrastructure Fund: Sharpe Ratio = $\frac{0.0108 - 0.06}{0.015} \approx -3.14$
2. ICICI Prudential Infrastructure Fund: Sharpe Ratio=: $\frac{0.0000-0.06}{0.010} \approx -6.00$
3. Nippon India Small Cap Fund: Sharpe Ratio=: $\frac{0.0117-0.06}{0.018} \approx -2.65$
4. DSP Infrastructure Fund:
   Sharpe Ratio=: $\frac{0.0095-0.06}{0.014} \approx -3.58$
5. Invesco India Infrastructure Fund: : Sharpe Ratio: $\frac{0.0125-0.06}{0.016} \approx -2.98$

ETFs

1. CPSEETF:
   Sharpe Ratio:$\frac{0.0013 - 0.06}{0.012} \approx -5.27$
2. SBI Nifty Next 50 ETF:
   Sharpe Ratio: $\frac{0.0109-0.06}{0.014} \approx -3.49$
3. Mirae Asset Nifty Next 50 ETF: Sharpe Ratio: $\frac{0.0109 - 0.06}{0.014} \approx -3.49$
4. Nippon India ETF Nifty Next 50 Junior BeES:
   Sharpe Ratio: $\frac{0.0109-0.06}{0.014} \approx -3.49$
5. Motilal Oswal Nifty Midcap 100 ETF: Sharpe Ratio: $\frac{0.0097 - 0.06}{0.012} \approx -4.18$

₹368.4	+0.95
₹ 79.99	+1.25

Table 3: Risk-Adjusted Performance

Fund Name	Type	Sharpe ratio
Bandhan Infrastructure Fund Direct Plan - Growth	Infrastructure Equity	-3.14
ICICI Prudential Infrastructure Direct – Growth	Infrastructure Equity	-6.00
Nippon India Small Cap Fund Direct – Growth	Small Cap Equity	-2.65
DSP The Infrastructure Growth and Economic Reforms Regular Fund Direct – Growth	Infrastructure Equity	-3.58
Invesco India Infrastructure Fund Direct – Growth	Infrastructure Equity	-2.98
CPSE ETF	Public Sector Undertaking	-5.27
SBI Nifty Next 50 ETF	Equity	-3.49
Mirae Asset Nifty Next 50 ETF (MANX-T50ETF)	Equity	-3.49
Nippon India ETF Nifty Next 50 Junior BeES	Equity	-3.49
Motilal Oswal Nifty Midcap 100 ETF	Equity	-4.18
Source: primary data		

The Sharpe ratios for both mutual funds and ETFs predominantly indicate negative values, suggesting that the portfolio returns have underperformed the risk-free rate during the analysed period. This underperformance may stem from market downturns, high volatility in equity-based funds, or suboptimal asset selection and fund management. Benchmark comparisons with broader indices like the Nifty 50 or Nifty Infrastructure Index could provide further context, as negative Sharpe ratios during market stress are common. Among mutual funds, the Nippon India Small Cap Fund (-2.65) exhibits relatively better risk-adjusted returns despite its high volatility. In contrast, ETFs like CPSE ETF (-5.27) and Motilal Oswal Nifty Midcap 100 ETF (-4.18) show significantly poor performance, reflecting higher volatility and lower return potential. The consistent negative Sharpe ratios across both categories highlight the lack of satisfactory returns relative to risk during the period, underscoring the need for careful fund selection based on risk-adjusted performance. These findings validate the hypothesis that management style, historical performance, and investor trust in professional fund managers are significant factors contributing to the dominance of mutual funds over ETFs in the investment market. Therefore,H1 is accepted based on the comparative risk-adjusted performance analysis.

Hypothesis2(H2): Investor preferences and perceptions significantly differ between mutual funds and ETFs, influencing their investment choices

RiskTolerance vs. Investment Preferences

From the above sample data, we create a summary of the responses related to Risk Tolerance and Investment Preference.

Table 4 : Risk Classification of Mutual Funds and ETFs

	Low Risk	Moderate Risk	High Risk	Total
Mutual Funds	5	6	1	12
ETFs	1	8	7	16
Both	0	2	0	2
Total	6	16	8	30
Source : primary data				

The p-value is 0.052, which is just above the typical significance level of 0.05.Therefore; we fail to reject the null hypothesis at the 5% significance level. This suggests that there is no statistically significant association between investment product preference (Mutual Funds, ETFs, Both) and risk tolerance (Low, Moderate, High) in this sample. The analysis indicates that ETFs possess substantial growth potential, driven by a rising demand for cost-effective investment options and increasing market accessibility. However, challenges such as lower investor awareness and concerns about liquidity may hinder their progress. These findings support the hypothesis that while ETFs have opportunities to catch up with mutual funds, their challenges must be addressed for sustained growth.

Table 5: Investment preferences

Variable	Mean	Standard Deviation
High Fees	4.1	0.7
Trust fund managers	4.2	0.8
Good long-term Investment	4.5	0.6
Easy to find Info	3.4	0.9
Understand Mutual funds	4.1	0.8
Source: primary data		

Table 6 : Perception Variables

Variable	Mean	Standard deviation
low fees	4.7	0.5
Easy to trade	4.6	0.5
Tax efficiency	4.0	-
Source: primary data		

The analysis reveals that low fees (mean: 4.7) and ease of trading (mean: 4.6) are the most valued factors among investors, with minimal variability in opinions, indicating widespread agreement. Good long-term investment prospects (mean: 4.5) are also highly preferred, while obtaining information (mean: 3.4) is perceived as the most challenging aspect, reflected by the highest standard deviation (0.9). The findings suggest that fees, trading simplicity, and information accessibility play pivotal roles in shaping investor perceptions of mutual funds and ETFs, confirming that investor preferences and attitudes significantly differ between these two investment options. Therefore, Hypothesis 2 (H2) is accepted based on the descriptive analysis and qualitative insights.

Findings:

Performance overview: ETFs exhibited mixed performance, with the CPSE ETF declining by -0.13%, while others like SBI Nifty Next 50 and Nippon India ETFs showed positive changes, reflecting investor interest in midcap equities. Mutual funds demonstrated strong performance, especially the Nippon India Small Cap Fund (+1.17%), indicating robust demand for small-cap investments.

NAV Comparison: Nippon India ETF Nifty Next 50 Junior BeES recorded the highest NAV among ETFs (₹803.0203), signaling strong demand, while DSP Infrastructure Growth and Economic Reforms Fund led mutual funds with ₹368.4. Lower NAVs in some funds may attract cost-sensitive investors seeking affordable entry points.

Sector Focus: ETFs offer diversified exposure to broader indices, while mutual funds target infrastructure and small-cap sectors, appealing to growth-oriented investors.

Investor Sentiment: Positive 1-day changes in most funds suggest favourable sentiment, though the CPSE ETF's decline highlights concerns about public sector performance.

Risk-Adjusted Returns: Negative Sharpe ratios across all funds indicate inadequate compensation for risk, with Nippon India Small Cap Fund (-2.65) showing relatively better performance.

Descriptive statistics: Low fees and ease of trading emerged as key investor preferences, while difficulty in obtaining information remains a challenge.

Regulatory frameworks: SEBI regulations on transparency, tax benefits, and expense caps have boosted ETF adoption, though limited awareness and trading complexities continue to hinder widespread participation.

Suggestions

- **Transparent fee communication:** Financial advisors should prioritise clear communication of fees, especially low-cost options, to attract cost-sensitive investors.

- **Information accessibility:** Develop user-friendly platforms and educational resources to simplify information on mutual funds and ETFs.

- **Sector-focused marketing:** Promote investment strategies in high-performing sectors like infrastructure and small caps to align with investor preferences.
- **Customised investment plans:** Introduce products tailored to varying risk tolerance levels to cater to diverse investor needs.
- **Performance-based strategy adjustment:** Regularly monitor fund performance against benchmarks and adjust strategies based on market trends and investor sentiment.

Conclusion

This study explored the comparative dynamics between mutual funds and ETFs, focusing on investor preferences and influencing factors. The analysis found that mutual funds dominate the investment market due to trust in fund managers, perceived lower risk, and long-term performance history, making them the preferred choice among investors. However, ETFs show growth potential driven by their low costs, trading flexibility, and transparency. The study emphasises that limited investor awareness, liquidity concerns, and lack of financial education are major barriers to ETF adoption. Understanding investor behaviour is essential in shaping the future investment landscape, and addressing these challenges can encourage wider ETF acceptance. Future research could explore investor preferences across diverse demographics and regions, offering deeper insights for investors, financial advisors, and fund managers to improve investment strategies.

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Kerala's Leap Towards Sustainable Mobility: An Analysis of the Role of Electric Vehicles

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Abstract

The global shift towards sustainable development has spurred significant attraction towards electric vehicles (EVs), with both the businesses and governments looking to extract the potential of EVs to lessen the dependence on fossil fuels. Kerala has shown its substantial interest in the adoption of electric mobility. This article examines the critical role of EVs in promoting environmental sustainability, with reference to Kerala. As human activities continue to contribute to environmental degradation along with the uncontrolled hike in the price of fossil fuels, transitioning to sustainable transport solutions like EVs is essential for mitigating pollution and climate change and maintaining financial stability. The study highlights Kerala's progressive stance on EV adoption, with a notable increase in registered electric vehicles, supported by government subsidies and incentives aimed at reducing the upfront costs and expanding charging infrastructure facilities. Through a comparative analysis of EVs and conventional vehicles, the research reveals that EVs significantly lower carbon emissions and operational costs, despite higher purchasing prices. The results of the study underline the significance of public awareness, technological advancements, and supportive market policies to enhance market penetration and acceptance of electric

vehicles.

Keywords: Electric vehicle, Sustainable development, Market penetration, EV adoption, Energy consumption

Introduction

Environmental sustainability is a key element of ensuring a liveable future for generations to come. The environment, from which we derive much of our sustenance, is changing and deteriorating due to human activity. We are contributing to environmental degradation through pollution, overexploitation of natural resources, and climate change, all of which can negatively impact the quality of life on earth. If we are to build a sustainable future, we must take action today. First and foremost, it is indispensable to nullify our greenhouse emission value and the amount of pollutant particles discharged into the aerosphere as the consequence of our exploits. By moving to a much more sustainable mobility solutions, the environment as well as the economy may gain a lot in terms of less noise and air pollution and less reliance on finite fossil fuels.

Electric mobility may simply be defined as electrically operated vehicles. The electric motor is the main part of this technology, wherein the vehicles come powered with a rechargeable battery system, disregarding the usage of the internal combustion engine (Richardson, 2013). It represents a revolutionary shift from the systems currently in use to the clean transport system. Most often, EVs fall within one of the following categories: passenger cars, light commercial vehicles, buses, and commuter two-wheelers. As far as Kerala, which is one of the most progressive and literate states in India, is concerned, the transition to electric vehicles is a natural choice, due to its progressively thinking population, high consumer awareness, and also the sustainability-oriented initiatives by the state government. As per data, of the 7,57,114 units of vehicles registered in the state until 15 Aug 2023, 75,802 units (10.01%) are EVs (second in the country behind Delhi in terms EV adoption rate). In the past few years, Kerala has seen a drastic shift in attitude towards sustainable transport solutions and environmental protection measures. In an effort to reduce air pollution, reduce emissions, and to create a healthier and greener environment, Kerala has adopted the purchasing of green transportation facilities. This shift has been driven by the government's policy changes, public awareness campaigns, and the emergence of manufacturers and suppliers of electric vehicles in the region.

The government of Kerala has decided to support the usage of EVs by providing subsidies for individuals and businesses that wish to make the switch. The government provides 50% reduction on Road tax & Registration exemption (for the first 5 years) for both the electric two-wheelers and four-wheelers, whereas a subsidy of Rs 25,000 is being provided to the newly purchased e-three wheelers (Kerala Electric Vehicle Policy 2020). These relaxations are extended to cover the initial cost and the running expenses associated with running an EV. This has led to an increased availability of EV charging stations in the state, as well as more people committing to buy and use EVs. The Government of Kerala is also offering several tax incentives for those who choose to purchase electric vehicles. The promotion of EVs is also resulting in energy efficiency. EVs do not have external tailpipes, and therefore reduce the direct emissions into the atmosphere. Additionally, they are more cost effective to run and are significantly more energy efficient than their petrol or diesel counterparts. Since the EVs are operated on electric motors (which generate power through electromagnetic fields) rather than internal combustion engines, they are quieter than their conventional counterparts, making them a great choice for city streets. With all these aspects being taken into consideration, this article aims to analyse the general acceptance level and market behaviour of electric vehicles in Kerala, which paves way for understanding the market size as well as the growth potential of EVs in the state. In addition, it looks to examine the environmental sustainability of electric vehicles with respect to other vehicles and tries to compare and evaluate the financial symmetry between a conventional vehicle and an electric vehicle, which facilitates the promotion of sustainable transportation and expansion of the EV market structure and provides the potential for generating tailor-made solutions to address the issues with the climate, infrastructure, and consumer behaviour in the state for the successful implementation of EV technologies.

Review of Literature

Digalwar and Giridhar (2015), together with Kumar et al. (2015), explored strategies to uplift the EV adoption rate in the country. The research emphasized the technological components of EV manufacturing that enable the industry to produce efficient and cost-effective vehicles, thereby increasing demand for EVs among the Indian population. It was suggested that the advancements in battery technology, enhanced awareness, and economic feasibility are essential facilitators for promoting EV adoption.

Sriram et al. (2022), investigated the elements that contribute to the acquisition of eco-friendly automobiles across various regions in the country. The findings suggested that increasing fuel prices and environmental concerns act as strong motivators for adopting EVs, while challenges include lengthy charging times, inflated initial expenditure, security concerns, restricted steering ranges, inadequate infrastructure, and psychological barriers. The study recommended that policies aimed at boosting the EV market share should also focus on regulating EV usage through higher taxes.

Lakshmi R B (2023) assessed the environmental impacts of electric vehicles concerning their energy sources. Their studies were focused on the ecological implications of EV battery production. It stressed the increasing need to evaluate the emissions linked to the increasing exposure of the EVs. The results indicated that charging EVs from the grid produces higher emissions than ICE vehicles, particularly in rural settings. The production of electrified automobiles is believed to enhance productivity, generate gross value-added, and create job opportunities while maintaining a relatively low environmental impact.

Viktor Pirmana (2023) assessed the commercial and ecological implications of the battery-equipped vehicular manufacturing in the country of Indonesia, in which the economic and environmental impacts of EV production were evaluated using an input-output model, incorporating domestic economic activities related to nickel. The Economic Impacts of Electric Vehicle Adoption research initiative aimed to forecast potential levels of EV adoption, compare life cycle costs with respect to that of the conventional vehicles, and analyse the impact of EVs on greenhouse gas emissions.

Raj and Sujith (2023) analysed the factors that determine the adoption of electric vehicles, focusing on Kerala in order to highlight the customer satisfaction. The study followed a descriptive research design and the data collected directly from 100 respondents through questionnaire. The findings suggested that environmental concerns, social influence, performance, after-sales service, economic benefit, and physical appearance of electric vehicles are all factors that influence EV adoption. The study concluded that the respondents with the age group between 46 and 55 with an educational qualification of undergraduate and a profession of business showed the highest satisfaction towards adoption of electric vehicles in Kerala.

Aswathy and Ushadevi (2024) reviewed the challenges faced by the customers while opting for electric two-wheelers (E2W), with special reference to the district of Thrissur, Kerala. A total of 30 respondents who are using electric vehicles were selected from Thrissur, using the random sampling method. It was identified that the utmost barrier faced by the consumers while buying electric vehicle was the high initial price and the major problem faced by the customers while using the vehicles was the lack of service centres, followed by the lack of skilled labour.

Sreeja O.K (2024) analysed the customer preference and satisfaction of electric two-wheelers in Calicut City, Kerala, by adopting a quantitative analysis approach. The study examined the interactions between price, perceived value for money, and charging infrastructure availability as a determinant of purchase intention and performance satisfaction. The data for the analysis were collected using a structured questionnaire from a sample of 248 respondents. The study revealed that the link between price and purchase intention is mediated by perceived value for money, highlighting the significance of customer perceptions in the decision-making process.

Methodology

Data collection/materials

The study was carried out in a descriptive format in order to collect qualitative and quantitative Information with the aid of secondary data, which were collected predominantly from various sources, namely the Road Transport Yearbook (2022–2023) of the Ministry of Road Transport and Highways, Society of Indian Automobile Manufacturers (SIAM), Society of Manufacturers of Electric Vehicles (SMEV), website of the Ministry of Heavy Industries [MHI], media reports, articles, journals, and books.

Analysis/methods

The indicators such as market penetration rate and carbon footprint rate are incorporated in the quantitative analysis of the study to essentially provide objective conclusions.

Results and Discussion

Market penetration rate

Market penetration rate is the percentage of a target that a product has captured out of the potential market. It gives an insight of the current market position and strategies and identifies opportunities for future growth.

Market penetration rate = (Number of customers / Target market size) * 100

Here, the number of customers and target market size indicate the number of electric vehicle customers and the total number of vehicle owners in the market respectively.

Table 1 : Yearly trend of market penetration level of vehicles in Kerala for the past 5 years

Year	Total number of vehicles registered (annually)	Total number of EVs registered (annually)	N Penetration rate of EVs (in %)	Cumulative percentage
2019	914061	472	0.05	0.05
2020	640713	1389	0.22	0.27
2021	765584	8820	1.15	1.42
2022	782833	39668	5.07	6.49
2023	757114	75802	10.01	15.08

Source: Ministry of Power (2024).

Table 1 indicates that there is a progressive increase in the rate of purchasing decision of electric vehicles with respect to the rest. As of 2019, the EV penetration rate in Kerala was only 0.05%, as it was seen as a budding stage for the introduction of EVs in the state, where there was a knowledge gap existed between the customers on considering an EV as their primary choice for transportation.

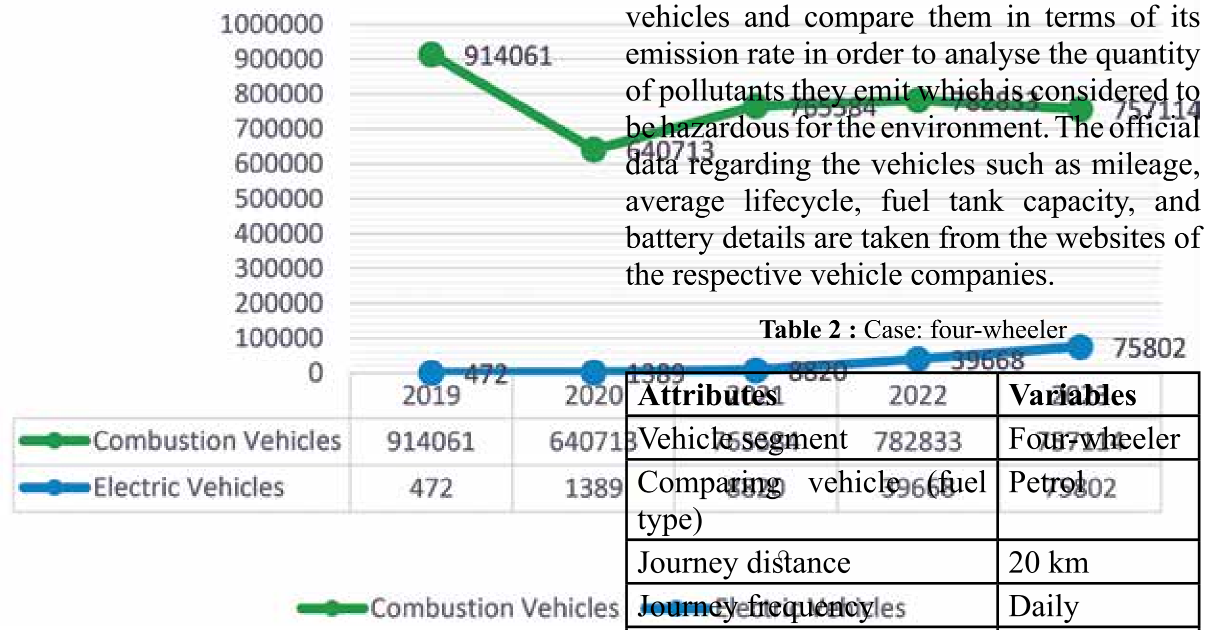

Figure 1: Market Penetration Rate of Electric Vehicles in Kerala (2019 - 2023)

As of the first half of 2023, the penetration rate stands tall as of 8.56% against that of the national average of 1.1%. Hence it can be seen that Kerala has got an impeccable taste and openness towards the acceptance of the EVs compared to the rest of the Indian states. In Kerala, the drill rate of chargeable vehicles in the automobile sector is high and is moving progressively as each year goes by, especially for two-wheelers. This may be due to multiple factors under concern such as rise in the price of fuels, increase in the charging infrastructure, ease of handling, a narrowing affordability gap, wider acceptance due to available information, and targeted investment policies from the manufacturers.

Carbon footprint rate

The carbon footprint rate of a vehicle refers to the amount of carbon dioxide emitted by a vehicle at a particular point of time. It rests upon multiple components like the vehicle's fuel efficiency, distance covered, and type of fuel used. The average carbon footprint of a vehicle in its lifetime is about 4.6 metric tons. Here, we calculate the CO_2 emissions from the most popular EVs and conventional vehicles and compare them in terms of its emission rate in order to analyse the quantity of pollutants they emit which is considered to be hazardous for the environment. The official data regarding the vehicles such as mileage, average lifecycle, fuel tank capacity, and battery details are taken from the websites of the respective vehicle companies.

Table 2 : Case: four-wheeler

Attributes	Variables
Vehicle segment	Four-wheeler
Comparing vehicle (fuel type)	Petrol
Journey distance	20 km
Journey frequency	Daily
Annual journey distance	7300 km
CO2 emissions factor	179.94 g/km
Comparable EV battery capacity	40 kWh
EV range (approximate)	300 km
Petrol car range (approximate)	17 km/l
Density of petrol	750kg/m3
Battery power needed for total journey	1168.00 kwh
CO2 emissions factor	850 g/kWh

Source: e-AMRIT portal.

The footprint calculation is carried out by the calculator software of the e-AMRIT portal (assists users by providing insights regarding the EV choices, insurance, and financing options) that has been developed and hosted by NITI Aayog on behalf of the Government of India.

Table 3 : Output

CO2 emissions from conventional vehicle	1.31 ton
CO2 emissions from the electric vehicle	0.99 ton

Annual CO2 emissions savings by opting an EV	0.32 ton
CO2 emission reductions during the lifetime of the vehicle	2.57 tons (0.32 * 8 years)

Source: e-AMRIT portal.

From Table 3, it is found that the electric vehicles emit less CO_2, as compared to conventional fuel vehicles. The electric vehicles also offer a much better environmental sustainability compared to the conventional vehicles. It is seen that an electric vehicle emits around 25% less carbon dioxide and allied greenhouse gases with respect to that of a conventional vehicle that shares the similar attributes.

Financial impact

For this particular analysis, we consider the four-wheeler brand of Tata Nexon, which has got both conventional and EV variants. The attributes of the vehicles are taken from the official website of the respective four-wheeler brand.

Table 4 : Comparison between a conventional vehicle and an EV (journey cost calculator)

Car model	Price (in lakhs)	Rate of fuel (petrol & electricity) [average price in Kerala]	Mileage	Cost/km (Rs)	Distance/month	Fuel cost/month (Rs)	Fuel cost/year (Rs)	Savings/year (Rs)
Nexon (Petrol)	9.45	Rs 106/l	17 km/l	6.23	10			
Nexon (EV)	15.98	Rs 4.5/kwh	325 km	0.97	10			

Source: Computed

Table 4 depicts that the initial cost of the EVs seems to be on the higher side. But on the other hand, the running cost as well as the maintenance cost of the EVs are very much favourable as far as the customer is concerned. Thereby, the increased initial cost maybe compensated as the lifecycle of the vehicle goes by. The EVs offer a higher overall financial benefit to the customer compared to that of the conventional vehicles. The purchasing cost of a conventional vehicle is less than that of an EV, whereas the maintenance cost and running cost of an EV are much lower than that of its counterparts, since an EV requires no fossil fuel and regular maintenance service. The electric mobility venture in Kerala is still in its budding stage. Even though the sales are increasing, there is still a lack clarity and knowledge among the customers regarding the value that an EV brings to the table. There is a need of the hour to switch to electric vehicles, as it saves the environment from various types of pollution, provides financial benefit for the customers and user-friendly modulations. However, the higher upfront cost still remains a major barrier that prevents users from considering an EV as their primary choice. Meanwhile, a state-controlled participant-involvement apparatus may dish out asset maximization of the EV business, sustainable management, and enterprising strategies to the associated firms.

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00 km	6230	74760	------
00km	970	11640	62400

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Role of Arohana and Avarohana in the Raga Athana – An Overview

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Abstract

In Carnatic music, there is usually a custom of knowing the arohana and avarohana of a raga, before learning a composition in that particular raga. May be, it will help to know the skeletal sancara of the raga ata glance. But this is applicable to the ragas with regular arohana -avarohana. In the case of vakra raga, the better option is likely to understand the colour of the raga from its prayogas in various compositions rather than from its arohana -avarohana. Athana raga is noticed with vakratva in its prayogas and it is a very popular raga wherein most of our composers have contributed their compositions. Here, the work is centered on figuring out the arohana,avarohana, and other noted prayogas in the Athana raga based on the details collected from various sangitalaksanagrandhas as well as the traditional use of the raga.

Key - words: Athana, arohana, avarohana, Tyagaraja, MuthuswamyDikshitar, SubbarayaSastri

Introduction

- ✓ Vakra ragas can be explained as the janya ragas with an irregular order of svaras in their arohana, avarohana, or both. The svara from which the regular course of the scale is disturbed is termed the ‘vakrasvara’ and the svara at which the regular course of the scale is regained is called the ‘vakrantyasvara’. Vakra ragas can be broadly categorised into the following heads:
- ✓ **Arohanavakra**: The ragas wherein only the arohana will be in irregular order.
- ✓ **Avarohanavakra**: The ragas in which only the avarohana will be in irregular order.
- ✓ **Ubhayavakra:** Ragas wherein both the ascend and descend will be irregular.

Methodology

The study is done based on the notation of the selected compositions and analysis of the same.

Data Collection/Materials

Data were gathered frommusic books as well as from the online platforms, including in-depth interviews of musicologists to understand the usage patterns of the raga, Athana

Athana

Arohana: s r_2 m_1 p n_3 s

Avarohana: s n_3 D_2 p m_1 p G_2 r_2 s

Athana comes under the category of avarohanavakra raga. It is said to be the janya of the 29thmela, Sankarabharana. Besides Shadja and Panchama, the svaras taken by this raga are ChatusrutiRishabha, AndharaGandhara, SudhaMadhyama, ChatusrutiDhaivata, and KakaliNisada. This is a dvi-anyasvarabhashanga raga, wherein SadharanaGandhara and KaisikiNisada figure as foreign notes.

References of raga Athana in ancient works:

Ragavibodha of Somanatha mentions Athana as a sampurna raga, a more suitable raga for singing in the night. It takes 'pa' as grahasvara, 'dha' amsa, and 'sa' nyasasvara. ***SangrahaChudamani*** of Govinda describes Athana as derived from Dhirasankarabharanamela omitting 'ga' and 'dha' in the arohana and with sampurnaavarohana, which ends with the phrase 'mggrs'. The svara, Shadja figures as graha, nyasa, and amsasvara. ***SangitaSampradayaPradarsini*** of SubbaramaDikshitar gives a detailed definition of this raga. Athana is given as the janya of 28thmela, Harikedaragaula. It is a sampurna raga with shadja as grahasvara. It is mentioned as a sarvakalika raga. SubbaramaDikshitar describes Athana as a bhashanga raga. Dhaivata, the jivasvara of Athana, comes as a svara which is very near to KaisikiNishada and hence, Venkitamakhi took Athana as the janya of 28thmela, Harikedaragaula, with KaisikiNisada as its lakshanasvara (kuRippusvara). Gandhara and Dhaivata which are seen as Dirghasvaras are given as jivasvaras, and they occur with the gamaka, 'vali'. The svara 'ga' shines with three colours, the first one as SadharanaGandhara, the second one as AndharaGandhara, and the third one with Kampitagamaka, without even touching the sthana of Antara Gandhara ('Grs' will be heard as 'm RmRmrs'). Likewise, Dhaivata appears with a mix of gamakas like 'D' heard as *'n\D', 'n/sD'*, etc. 'DP' as *'DnP', 'nD/n\P'*,etc. 'PDP' as *'p/nDnP',* etc. It is said that KaisikiNisada comes in the prayogas 'm p d' where the tarasthayiShadja is not touched. KakaliNisada figures in arohanaprayogas like 'p n s', 'd n s', and in avarohanasancaras like 's n p'. While using 'p d^2 n^3 s' in the arohanaprayoga, one should come down with a glide, rubbing swaras with each other. Sankarabharanam easily pictures if Dhaivata coming from Panchama is shown firmly. In phrases like 'p d n m', KaisikiNisada shines with a slight touch of Shadja.

Table 1

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Text	Ragavibodha of Somanatha (1609 AD)	SangrahaCudamani of Govinda (1750 - 1800 AD)	Sangita Sampradaya Pradarsini of Subbarama Dikshitar (1904 AD)	SangitaCandrika of Attur Krishna Pisharady (1954)
Mela details	janya of Karnatagaulamela with the svarasthanas of Harikamboji	janya raga derived from Dhirasankarabharanamela	janya of 28th mela, Harikedaragaula	Janya raga derived from the 29th mela, Sankarabharanam
	Sampurna raga	Sampurna raga	Sampurna raga	Sampurna raga
			Bhashanga raga: Andhara Gandhara, KakaliNisada(anyasvaras)	Bhashanga raga: SudhaNisada in the arohana (anyasvara)
Arohana and avarohana	Srmpns - sndpmgrs	Srmppns - sndpmggrs	srgmpDns - snDpmGrs	srGmpDnS - SnDpmGrs

It is also mentioned that the raga, Devakriya will shade, if ‘s d p m’ comes in a normal way.***SangitaCandrika*** of Attur Krishna PisharadycategorisesAthana under bhashanga variety, wherein avarohanaoccasionally takes SudhaNisada. The svara, ‘sa’ comes as graha and nyasasvara and ‘ga’ and ‘dha’, the amsasvaras.From the above table, the disparity can be noticed regarding the janaka raga of Athana as well as its arohana -avarohanaprayogas. Here, the study is carried out by analysing the following three compositions in Athana raga:

1. **Elanidayaradu – Adi – TyagarajaSwamy**
2. **Brhaspate – TisraTriputa – MuthuswamyDikshitar**
3. **Paramapavani – Adi – AnnaswamySastry**

Among the three sishyaparamparas of Tyagaraja, namely Umayalpuram, Walajapet, and ThillaisthanamParamparas, the Umayalpuram school had handled the largest number of two kala compositions of Tyagaraja. The kriti ‘Elanidayaradu’ is one among them. Brhaspate is one among the set of Navagrahakritis of MuthuswamiDikshitar, which is in praise of the graha, Jupiter (Brhaspati). Though AnnaswamySastry’s compositions are fewer in number, Paramapavani is a popular song handled by many musicians.

It is observed that Saint Tyagaraja’s approach is similar to the opinion of SangrahaChudamani, whereas MuthuswamyDikshitarsticked on to the Venkitamakhi school as mentioned in SangitaSampradayaPradarsini.A proper arohana as specified in SangitaSampradayaPradarsini is not seen in this Dikshitarkriti.

Though Dikshitar has employed bothtypes of Gandhara in this kriti, yet, in the arohana and avarohana phrases (s r m p d n p n s and s n s p d m p r m r s), Gandhara is found missing and both the ascent and the descent come in vakra.

Table 2 : Brhaspate – TisraTriputa – MuthuswamyDikshitar

Arohana -Avarohana phrases seen in the composition	Possible phrases
RS;srsn³SP-pnP np npnpsdpm	snsp np sdpm

Table 3 : Elanidayaradu – Adi – TyagarajaSwamy

Arohana- Avarohana phrases seen in the composition	Possible phrases
snSDd dn²p n²n²P	sdnp

Psdpm Pdpmpmg²G gmP\M pdns	sdpm pmg² – gmP\M pdns
MP;N³S\NS;sn³Dns\ N³S;	mpn³s sn³Dns
RSRN³SNSP NPNPD-NP;	sn³sp dnP
MP; G;RS; Rn³s\N/RS;	mpGrs
PdDsdPMPgmGMP-npDP	gmpnP DP
N³S;RMP DD N; dnPN³S	srmpdnpns
pdnsrsnspdmprmrs	snspdmprmrs

Sn^{2}S RSR mmR S;R SrsnsD	mmrs - SrsnsD
smrs n^{2}rsn pdN^{2}P; PpmG	mrsnpdNPpmG
gmPMpn^{2}pn^2 DN^{2}P;	gmpndNp
pddsDPM Mpn^{2}pn^{2}p-mG	pds – sdpmpnpmG
sn^{2}P pdpdsnNP n^{2}n^{2}pm	snpnpm
pd dn^2 n^{2}s n^{2}srsn^{2}p	pdnsrsnp

In this kriti, a proper arohana- avarohana is not seen. The prayoga ‘g m p n’ is found more in the arohanaprayogas. Avarohanasancharas such as ‘sn^3 pdN P p m G’, ‘sDpmpnpmG’, etc. are found wherein the phrases end without touching ‘sa’. However, avarohana mostly figures in vakra only.

Table 4 : Paramapavani – Adi – AnnaswamySastry

Arohana- Avarohana phrases seen in the composition	Possible phrases
PMP pmG; ^{2}MP;;P;P n^{2}n^{2}pm	gmP - nnpm
PMP pmG; ^{2}MP;;P n^{2}P n^{2}d n,^{2}p d n^{2}pm	gmpndnpm
PMP pmG; ^{2}MP;;pn^{2}P nSpsdpm	gmpnspsdpm
PMP pmG; ^{2}MP;; D,nS; sdpm	gmpdns - sdpm
pdn^{2}s rsn^{2}p n^{2}n^{2}pm	pdnsrsnp
PP SDPMPG rmrsnsrm pn^{2}sn^{2}sdpm	sdpmpGrmrs - srmpns
PG,rS S\D,nS	grs
n^{2}srmpn^2 pn^{2}mpdnSrs	srmpn - pnmpdns
pDn^{2}P G,rmRS	npg,rmr,s

With reference to the notation of ‘Paramapavani’ of AnnaswamySastry in Vidya Shankar’s book titled ‘*SubbarayaSastry’s and AnnaswamySastry’s Compositions*’, Athana is given as the janya of 29thmela, Sankarabharanam with the arohana -avarohana as ‘s r^2 m^1 p d^2 n^3 s – s n^3 D^2 n^2 p m^1 G r^2 s’ (where Gandhara is heard as r^{2}m^1 r^{2}m^1). In this composition, a full - scale arohana -avarohana is not found; the prayoga, ‘s r m p n’ is seen more, while ‘p d n s’ prayoga also is included to some extent. Avarohana comes in vakra with the presence of Dhaivata (s d p m p G r m r s) as well as without Dhaivata (n p G p m g m r s), in this kriti.

A proper arohana -avarohana cannot be traced from all the above compositions. ‘srmpn’ prayoga is rarely engaged by MuthuswamyDikshitar; phrases with ‘pdns’ are more in number. Both ‘srmpn’ and ‘pdns’ prayogas are equally distributed by AnnaswamySastry in his kriti, while ‘pdNP’ prayoga is found more in Tyagaraja’skriti. Everywhere, the avarohana comes in vakra only.

Swara patterns with vakraprayogas are beautifully incorporated in the above compositions. It can be observed that very few similar phrases are found in the above kritis such as ‘dN^{2}p’, ‘DN^{3}S’, ‘n^{3}Sp’, ‘GMP’, etc. There are limited janta and dhattuprayogas or most probably repeated jantaprayogas found in this raga. Vakraprayogas highlight the individuality of this raga and hence there is a comparably less space for jantadattuprayogas.

Elanidayaradu: PPnnpm**P /S;SSSS//** sn^3**Sp**dNP//n^3**Sp**nnpm//pm**PR**//

Brhaspate: SN^3**S\P //P;S**DPM//SN;**S\P;S;**/ **P;R;;;**R;S;;;//

Paramapavani:pn^{2}P n**Sps**dpm //, etc.

Distinctive viseshaprayogas like ‘DD;D;D;DPPDN;^{2}P;;’ in Elanidayaradu, ‘N^{3}S;GMR;S’ , ‘SrsN;NS$^{d/n}$D;;;D;’, etc. in Brhaspate ‘PG,rS/S\D;nS,’ ‘R,mP; \P\P N;^{2}d N,^{2}P;mP nS’, etc. in Paramapavani can be noticed. **Gamakas**play a vital role in Athana raga. Gamakas like Kampita, Nokku, Vali, Orikkai, Odukkal, Jaru, etc. are present in all these three compositions. A good number of Ravaigamaka is present in the kriti ‘Paramapavani’.

Some other observations

i) It can be noted that in Athana raga, AndharaGandhara comes fewer times compared to SadharanaGandhara, but in this composition of MuthuswamyDikshitar, AndharaGandhara is found in more phrases than SadharanaGandhara. For example,

Anupallavi : M; P;;; ^{m}**G;;;**^{m} R; S;;;

Ma hen **dra**dyupa sita

Charanam : P; **GMG;** M; P; //^{m}**G;;;**^{m} R; Srs N; S; // N S; **g**m R; S

Ja **ga**traya //**pu**trakara // ni ran **ja**naya

TyagarajaSwamy's compositions in Athana raga seem to have employed SadharanaGandharam only and not AndharaGandharam. The svaraGandhara, in the prayoga like 'pmG;' comes with dirghakampita, wherein the shake extends from ChatusrutiRishabha to Madhyama and is heard as 'R^{2}mR^{2}mr'. So, it can be said that, Athana beautifully shines in Tyagaraja compositions with the prayogas like mRm PP dNP;//PRS;sRmRSS;// without touching Gandhara. In the kriti, 'Paramapavani', in most of the arohanaprayogas, KakaliNisada seems to adorn the place of Nisada and in avarohanasancaras, KaisikiNisada is seen to be dominant

ii) In Athana, KakaliNisada comes in its original place in a fewer number of phrases. In many other phrases, Nisada actually takes the place of a higher KaisikiNisada, i.e., more than KaisikiNisada but fewer than KakaliNisada. Some phrases in 'Elanidayaradu' like '\N\N\N SrmrsNS'//'R\NRS'//'snSRSR'//etc., sancharas in 'Brhaspate' like'M;P;;;N;^{3}S;\N;^{2}S;;'//'\N;/R;S;;;S,rsN;'//etc. and in 'Paramapavani', phrases such as 'pnsnsdpm'//'pDnSSsr\NS'//etc. can be quoted as examples. In the case of Gandhara also, in some phrases, it actually takes a place almost nearer to AndharaGandhara and not exactly the AndharaGandhara. Gandhara actually hears as 'rmrmr' only, with ChatusrutiRishabha and SudhaMadhyama. For example, in 'Paramapavani', phrases such as 'pmG;MP' (which hears as 'pmR,mR,mRMP'), 'pdNPG;' (which hearsas'pdNPmR,mR'), in 'Brhaspate', like 'P,dpMPMGG;' (which hears as 'P,dpMPMRRmRmr), 'G;GMP;' (which hears as 'RmRmrmrMP;') and in 'Elanidayaradu' like 'pmGMPPnnpmP' (which hears as 'pmRmrMPPnnpmP'), etc. It can also be noticed that MuthuswamyDikshitar had used Gandhara and Dhaivata as prolonged swaras in the ascent. May be, MuthuswamyDikshitar intended to differentiate Athana from Harikamboji by using dirghaGandhara and dirgha Dhaivata in the arohanasancaras, as Harikamboji rarely incorporates dirghaswaras in its arohana. For e.g., **G;**M;P;// M;P;**G;;;**R;//S;**D ;;;D;**N;P;// **D;**NS// DpDnsr//, etc.

Conclusion

It can be inferred that svarasthanas and phrases have their own bhava apart from the arohana – avarohana structure for certain raga. In such cases the lakshana stands second to the Lakshya, and it is evidently felt in the ragas like Athana. Generally, arohana and avarohana of a raga help one to get an idea on the sanchara of the raga, both in the ascent and the descent. Here, this study clearly shows that ragas like Athana, cannot be handled by simply taking its arohana and avarohana, as it takes vakrasvaras as well as anyasvaras. Moreover, in bhashanga ragas, there will be some particular phrases in which the svakiyasvara as well as the anyasvara must figure. But this point cannot be applied for Athana raga, as boththe Nishada varieties come frequently enriching the aesthetic beauty of the raga. It is likely that Saint Tyagaraja and MuthuswamiDikshitar gave somewhat distinct colours for their songs in the raga, Athana. Therefore, it can be concluded that the duty of the musicians is to keep the beauty of these compositions through popularising them as per the notations available, but keeping in mind that a raga can be learned or expressed through bhava or gamaka which is apart from arohana–avarohana. They are merely the reference sources to know the boundaries or scope of a raga.

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Musical Practices in Indian Sufism

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Abstract

This article explores the essential role of music in Indian Sufism and focuses on its spiritual practices at Sufi shrines. Music bridges all emotions that connect to spirituality and devotion. In Sufism, music serves as a pathway to divine love, which helps the devotees to attain spiritual ecstasy with an urge to unite with the absolute power. The study details the importance of Sufi music and its central form, Qawwali, which fuses Persian and Indian traditions contributed by Amir Khusroe, a Sufi saint and poet. This also shows the celebration of devotion in Qawwali performances at prominent Sufi shrines, Ajmer Dargah, Hazrat Nizamuddin Dargah, and Haji Ali Dargah. Sufi divine love is also expressed in other musical forms such as kafi, naat, ratheeb, Marsiya, and dhikr and a meditative whirling dervish art. Despite modern challenges, traditional Sufi orders (schools which teach and practice Sufism) and qawwal families preserve the true spiritual essence of the Sufi musical concept. This article also highlights the openness of Sufi shrines irrespective of religious traditions, allowing people to experience the power of ecstatic spiritual music. By evaluating the themes of Sufi music and rhythm, this study showcases the bridge between art, devotion, and the divine.

Keywords: Sufism, Indian Sufism, Sufi music, Qawwali, Dargah, Sufi shrines, Spirituality, Sufi traditions, Amir Khusroe, devotional music, Ajmer Dargah, Urs festivals, Sama'a, Mysticism, whirling dervish, Sufi orders.

Introduction

Music is used in many ways, such as for devotion, celebration and entertainment, and developing one's mood. The value of music in everyday life depends on the way one uses it and the degree to which one is engaged in it, which in turn depends on the contents in which one hears it. Music has been used for devotional purposes since the prehistoric era. Music and spirituality are always interlinked, as it touches the innermost feelings of the human mind. It is the best medium to communicate with the divine. One can be creative in one's own way: by composing or by writing lyrics, in devotion. Music is always there to communicate the inexpressible and free the mind from the boundaries of speech. It elevates us to alternate places of emotion, rhythm, and imagination and enables us to come to accept in ways through touching the innermost feelings by activating imagination, inspiration, and insight.

Music and religion are linked in some way or another in any society or culture on earth; all religions in the world embrace the use of music in their worship. Spirituality is different from devotion. In some religions, there are particular rules for expressing music for devotion. But music in spirituality has no set boundaries, as it is expressed till the devotional mind transforms to an ecstatic state of trance where the singer or listener feels oneness with the divine.

In that genre, Sufism, the mystical tradition of Islam that practices music as a key to communicate with the divine. Sufism means that God makes us die in ourselves and makes us live in him. It is the spirituality or mysticism of a religion. Sufism teaches the realisation of the soul and is free from religious rules and principles. Sufism believes that all religions and revelations are only the race of a single eternal sun and that all Prophets have delivered and proclaimed in different tongues the same principles of eternal goodness and eternal truth, which flow from the divine soul of the world. The Sufis trace the origin of Sufism, which in tradition is known as 'Tasawwuf' to the holy Prophet (pbuh) of Islam himself and from the origin and creation of man. A Sufi purifies himself by constantly keeping the image of the Almighty in mind. The highest heaven of Sufis is their own heart. The ultimate aim of Sufis is to merge with the Almighty in all ways. Sufis express their love to the divine through many practices in which the musical expression takes the major place. Sufi music is a very important branch of Islamic spirituality and mysticism. Sufis believed that musical worship is one of the best ways to express divine love. The Sufi tradition is strongly characterised by practicing music, rhythm, and dance to reach a particular state of consciousness. The tangled concepts of Sufism and its perspectives are topics in many of the spiritual books. There is a particular pattern of practice for expressing spirituality in Sufism. Sufi Dargahs or shrines are places where the tomb of a Sufi Saint is located. Dargahs are important spiritual and cultural centres where devotees from different faiths seek guidance, solace, and blessings.

Methodology

Data collection/materials

Data were gathered using a combination of field observations including Qawwali performances and Shrine rituals, interviews with Qawwals and devotees, historical texts, and ethnographic research at prominent Sufi shrines in India.

Analysis/methods

The study examines the devotional value of Qawwali music, its lyrical themes, rhythm structures, audience participation during a performance, and the impact of modern influences on traditional Sufi music.

Results and Discussion

Musical practices at Sufi shrines in India play a significant role in the spiritual and cultural life of devotees. Sufi music is the musical expression of spirituality in different musical forms inspired by the poetries of Sufi Saints such as Amir Khusroe, Jalaluddin Rumi, Baba

Bulleh Shah, and Khwaja Ghulam Farid. Sufi music includes Qawwalis, ghazals, naats, kafi, and dhikr (remembrance of god). The main form of Sufi music, 'Qawwali', is central to these practices. Qawwali performances are often held at Sufi shrines during evenings or Fridays, and on occasions, such as Urs Festivals, commemorating the death anniversary of a Sufi Saint.

The most widely known style of Sufi music is Qawwali, especially in South Asia. 'Qaul' is an utterance (of the prophet), Qawwal is someone who often repeats a 'Qaul', and Qawwali is what a Qawwal sings (Qureshi 2012, p. 470).

The rendition of Sufi music in the form of Qawwali is a tradition in the Indian subcontinent, presently encompassing Pakistan, India, and Bangladesh, usually at a khanqah (hospice) or a place sacred to Sufis. It is the rendition of philosophical verses in several languages by a lead male singer accompanied by co-signers embellished with clapping of hands and some musical instruments. The formal name for a Qawwali session is 'Mehfil E Sama'. 'Sama' is a practice of devotional music, performed in central Asia and Turkey. The musical tradition of Qawwali can be traced back to eighth-century Persia – today's Iran and Afghanistan. Amir Khusroe Dhelavi of the Chisti order of Sufis is credited with fusing the Persian and Indian musical traditions to create Qawwali as we know it today, in the late 13th century in India. Qawwali is seen everywhere but particularly at shrines, and is oriented to saints since saints symbolise the nearness to God, the Almighty which the Sufi seeks to achieve in 'Sama'. Thus the commemoration of a saint's final union with God on his day of demise constitutes the prime reason for holding Qawwali assemblies. Several types of assemblies have evolved in accordance with their specific purpose and occasion of appearance. Most prominent among them are the ones held to celebrate the saint's union with God and also to commemorate his death by the appropriate ritual for the dead (Qul, Khatam). Complementing these major performance occasions for Qawwali are what Sufis consider the classical Sama of mystics' intimate gatherings convened by shrine notables or spiritual guides for their particular circle of Sufis, disciples, and devotees.

The concept of Qawwali occasions in today's Indian Sufism comprises a layered composite of rules and conventions developed initially out of principles, which were expounded by early saints and divines, and adapted in accordance with changing social conditions.

The musical pattern of Qawwali evokes a mystical devotional state of mind through its special pattern of rhythms, repetitive melodies, and powerful vocal improvisations. The lyrics of Qawwali express themes of divine love, spiritual longing, and unity of all beings. The audience actively participate by clapping, swaying, and singing along, creating a communal atmosphere of spiritual ecstasy and unity. It evokes deep spiritual emotions, heals afflictions, and brings devotees closer to the divine power. Thus the path of spiritual awakening opens. The time and duration of qawwali performances vary considerably. The favourite time for these assemblies is the night when there are no interruptions, and the performances often continue as late as early morning prayers. Standard performance format includes a 'Quranic' (holy book) recitation, prayer for the dead (Fatiha), Sufi genealogy (Shijra), and prayer and qawwali singing with songs praising the Almighty, Prophet (pbuh), and the saints.

The origin of Sufi music at shrines

Sufism, a mystical branch of Islam, binds personal connection with God, through love, devotion, and inner purification. Sufi saints or Murshids play a key role in developing the spiritual philosophy across the Indian subcontinent. Irrespective of caste and religion, people are attracted to their teachings and visit Dargahs all over the world.

Major Sufi shrines and their musical traditions

Ajmer Dargah Sharif, Rajasthan: The

Dargah of Khwaja Moinuddin Chishti, the founder of the Chishti order, is the first on the chart. The qawwali performances are held every day after the Maghrib prayer (evening prayer) at the shrine. Special Qawwali performances take place during festivals like the death anniversary of the Saint, which attracts a number of pilgrims. The qawwals perform spiritual poetry and songs, which reflect the Saint's message of love, peace, and tolerance. There is a particular space inside Dargah Sharif provided for qawwali performances. The qawwal and his team perform qawwalis and people gather around to watch. Some join and sing along with the qawwals, clapping their hands in a rhythmic pattern. The rhythm pattern varies according to the lyrical meaning of the Sufi poetry combined in a medium and fast pace, accompanied by musical instruments like Duff and Harmonium.

Hazrat Nizamuddin Dargah, Delhi: The Dargah of Nizamuddin Aulia is well known for its musical practices as the Dargah follows the Sufi Chisty order. The Qawwali performances are held every Thursday evening, attracting crowds from all over the country and beyond. The Qawwali performance follows a traditional style of rendering without any regional musical traces.

Haji Ali Dargah Sharif, Mumbai: The Dargah of Saint Pir Haji Ali Shah Bukhari is located on a small islet off the coast of Mumbai, which is famous for its devotional musical traditions. Qawwali performances here are an offering to the saints with expressions of reverence and supplications.

Other musical forms at Sufi shrines: Other regional musical traditions are also developed in Sufi shrines in the Deccan region Marsiya. Nauhas (lamentations) are often performed at shrines during the month of Muharram, to commemorate the martyrdom of Imam Hussain. Another musical form known as kafi associated with the poetry of Baba Bulleh Shah and Shah Hussain is also sung at shrines. Another Sufi meditative art form is the whirling dervish which is practiced from the Mevleviya Sufi order of Saint Jalaluddin Rumi. Kathak dance is also performed, blending classical Indian dance with slow-paced devotional music. This fusion shows the importance of Indian tradition where local art forms are woven with spiritual, mystical, and devotional practices.

Conclusion

Sufi Music with its message of divine love and brotherhood has attracted devotees from various faiths and even people with no specific religious affiliation. The shrine has no particular religious barriers and allows individuals from all walks of life to come together and experience the mystical world of spirituality and music. At many shrines, people of different religions offer prayers and practices believing that the saint's blessings are for all, regardless of faith.

There are certain challenges faced by the Sufi musical traditions in the modern era. According to modernity, the expectation of the audience changes which in turn dilutes the spiritual essence of qawwali performances. Some critics point out that the qawwali has become a performance of art rather than a spiritual practice, as it is also performed outside Shrines for commercial purposes or festivals, both in traditional and fusion styles of singing. However, the Sufi shrines, Sufi orders, and qawwal family traditions stick to its real values, preserving the traditional spiritual purpose of qawwali. Efforts should be taken to archive traditional compositions, develop Sufi music among young generations, and maintain the connection between music and spirituality.

The musical practices at Sufi shrines weave the connection between art and spirituality in the Sufi tradition. Sufi musical forms, especially qawwali, inspire and encourage the devotees to create an atmosphere where the divine presence or energy is felt emotionally and spiritually. The vibrant rhythmic pattern of qawwali performances allows one to experience a spiritual state of trance evolving in the divine energy, which is felt from the music.

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Rag Pahādi: A Journey Through M.S. Baburaj's Musical Legacy

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Abstract

Music as a universal language enhances the emotional impact and story narration in cinema. Music can elevate a movie scene with various shades like tension, suspense, joy, and sorrow. To put it in another way, music can make or break a film if not chosen wisely. Malayalam film industry's association with music began around 1930. The early songs and music were highly influenced by Carnatic and Hindusthani traditions. Several tunes were borrowed from Hindi films, as they were quite popular among the public. Several musicians, poets, and singers were recognised after the inclusion of music in cinema. Many folk tunes were preserved as part of film music creations and they hold a special place in the hearts of the listeners. The period from 1950s can be considered the classic period of Malayalam film music. This article focuses on the contributions of M.S. Baburaj, one of the legendary musicians of the period, in Malayalam cinema and handling of Rag Pahādi in his creations.

Keywords: Malayalam, Film, Music, Hindusthani, MS Baburaj, Pahādi, Songs

Introduction

Malayalam cinema has a rich tapestry and artistic achievements, which have played a prominent role in shaping the Indian film industry. The Malayalam cinema journey began with *Vigathakumaran* by J.C. Daniel in 1930, which was a silent film. The first talkie cinema *Balan*, which was released eight years later, had a soundtrack. It marked a milestone in Malayalam cinema. *Nirmala* was a significant film in Malayalam, as it had background score and songs. The songs were penned by G. Sankara Kurup and the music was handled to by P.S. Divakar and E.I. Warrier. Several films like *Nalla Thanka*, *Jeevithanouka*, and *Neelakkuyil* were released later along with the emergence of studios like Merryland and Udaya. Musicians like V. Dakshinamoorthy, G.K. Venkatesh, M.S. Gnanamani, B.S. Chidambaranath, P.S. Divakar, Br. Lakshmanan, M.S. Baburaj, K. Raghavan, and G. Devarajan and lyricists like Vallathol Narayana Menon, Thikkurissy Sukumaran Nair, Vayalar Rama Varma, Abhayadev, P. Bhaskaran, and G. Sankara Kurup contributed to the industry with their splendid works. Playback singers like P. Leela, Augustine Joseph, Kaviyoor Revamma, Mehaboob, Alappuzha Pushpam, K.J. Yesudas, S. Janaki, P. Susheela, and Kamukara Purushothaman were well received by the audience. This article focuses on the music composer, M.S. Baburaj, and his experiments with Rag Pahādi .in Malayalam film songs

M. S Baburaj M.S. Baburaj flourished during the golden era of Malayalam cinema. Mohammad Sabir Baburaj aka Babukka, as he was known in the industry, was born to Jan Muhammad Khan and Fathima on 3 March 1929 in Kozhikode. He showed passion and talent for music from a very early age. His father was a Hindusthani musician from Bengal, from whom he acquired his basic music lessons. He was trained in Hindusthani music and was a singer of Ghazals and Qawwalis. But soon his father slunk away to Calcutta and left them in poverty. This made him sing on the streets and trains for a living. He entertained the public with melodious Hindi songs and Bhajans accompanied by his harmonium. Kunju Muhammed, police officer and ardent music lover, noticed him and adopted him. He was benevolent enough to provide not only shelter but also opportunities .to develop Baburaj's talent for singing

Figure 1. M.S. Baburaj.

Baburaj started singing in the music troupe of Nilamboor Balan initially and later moved into the world of theatre where he composed songs for dramas. In 1951, he composed songs for the play *Inquilabinte Makkal* and several other dramas. He made his debut as a film music director in 1957 through Ramu Kariat's *Minnaminungu*, which had songs penned by P. Bhaskaran. The film had 10 songs, but the songs were not received well as expected. His next film *Umma* in 1960, directed by M. Kunchako, gave him more recognition. The song 'Kadalivaazha' sung by Jikki became an evergreen song. From there on, lyrics by P. Bhaskaran served as a lucky charm for Baburaj songs. *Kandam Becha Coat* directed by T.R. Sundaram was another hit movie in which he partnered with P. Bhaskaran. Later Baburaj composed music for movies like *Mudiyanaya Puthran*, *Laila Majnu*, *Palattu Koman*, *Bhagyajathakam*, *Ninamaninja Kalpadukal*, and *Moodupadam*. P. Bhaskaran wrote lyrics for all these movies, except *Palattu Koman*, for which Vayalar Rama Varma penned the songs.

The subsequent five years gave him hits like *Thacholi Othenan*, *'Karutha Kai*, *Bhargavi Nilayam*, *Bharthavu*, *Kuttikkupayam*, *Subaida*, *Kadathukaran*, *Porter Kunjali*, *Kuppivala*, *Ammu*, *Thangakkudam*, *Kattuthulasi*, *Mayavi*, *Chettathi*, and *Thommante Makkal*. Some of the famous songs from these films are 'Anjana Kannezhuthi' from *Thacholi Othenan*, 'Panchavarna Thathapole' from *Karutha Kai*, 'Vasantha Panchami Nalil',

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'Arabikkadaloru Manavalan', 'Pottatha Ponnin', 'Thaamasamethe Varuvan', and 'Ekanthathayude Aparatheeram' from *Bhargavi Nilayam*, 'Velukkumbol Kulikkuvan', 'Innente Karalile', 'Oru Kotta Ponnundallo' from *Kuttikkupayam*, 'Kanmani Neeyen' from *Kuppivala*, and 'Sooryakanthi' from *Kattuthulasi*.

'Oru Kochu Swapnathin' and 'Mattoru Seethaye' from *Tharavattamma*, 'Eeranuduthumkondambaram' from *Iruttinte Athmavu*, 'Kannuthurakkatha Daivangale' from *Agniputhri*, 'Anuragaganam Pole' and 'Ezhuthiyatharanu' from *Udyogastha*, 'Surumayezhuthiya' from *Khadeeja*, 'Thamarakkumbilallo' from *Anweshichu Kandethiyilla*, 'Oru Pushpam Mathram', 'Annuninte Nunakkuzhi', 'Pranasakhi', and 'Avidunnen Ganam' from *Pareeksha*, 'Swarnavalakalitta' from *Lakshaprabhu*, 'Akale Akale' from *Midumidukki*, 'Pathiravayilla' from *Manaswini*, and 'Thane Thirinjum Marinjum' from *Ambalapraavu* are songs that exhibit Baburaj's musical genius.

Baburaj passed away on 7 October 1978 at an early age of 49. He was honoured with Sangeetha Nataka Academy Award in 1983 posthumously for his works. Many of his songs still remain evergreen melodies of the Malayalam film industry.

Rag Pahādi

Pahādi is said to be a scale which resembles folk tunes. The word Pahādi means 'mountain' or 'of the hills'. The origin is said to be from Kashmir Dogri folks (Himalayas) and the raga is mostly sung in middle and lower octaves. As the name suggests, the raga was mostly handled by several native composers for folk songs. Pahādi is said to belong to Bilawal That and has shades of Bhoopali and Mohana Kalyani from Carnatic music. Hindusthani ragas lend composers the freedom to break the rules while creating film songs with an attractive touch. Any note like Komal, Thivra, or Shuddha can be liberally used while singing Pahādi. As a result, beautiful melodies take birth from this raga.

- Aroh/Avaroh of Pahādi is S R G P D S – S D P G R S (S N D P M G R S) Bhoopali in Aroh and Bilawal in Avaroh
- Jati – Audav-Sampoorn
- Vadi- Pa
- Samvadi-Sa
- Rasa- Sringar, Shaanth, Virah
- Time of singing – Pradham prahar of night (6 pm to 9 pm)
- Pakad – sa dha pa, ga pa dha sa,

Songs in Raga Pahādi by M.S Baburaj

M.S. Baburaj used Raga Pahādi notably in six Malayalam film songs, which are listed in Table 1.

Table 1: Raga Pahādi in six Malayalam film songs

Sl. no.	Song	Singers	Lyrics	Movie
1	'Avidunnen Ganam Kelkan' (1967)	S. Janaki	P. Bhaskaran	Pareeksha
2	'Manimukile' (1965)	A. K. Sukumaran, S. Janaki		
3	'Oru Kochu Swapnathin' (1966)	S. Janaki		
4	'Pranayaganam' (1966)	P. Susheela		
5	'Surumayezhuthiya' (1967)	K. J. Yesudas		
6	'Vasantha Panchami Nālil' (1964)	S. Janaki		

Let us go through the song 'Surumayezhuthiya' to understand Rag Pahādi in detail.

The song starts with the catchy humming which depicts the raga outline.

'Surumayezhuthiya' – gpp...dss gg and the part 'Sooryakanthi' in the Pallavi -s r g r s d in the lower octave shows signature phrases of Pahādi. The Anupallavi begins as 'Jalakathirasheela' where pdsnddndp at 'Jaalameriyuvathenthino' is a beautiful phrase of the raga. In the Charanam, where the lyric 'Ragalahari' appears, he phrases it as pmpgrr, which is soothing. The connection between notes makes this raga beautiful. The background instruments in the song, mostly the bit on the violin and flute, glide through Pahādi, which makes the song more melodious.

Nimisha Salim, granddaughter of M.S Baburaj, during her performance at a music event held at Kozhikode in 2011, mentioned about the use of one 'off-note' in Baburaj compositions. This one note changes the entire mood and beauty of the song. She refers to the note as 'Kalla katta'. This phenomenon can be clearly seen in these six film songs. As we go through the musical graph of Baburaj, 1960s was the peak period of his musical career. Most of his musical combinations were with lyricist P. Bhaskaran and singers S. Janaki and K.J. Yesudas. The Baburaj–Janaki duo is an evergreen favourite of musical lovers. His songs were mostly minimally accompanied by tabla and harmonium.

Conclusion

From the above-mentioned songs, it can be found that most of the Baburaj melodies reflect the style of Gazhals. The music from the streets of Kozhikode, filled with hunger and poverty, ended up in the minds of every music lover, which had endless love for M.S. Baburaj. He can be remembered as a musician with God's touch. This study focused on just one raga among his splendid compositions, but the above-mentioned songs are enough for one to understand his musical genius. The new-generation audience and singers, despite their techno advancement, still enjoy Baburaj melodies, which shows the timelessness of his compositions.

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Vayalar Rama-varma	Anarkali
Yusafali Kecheri	Khadeeja
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Music and Memory: An Overview from the Perspective of Neuromusicology

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Abstract

Music has long served as a universal language, influencing human cognition, emotion, memory, and social interaction. Music as entertainment has been fuelling commercial industries and economic prospects across the ages. Also, the fact that it features as a valuable socio-cultural indicator has been established effectively. This review synthesises existing literature on Neuromusicology to explore the neurobiological foundations of musical perception and its effects on cognitive and emotional processes along with a purview of its effect on memory skills. By examining historical perspectives—from Darwin's and Spencer's evolutionary theories to contemporary insights on music's role in social communication and neurochemical regulation—this analysis offers a cohesive introduction for those new to the field. Importantly, the study is based exclusively on secondary sources and literature analysis, with no original experimental intervention conducted. The findings underscore music's enduring impact as both a cognitive medium and a catalyst for social bonding, while outlining promising directions for future research in understanding the role of specifically using Carnatic music as an interventional tool for the same. The multifaceted approach to understanding music's impact on the brain has been one of the most unique and intriguing topics of research. Focusing on the neuro-biological perspective of music, some of the most defining research on this area is being conducted while trying to establish and nurture the possibilities of reviewing the multidisciplinary aspects of music.

Keywords: Neuromusicology, Multidisciplinary, Neurobiology, Cognition, Memory, Review, Future research, Music

and brain, Carnatic music, Svara phrases, Raga exposition, Varisas, Alankaras, Musical permutations.

Introduction

Music has long played a vital role in human society. Peter Kivy (1959) explains that Darwin's *The Descent of Man* (1871) reveals music's evolutionary significance by linking musical expression to natural selection, particularly through its roles in communication and sexual selection (Darwin, 1871/1874). Darwin proposed that early humans may have used song – through musical notes and rhythm – as a precursor to articulate speech, a trait also observed in species like songbirds. Schulkin and Raglan (2014) further support the idea that musical expression is a universal human feature shaped by evolutionary pressures, while Herbert Spencer provided alternative scientific perspectives that expanded the discussion on music's role in human evolution. More recently, Honing et al. (2015) suggested that music acts as a 'social glue' by enhancing group cohesion through shared activities such as singing and dancing, which can trigger neurochemical responses like endorphin release. These diverse viewpoints underscore music's profound influence on human emotion, memory, and social connection.

Methodology

This study employs a qualitative literature review to synthesise existing research on neuromusicology, focusing on the neurobiological foundations of musical perception, memory, and social cohesion. The following steps outline the methodological framework:

Literature search strategy

A systematic search was conducted across multiple academic databases – including PubMed, PsycINFO, Google Scholar, JSTOR, to name a few – to identify peer-reviewed articles, historical accounts, and theoretical papers relevant to neuromusicology. Keywords and phrases such as 'neuromusicology', 'music and memory', 'evolutionary theories of music', 'Darwin and music', 'social cohesion and music', and 'neurochemical effects of music' were used in various combinations to ensure a comprehensive collection of sources.

Inclusion and exclusion criteria

- Inclusion criteria:
  1. Peer-reviewed journal articles, book chapters, and historical documents that address the neurobiological aspects of music, its evolutionary role, and its social impact.
  2. Studies published in English that contribute to understanding the intersection of music, memory, and neurobiology.
  3. Both contemporary research and foundational theoretical works (e.g., Darwin's and Spencer's perspectives) were considered.
- Exclusion criteria:
  1. Non-peer-reviewed sources and articles without a clear methodological basis.
  2. Studies that focus solely on the performance or compositional aspects of music without addressing neurobiological or cognitive implications.
  3. Research not directly related to the themes of memory, emotion, or social interaction in the context of music.

Data extraction and synthesis

Relevant data – including research objectives, theoretical frameworks, key findings, and conclusions – were extracted from each selected source. The extracted information were then organised thematically. A narrative synthesis approach was used to integrate findings from diverse disciplines such as neuroscience, psychology, musicology, and anthropology, thereby providing a cohesive overview of the field.

Thematic analysis

The review identified several core themes:

- Evolutionary perspectives: Historical viewpoints by Darwin, Spencer, and other early theorists on the role of music in human evolution.
- Neurobiological underscoring: Contemporary studies that detail how musical perception is linked to memory, emotion, and neurochemical processes.
- Social and cognitive implications : Research exploring how music promotes social bonding, communication, and group cohesion.

These themes guided the analysis, highlighting both areas of consensus and gaps in the current literature.

Limitations

This review is inherently limited by its reliance on secondary sources and published literature. Potential biases include publication bias and the variability in methodological framework across the sources. Moreover, the exclusion of non-English studies may restrict the global perspective on neuromusicology. These limitations are acknowledged as areas for further research.

Ethical considerations

As this study is based entirely on existing published literature, there were no direct ethical concerns involving human or animal subjects. All sources have been appropriately cited and credited.

Neuromusicology

Neuromusicology is a modern field that explores the intersection of music and the brain, emerging in the late 20th century as advances in neuroscience and neuroimaging (fMRI, PET scans, EEG) allowed scientists to observe real-time brain activity during musical tasks such as listening, performing, or composing.

Historically, music was understood through cultural, philosophical, and psychological lenses. Ancient Greek thinkers like Pythagoras and Aristotle had recognised its therapeutic properties, but formal scientific studies did not emerge until the 19th and early 20th centuries. At the same time, ancient Indian traditions also acknowledged music's healing potential. Early texts like the lakshanagrandhas described how the seven musical notes produce distinct vibrations, and how their combinations form ragas or modes that influence mood, emotion, memory, and cognitive abilities. This concept – that specific musical frequencies can affect the mind much like the moon influences tides – is inherent not only in Indian music (Carnatic and Hindustani) but also in Western traditions.

The advent of advanced neuroimaging in the mid to late 20th century revolutionised our understanding of musical processing by enabling researchers to map the brain regions activated during musical experiences. This breakthrough paved the way for neuromusicology as a distinct discipline. A landmark moment in its history came in the early 1990s with the work of scholars like Alfred Tomatis and Oliver Sacks. Tomatis, a French ear, nose, and throat doctor, theorised that, musical stimuli – especially Mozart's compositions – could enhance brain function and promote healing. Oliver Sacks further popularised the idea in his 2007 book, *Musicophilia: Tales of Music and the Brain*, which offered both scientific insights and compelling anecdotal evidence of music's ability to invoke profound emotional and cognitive responses.

Music and the Brain

To understand how music impacts the brain, one needs to understand the different parts of the brain which are responsible for the various functions that modulate our lives day in and day out. Each hemisphere, each part of the brain is designated to carry out diverse responsibilities. The frontal lobe used in thinking, decision making, and planning is an important space, wherein it has been seen that music can influence and improve the ability of these functions. The temporal lobe processes the information that comes in, especially those of sounds we hear. This directly impacts the emotional part of processing music. The centre that controls language further aids in music appreciation. Though ideally the understanding is that the left hemisphere handles the music part whereas the right hemisphere deals with languages, recent studies have proven that music in fact stimulates different parts of the brain. "When reviewing the literature on brain substrates of music processing, a puzzling variety of findings can be stated. The traditional view of a left-right dichotomy of brain organization—assuming that in contrast to language, music is primarily processed in the right hemisphere—was challenged 20 years ago, when the influence of music education on brain lateralization was demonstrated. Modern concepts emphasize the modular organization of music cognition. According to this viewpoint, different aspects of music are processed in different, although partly overlapping neuronal networks of both hemispheres." (Altenmüller, 2001).

The Broca's area and the Wernicke's area both serve unique purposes. The former helps in communicating and expressing, whereas the latter helps in understanding what is being spoken and communicated thus. The occipital lobe plays yet another major role in conveying visual images within the desired formats. Musicians are used to visualising music when they listen to it, unlike those who are not technically inclined to music. There is a genuine ideation of what the scale might be and the subtler technical aspects of the piece of music they listen to. This is one major difference between musicians and non-musicians. Another unique feature observed amongst musicians is muscle memory and the cerebellum is responsible for the coordination of movement, and anything related to physical memory. Instrumentalists seem to relate to this more, having played a particular piece of music repeatedly while learning the piece before performing it. Also, the cerebellum is the reason why Alzheimer's patients with no concurrent memory of people or incidents in their lives, still manages to recognise a piano piece they learnt. They may still remember it well enough to play it too while eliciting an emotional response from the same.

Music increases the release of neurotransmitters like dopamine in the centre called nucleus accumbens. This is the space in the brain which seeks pleasure and reward and plays a major role in addictive behaviour. The Amygdala is the part which processes and triggers the key emotions. So, the emotional aspects like fear, pleasure all are conducive to the functioning of the amygdala. Certain film sequences that are accompanied by background music and the way they make the listeners feel are related to these functioning parts of the brain. Hippocampus considered as the central processing unit of the brain conveys, interprets, and helps coordinate the retrieval of memories and plays a role in the transition of emotional responses. Most of the times a favourite song deeply etched in the brain is almost always connected with the memory of a particular incident or person associated with the song or the moment the song manifested in one's consciousness. "Music may increase neurogenesis in the hippocampus, allowing production of new neurons and improving memory." (Ayako Yonetani, https://www.ucf.edu/pegasus/your-brain-on-music/).

The Hypothalamus is responsible for the production of hormones that are essential in managing thirst, sleep, heart rate, and metabolism. Music has the innate ability to impact the heart rate, for example, based on the music one listens to. A composition in Behag, Shyama, Yamuna Kalyani, or even Kanada immediately relaxes you and prepares your heart to reduce increased heart rate. Music is also known to intervene well to manage and increase deeper sleep patterns in a person undergoing higher stress levels. The Corpus Callosum is yet another important sector of the brain which helps both the left and right spheres in communicating with each other. It also deals with the complex thought processes which require logical thinking and problem-solving skills.

The Putamen part of the brain is responsible for processing rhythm and coordination of movement as well. “Music can increase dopamine in this area, and music increases our response to rhythm,” Yonetani says. “By doing this, music temporarily stops the symptoms of Parkinson’s disease. Rhythmic music, for example, has been used to help Parkinson’s patients function, such as getting up and down and even walking because Parkinson’s patients need assistance in moving, and music can help them kind of like a cane.” (Ayako Yonetani, https://www.ucf.edu/pegasus/your-brain-on-music/)

“Unpleasant (permanently dissonant) music contrasted with pleasant (consonant) music showed activations of amygdala, hippocampus, parahippocampal gyrus, and temporal poles. These structures have previously been implicated in the emotional processing of stimuli with (negative) emotional valence; the present data show that a cerebral network comprising these structures can be activated during the perception of auditory (musical) information.” (Koelsch et al., 2006)

Understanding that much advanced research has been conducted evaluating and highlighting the abilities of music, should further encourage Carnatic musicians and research scholars to collaborate and work towards understanding how Carnatic music, specifically the ragas and talas, can be used to create a difference in stimulating and enhancing brain processes.

Neuroplasticity

“Neuroplasticity, also known as neural plasticity or brain plasticity, is a process that involves adaptive structural and functional changes to the brain. It is defined as the ability of the nervous system to change its activity in response to intrinsic or extrinsic stimuli by reorganizing its structure, functions, or connections after injuries, such as a stroke or traumatic brain injury (TBI). This activity describes neuroplasticity, the evaluation and management of neuroplasticity, and reviews the role of the interprofessional team in improving care for patients.” (Puderbaugh & Emmady, 2023)

The understanding of neural plasticity has contributed immensely towards understanding how music helps in the adaptation of the brain post exposure and how memories keep getting formed, updated and prioritised in our daily lives.

If we were to understand neuroplasticity thus, Carnatic music with its innate characteristic features of raga exposition, varisas, alankaras, modal shift of tonic, and rhythmic diversities can play a huge role in effectively stimulating brain processes by creating new neural networks while also observing the progress in real time through FMRI and EEG as well.

Music and Memory

Music embeds itself in our memory largely through the hippocampus, which encodes, stores, and retrieves our experiences. It converts short-term memories into long-term ones, manages spatial awareness, and regulates episodic and verbal memories. Music utilises these memory systems by linking episodic and spatial elements, ensuring that experiences –from fleeting moments to significant life events – are captured and later recalled.

Beyond its acoustic components (pitch, tempo, timbre, intensity), music triggers complex emotional responses. These arise not only from the sensory input but also from cognitive appraisal, subjective interpretation, physiological changes, and emotional regulation. Such multifaceted processing means that an individual’s response to music is uniquely shaped by personal history and cultural context. For instance, while listeners across cultures may agree that a song sounds angry or joyful, they can differ in whether they perceive that emotion as positive or negative, and in the degree of stimulation or calm it evokes (Anwar, 2013).

Moreover, music's impact reaches far beyond the auditory cortex. Research has shown that music activates several brain regions critical to memory and emotion, including the hippocampus, amygdala, and prefrontal cortex (Koelsch, 2010). This neural activation explains why familiar or emotionally charged music can vividly trigger autobiographical memories, linking past experiences with present emotions (Janata, 2009).

In summary, the brain's response to music is the result of a sophisticated interplay between structural acoustic elements and higher-order cognitive and emotional processes. The nuanced integration of these factors – underscored by studies such as those by Juslin and Laukka (2004) – illustrates how our musical experiences are deeply personal and context-dependent.

Different Types of Memory

Memory comprises several verticals, each responsible for distinct processes, and music influences various types of memory.

Autobiographical memory: Music effectively triggers recollections of personal experiences and events. Studies show that familiar tunes act as a powerful tool for recalling specific life events and the emotions tied to them (Cuddy & Duffin, 2005).

Procedural memory: This type of memory governs motor skills and actions – such as riding a bike or playing an instrument. Rhythmic exercises and musical training enhance procedural memory by establishing routines that support repetitive musical patterns. Research demonstrates that musicians who undergo extensive training in rhythm, pitch, and coordination exhibit superior procedural memory compared to non-musicians. The structured repetition in musical practice strengthens procedural memory systems, underscoring the benefits of early music training for children's cognitive development.

Semantic memory: Involving the storage of facts and general knowledge independent of personal experience, semantic memory can also be enhanced by music. Mnemonic devices such as songs for learning the alphabet or language use musical cues to improve factual retention. One study, Eskine, Katherine & Anderson, Ashanti & Sullivan, Madeline & Golob, Edward. (2018) "Effects of music listening on creative cognition and semantic memory retrieval, notes "listening to music can affect cognitive abilities and may impact creative cognition," although the exact relationship between music, mood, and semantic knowledge remains underexplored.

Working memory: Responsible for temporarily holding and manipulating information, working memory benefits from background music during cognitive tasks, if the music is not too distracting. Studies indicate that instrumental background music can enhance concentration and short-term retention, while fast, loud music may disrupt tasks like reading comprehension (Bottiroli, Sara et al. "The cognitive effects of listening to background music on older adults: processing speed improves with upbeat music, while memory seems to benefit from both upbeat and downbeat music." *Frontiers in aging neuroscience* vol. 6 284. 15 Oct. 2014, doi:10.3389/fnagi.2014.00284).

These insights, alongside structured musical practices found in Carnatic music, open avenues for research on enhancing memory through musical interventions. These compelling findings underscore music's multifaceted role in memory enhancement across various cognitive domains.

Considering the different studies conducted with effects of musical application being relevantly singled out, it also paves the way to approach the utilisation of Carnatic music in an effective way for enhancing memory. Basic structural exercises in Carnatic music, its different combinations of svara phrases, and the extensive application of raga and tala varieties across a spectrum of compositions all are already attuned to such research possibilities.

Music and Memory Enhancement Music therapy has proven effective for cognitive impairments, notably in Alzheimer's disease and other dementias. Studies indicate that even when verbal communication deteriorates, familiar songs can trigger emotional responses and memory recall – improving quality of life despite hippocampal damage (Sacks, 2007). In rehabilitation following brain injuries or strokes, music helps rebuild cognitive functions such as memory, speech, and motor coordination. Rhythm-based techniques like rhythmic auditory stimulation tap into the brain's neural plasticity to aid recovery (Thaut, Michael H et al. "Neurobiological foundations of neurologic music therapy: rhythmic entrainment and the motor system." *Frontiers in psychology* vol. 5 1185. 18 Feb. 2015, doi:10.3389/fpsyg.2014.01185).

Beyond clinical settings, music enhances everyday learning. Research shows that instrumental music, when used during study sessions, can improve the acquisition and retention of information, helping students perform better compared to studying in silence (The *PLOS ONE* Staff (2014) Correction: The Musicality of Non-Musicians: An Index for Assessing Musical Sophistication in the General Population. PLoS ONE 9(6): e101091. https://doi.org/10.1371/journal.pone.0101091). Music's effectiveness as a mnemonic device is evident in common memory aids like the 'ABC song' or tunes for mathematical formulas. Additionally, traditions in Indian classical music – through mnemonic phrases, note permutations, and structured exercises (abhyasa gana) – suggest further potential, though research in this area remains limited.

Moreover, music promotes creativity and problem-solving by inducing a relaxed, focused state, which in turn supports memory retrieval and task performance (Levitin, 2006). In daily life, specific songs can evoke powerful autobiographical memories, serving as emotional cues for significant events or periods in one's life. This characteristic underline music's value both as a personal memory aid and a therapeutic tool.

In therapeutic contexts, music is increasingly incorporated into cognitive rehabilitation programmes aimed at restoring lost functions across a variety of conditions – from developmental disabilities to traumatic brain injuries. Furthermore, evidence suggests that listening to music during or after learning tasks can facilitate the consolidation of new memories during sleep (Hanna-Pladdy & Mackay, 2011), highlighting its potential to boost both short-term and long-term memory retention.

Overall, whether used as a clinical intervention or a daily cognitive enhancer, music offers a multifaceted approach to improving memory, emotional well-being, and overall cognitive function.

Conclusion

The transactional nature between music and memory is intriguing and multifaceted, extending from its therapeutic potential in treating cognitive impairments to the use of the same in enhancing everyday learning and memory processes. Music's ability to evoke emotions, stimulate and redefine neural networks, and reinforce memory retention makes it a powerful tool for both cognitive enhancement and emotional well-being.

As research studies continue to uncover the intricacies of how music affects the brain and memory, a deeper understanding of neuromusicology will likely reveal more widespread applications of music in clinicalsettings, education, and everyday life. From helping Alzheimer's patients recall memories to aiding students in memorising facts and improving the coginitive and memory skills, and to slowing down the ageing of the brain post middle age, all add to music's impact on memory. This is an undeniable fact and an area of research with so much potential.

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Cultural Relativism as a Paradigm of Inclusivity: The Perspective of Franz Boas

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Abstract

This article delves into Franz Boas's perspective on cultural relativism, framing it as a paradigm of inclusivity. As a foundational principle in anthropology, cultural relativism, as developed by Boas, emphasises understanding cultures within their own contexts, free from ethnocentric biases. This approach fosters inclusivity by validating diverse cultural practices and beliefs, challenging dominant narratives, and promoting a more respectful and open-minded worldview. The article examines Boas's rigorous methodology, which includes extensive fieldwork and empirical data collection, and how it underpins his advocacy for cultural relativism. Through case studies of Boas's work among indigenous communities, the article illustrates the practical applications and implications of his theories. Additionally, it addresses the challenges and criticisms of cultural relativism, particularly the balance between cultural understanding and the protection of human rights. By exploring Boas's contributions, the article highlights the enduring relevance of cultural relativism in promoting inclusivity and social justice in contemporary anthropology and beyond. The discussion underscores the transformative potential of embracing cultural diversity as a means to foster a more equitable and empathetic global society.

Keywords: cultural relativism, inclusivity, ethnocentrism, anthropology, Sapir-Whorf hypothesis, enthnography, ethnology, moral relativism, moral subjectivism

Introduction

Inclusivity is the practice or policy of providing equal access to opportunities and resources for people who might otherwise be excluded or marginalised, such as those having physical or intellectual disabilities or belonging to other minority groups. Inclusion is the culture in which a mix of people can collaborate, feel comfortable and confident to be themselves, and work in a way that suits them and delivers business or service needs, ultimately resulting in progress. Inclusion will ensure that everyone feels valued and importantly, adds value. Any deliberation on the philosophical significance of inclusivity and the repercussions of exclusivity would bring into the picture the paradigm of cultural relativism articulated by the celebrated anthropologist-philosopher Franz Boas.

Cultural Relativism

Cultural relativism propounds the view that all cultures were essentially equal and that cultures cannot be objectively evaluated as higher or lower, better or worse, right or wrong, and each culture has to be understood in its own terms, within its own framework (Union of International Associations, 2017). Comparing and judging the tenets of different cultures using objective measuring rods taken from any one culture would be tantamount to comparing two incomparable entities like apples and oranges. They are different and their value is never diminished on account of the differences between them. The worth of a tenet of culture is to be evaluated intrinsically. It is only when the worth of an aspect of culture is evaluated intrinsically, within its own framework and defining criteria, that it can be truly appreciated. From this perspective is born an egalitarian approach that is inclusive and can accommodate the diversities of cultures in its bosom in a spirit of camaraderie.

Methodology

This article employs a historical and analytical approach to examine Franz Boas's contributions to cultural relativism. By analysing primary and secondary sources, including Boas's writings and scholarly interpretations of his work, the study aims to elucidate the core principles of Boas's perspective on cultural relativism and its relevance to inclusivity. The study also incorporates ethnographic case studies to illustrate the practical application of Boas's ideas.

Ethnocentrism Versus Cultural Relativism

Ethnocentrism refers to the practice of applying one's own culture or ethnicity as a frame of reference to judge other cultures, practices, behaviours, beliefs, and people, instead of using the standards of the particular culture involved. This involves evaluation of other cultures according to preconceptions originating in the standards and customs of one's own culture (McCornack & Ortiz, 2017, p. 109). For example, people in some countries regard consuming dried squid or fried crickets as 'weird' and 'gross' and pronounce judgements like "dried squid is smelly" or "people shouldn't eat insects". This is typical of an ethnocentric perspective where we use our culture as the centre and evaluate other cultures based on it. The cultural relativist perspective demands that instead of thinking, "fried crickets are disgusting!" one should instead ask, "why do some cultures eat fried insects?" One may learn that fried crickets or grasshoppers are rich in protein and in Mexico, they are part of famous Oaxaca regional cuisine and have been eaten for thousands of years as a healthy food source!

Franz Boas and Cultural Relativism

Franz Boas, often referred to as the "father of American anthropology", revolutionised the field with his concept of cultural relativism. He was born in 1858 in Minden, Germany. His early interest in natural sciences and geography, combined with his experiences studying indigenous cultures during his fieldwork in Canada, profoundly influenced his anthropological outlook. Boas's observations of the Inuit and other indigenous groups led him to question prevailing ethnocentric attitudes and the simplistic categorisation of cultures as 'primitive' or 'civilised'. Boas's seminal works, such as *The Mind of Primitive Man* (1911) and *Race, Language, and Culture* (1940), laid the groundwork for cultural relativism. In these works, Boas argued against the biological determinism of race and advocated for a holistic approach to studying cultures, considering the interplay of historical, environmental, and social factors.

Boas argued that cultures should be studied within their own contexts, without imposing external standards. This approach fosters inclusivity by recognising the validity of diverse cultural practices and beliefs. The perspective of cultural relativism was established as axiomatic in anthropological research by Franz Boas in the first decades of the twentieth century and was later taken up and popularised by his students. Boas believed that the sweep of cultures, to be found in connection with any subspecies, is so vast and pervasive that there cannot be a relationship between culture and race. Franz Boas was trained in physics and geography and was heavily influenced by Immanuel Kant, Johann Gottfried Herder, and Alexander von Humboldt. Boas pointed out the possibility of one's culture mediating and limiting one's perspective in subtle ways that are not obvious. To fully comprehend this phenomenon, Boas gave a very broad definition to culture that included not only certain tastes in food, art, and music, or beliefs about religion, but permeated much deeper.

Challenges Thrown Open by Boaz

In *The Mind of Primitive Man*, Boas defined culture as

"the totality of the mental and physical reactions and activities that characterize the behaviour of the individuals composing a social group collectively and individually in relation to their natural environment, to other groups, to members of the group itself, and of each individual to himself." (Boas, 1911/1963, p. 149)

This definition of culture placed before the anthropologists two significant challenges: How can one escape the unconscious bonds of one's own culture, which inevitably bias our perceptions of and reactions to the world? How to make sense of an unfamiliar culture?

The ideas articulated by cultural relativism were instrumental in the development of innovative methods and heuristic strategies by anthropologists. The period between the First World War and the Second World War saw the employment of the tenets of cultural relativism by the American anthropologists in their rejection of western claims to universality and the salvage of non-western cultures. Boas's epistemology was thus transformed into methodological lessons. The use of cultural relativism as a methodological tool was most evident in the way it approached language. Beyond the obvious function of language as a means of communication, Boas saw language as a means of categorising experiences. The existence of different languages suggests that people categorise, and thus experience, language differently. The hypothesis of linguistic relativity, also known as the Sapir–Whorf hypothesis, the Whorf hypothesis, or Whorfianism, is a principle suggesting that the structure of a language affects its speakers' worldview or cognition, and thus people's perceptions are relative to their spoken language.

Boas's student Melville Herskovits summed up the principle of cultural relativism thus: "Judgements are based on experience, and experience is interpreted by each individual in terms of his own enculturation" (Herskovits, 1972, p. 15.). Boas pointed out that all scientists belonging to any stream whatsoever were people born in and groomed in a particular culture whose impact is inescapable. This naturally brought them within the clutches of ethnocentrism.

So, is there a way to escape the stranglehold of ethnocentrism? Profound study and reflection helped Boas to arrive at the conclusion that if genuine scientific research were to be conducted in cultures alien to one's own, then it would demand an escape from the framework of ethnocentrism and for this he suggested the method of ethnography. Ethnography suggests that cultural scientists ought to live with people of the culture that they attempt to study, for a prolonged period of time that enabled them to understand and assimilate the tenets and nuances of that culture, including their language, resulting in being enculturated, at least partially, into that culture. Ethnography as a methodological tool emphasises the importance of the 'local context' in understanding the meaning of particular human beliefs and activities.

A classical illustration of ethnography was depicted by Boas (1889) in his article 'On Alternating Sounds'. A number of linguists at Boas's time had observed that speakers of some native-American languages pronounced the same word with different sounds indiscriminately. They thought that this meant that the languages were unorganised and lacked strict rules for pronunciation, and they took it as evidence that the languages were more primitive than their own. Boas, however, noted that the variant pronunciations were not an effect of lack of organisation of sound patterns, but an effect of the fact that these languages organised sounds differently from the English language. The languages grouped sounds that were considered distinct in English into a single sound, but also having contrasts that did not exist in English. He then argued the case that native Americans had been pronouncing the word in question the same way, consistently, and the variation was only perceived by someone whose own language distinguishes those two sounds.

Boas's student, the linguist Edward Sapir, later noted also that English speakers pronounce sounds differently even when they think they are pronouncing the same sound. For example, few English speakers realise that the sounds written with the letter ⟨t⟩ in the words tick and stick are phonetically different, the first being generally aspirated and the other unaspirated; a speaker of a language where this contrast is meaningful would instantly perceive them as different sounds and tend not to see them as different realisations of a single phoneme.

Case Studies

The Inuit

Boas's research among the Inuit in Baffin Island is a prime example of cultural relativism in practice. By immersing himself in their daily life and learning their language, Boas gained a deep understanding of their culture. His ethnographic work revealed the complexity and adaptability of Inuit social structures, challenging stereotypes of 'primitive' cultures.

Illustration: Boas's detailed descriptions of Inuit kinship systems and subsistence practices provided valuable insights into their social organisation and environmental adaptation. His work demonstrated the importance of understanding cultural practices within their specific contexts.

Northwest Coast tribes

Boas's studies of the Northwest Coast tribes, including the Kwakwaka'wakw and Tlingit, further illustrated the application of cultural relativism. He documented their elaborate potlatch ceremonies, artistic traditions, and social hierarchies, emphasising the need to understand these practices within their cultural framework.

Illustration: The potlatch, a ceremonial feast involving the redistribution of wealth, was often misunderstood by outsiders as wasteful or irrational. Boas's ethnographic research revealed its significance as a social and economic institution that reinforced social bonds and status within the community.

Ethnology: A Heuristic Tool

An important heuristic tool suggested by cultural relativism is ethnology that boils down to comparing and contrasting as wide a range of cultures as possible, in a systematic and even-handed manner. The context for the emergence of ethnology as a heuristic tool was in response to studies of material artifacts in museums. Curators of museums assumed that similar causes produce similar effects; therefore, in order to understand the causes of human action, they grouped similar artifacts together—regardless of provenance. Their aim was to classify artifacts, like biological organisms, according to families, genera, and species. Thus, organised museum displays would illustrate the evolution of civilisation from its crudest to its most refined forms. Boas argued that although similar causes produce similar effects, different causes may also produce similar effects. Consequently, similar artifacts found in distinct and distant places may be the products of distinct causes. Against the popular method of drawing analogies in order to reach generalisations, Boas argued in favour of an inductive method. Based on his critique of contemporary museum displays, Boas concluded:

"It is my opinion that the main object of ethnological collections should be the dissemination of the fact that civilization is not something absolute, but that it is relative, and that our ideas and conceptions are true only so far as our civilization goes." (Boas, 1974, p. 62)

Ruth Benedict, another of Boas's students, also argued that an appreciation of the importance of culture and the problem of ethnocentrism demands that the scientist adopt cultural relativism as a method. In her celebrated work *Patterns of Culture* (1934) she has clarified that she was not romanticising so-called primitive societies; she was emphasising that any understanding of the totality of humanity must be based on as wide and varied a sample of individual cultures as possible. It is only by appreciating a culture that is profoundly different from our own, that we can realise the extent to which our own beliefs and activities are culture-bound, rather than natural or universal. In this context, cultural relativism is a heuristic

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device of fundamental importance because it calls attention to the importance of variation in any sample that is used to derive generalisations about humanity (Benedict, 1934, p. 3).

The Critical Function of Cultural Relativism

Philosopher John Cook in his ‘Cultural Relativism as an Ethnocentric Notion’ published in the book *The Philosophy of Society*, observed:

“It is aimed at getting people to admit that although it may seem to them that their moral principles are self-evidently true, and hence seem to be grounds for passing judgement on other peoples, in fact, the self-evidence of these principles is a kind of illusion.” (Cook, 1978)

Cultural relativism thus offers the best wake-up call to a researcher to never take the tenets of one’s culture as self-evident and thereby true and consequently pass judgements on other cultures with ethnocentric prejudices.

Cultural Relativism and Moral Relativism: Convergence and Divergence

The difference between cultural relativism and moral relativism is subtle but real and it is therefore improper to treat the two as synonymous. Cultural relativism is the awareness that people behave according to their own culture and judgements should be made based on their respective culture. On the other hand, moral relativism refers to the fact that the morality of an individual action is also relative based on the cultural, religious, and philosophical standing of a context or community. Moral relativism posits that moral judgements are based on the context with emphasis on religion, culture, and even philosophy. Most importantly, moral relativism stresses that there is no such thing as universal morality. This denial of universality allows researchers to seek the unique function of each moral belief. Sometimes, within the same context, the moral judgements of one time period may be considered as immoral in another. For example, in Sri Lanka, a few decades ago, polygamy was in practice. The reason for this practice was that the land would not go out of the family. However, currently, polygamy is looked upon as immoral and monogamy is accepted and considered as moral. Cultural relativism is the awareness that people behave according to their own culture, and the judgements should be made based on their respective culture. Moral relativism refers to the fact that the morality of an individual action is also relative to the cultural, religious, and philosophical standing of a community. In both cases, universality is rejected.

Cultural Relativism and Its Ethical Repercussions

Cultural relativism involves specific epistemological and methodological claims, but whether or not these claims necessitate a specific ethical stance is a matter of debate. However, the significance of the ethical stand suggested by cultural relativism cannot be overlooked as can be discerned from the popularity and acceptability that it received in the post-Second World War scenario, as a reaction to the exclusionist and chauvinistic ideologies like Nazism, colonialism, ethnocentrism, and racism and the disgrace and violence that these brought upon the world. The greatest ethical advantage of cultural relativism is that it is accommodative of natural differences and non-judgemental in its standpoint. It opens up a paradigm of inclusivity. Inclusivity is the fertile ground for cooperation, mutual understanding, and progress, as it is based on the ideals of love and resultantly of peace. The cultural relativist framework weeds out feelings of distrust and pride and thereby hierarchy and hatred. When cultural relativism sinks into our psyche, we progress from mutual tolerance to mutual acceptance.

Criticisms

One major critique of cultural relativism is its potential to overlook human rights violations. By asserting that all cultural practices are valid within their context, cultural relativism can inadvertently excuse practices that contravene internationally recognised human rights. For instance, harmful practices such as female genital mutilation (FGM), child marriage, and various forms of discrimination and violence against women and minorities are often defended under the guise of cultural preservation (Abu-Lughod, 2013).

The emphasis on preserving cultural practices can sometimes impede the enforcement of international human rights norms. When cultural traditions clash with global human rights standards, cultural relativism can be used to resist the adoption of protective measures for vulnerable populations. This tension highlights the difficulty in balancing respect for cultural diversity with the imperative to protect fundamental human rights (Merry, 2006).

While cultural relativism encourages respect for cultural diversity, it must be balanced with a commitment to upholding basic human rights. Achieving this balance involves engaging with local communities to find culturally sensitive solutions that do not compromise the dignity and rights of individuals. This approach allows for the protection of human rights while acknowledging and respecting cultural differences (Engle, 2001).

The anthropologist Julian Steward and some of his followers have argued that any attempt to apply the principle of cultural relativism to moral problems would only end in contradiction: either a principle that seems to stand for tolerance ends up being used to excuse intolerance, or the principle of tolerance is revealed to be utterly intolerant of any society that seems to lack the (arguably, Western) value of tolerance (Steward, 1948). They concluded that anthropologists must stick to science and engage in debates over values only as individuals (Barnett, 1948).

Political scientist Alison Dundes Renteln has argued that most debates over moral relativism misunderstand the importance of cultural relativism (Renteln, 1988). Renteln faults philosophers for disregarding the heuristic and critical functions of cultural relativism. Her main argument is that in order to understand the principle of cultural relativism, one must recognise the extent to which it is based on enculturation: the idea that people unconsciously acquire the categories and standards of their culture. This observation, which echoes the arguments about culture that originally led Boas to develop the principle, suggests that the use of cultural relativism in debates of rights and morals is not substantive but procedural. That is, it does not require a relativist to sacrifice his or her values. But it does require anyone engaged in a consideration of rights and morals to reflect on how their own enculturation has shaped their views. Renteln (1990) thus bridges the gap between the anthropologist as scientist and as private individual (who has every right to make value judgements). The individual keeps this right, but the scientist requires that the individual acknowledge that these judgements are neither self-evident universals, nor entirely personal, but rather took form in relation to the individual's own culture.

Conclusion

We live in a world full of diversity. There are very little universal, overriding values and norms, which are applicable to all human beings. This is because people belong to different nations, cultures, religions, and even ethnic groups. In such a context, tolerance of the other is vital. Franz Boas's perspective on cultural relativism offers a powerful framework for promoting inclusivity and understanding cultural diversity. By valuing each culture on its own terms, Boas's methodology encourages a more respectful and empathetic approach to studying human societies. Boas emphasised the importance of conducting thorough empirical research. He believed that anthropologists should immerse themselves in the cultures they study, often advocating for participant observation. This approach allowed anthropologists to gain a deeper, more nuanced understanding of cultural practices from the perspective of the people within that culture. Boas's insistence on this method helped move anthropology towards a more rigorous and scientific discipline. One of Boas's key contributions was the concept of historical particularism. He argued that each culture has its own unique history that shapes its development. Boas opposed the then-dominant evolutionary theories that placed cultures on a hierarchical scale of progress. Instead, he emphasised that cultures should be understood within their own historical and environmental contexts. This perspective helped dismantle ethnocentric biases and promoted a more objective study of cultures.

While challenges and ethical dilemmas remain, the principles of cultural relativism continue to inspire anthropologists and promote more inclusive and ethical research practices. Cultural relativism affirms diversity in people and treats this diversity as irreducible. It creates a perspective that is non-judgmental and accommodative of natural differences. Cultural relativism is not a mere theory of anthropology but an entire paradigm of thought. It ushers in a genuine urge to understand and appreciate the tenets of other cultures in an atmosphere that is consciously freed of ethnocentric biases. The world that we confront today poses serious challenges to love and peace and paradigms like cultural relativism are the rays of hope for bringing in lasting peace through mutual cooperation brought in by mutual respect.

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Wilfrid Sellars's Refutation of *The Given* as a Myth and Linguistic Foundations of Cognition

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"The limits of my language mean the

limits of my world." – Ludwig Wittgenstein

Abstract

The article critically examines Wilfrid Sellars's critique of the empiricist belief that pre-conceptual experience forms the basis for conceptual knowledge. Sellars questions the traditional assumption that language and knowledge of the world are based on immediate sensory experiences. He argues that knowledge is a network of beliefs based on relationships rather than fundamental 'givens'. The article highlights Sellars's critique of the 'given' and offers a more intelligible account of the interdependence of thought, language, and social practices in producing knowledge. However, towards the end, the article evolves as a critique of Sellars's position.

Keywords: Epistemology, Sense data, Representationalism, Foundationalism, Linguistic practices.

Introduction

American philosopher Wilfrid Sellars is well known for his seminal work *Empiricism and the Philosophy of Mind*, which was published in 1956. In his essay, he questions the empiricist idea that sense data or firsthand experience may provide an immediate and fundamental understanding of the world. One of his most well-known concepts is the critique of the 'Myth of the Given'. He argued that our conceptual framework and language have a significant influence on how we perceive the world rather than being solely dependent on sensory data. His contributions set the stage for eventual advancements in epistemology and the philosophy of mind. Sellars focused on the interaction between sensory input and conceptual comprehension, challenging the notion of foundational sense data. His ideas marked a shift away from foundationalism and towards an analysis of how human thoughts and reasoning combine with empirical data to create a coherent and well-supported worldview.

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Epistemology from Descartes to Kant: An Overview

To place Sellars in this context, it is crucial to look at the epistemological debates of the 17th century. During this time, philosophy saw a dramatic change as thinkers like Descartes, Locke, and Kant searched for the basis of knowledge. Descartes, Locke, and Kant were among the philosophers who influenced philosophy's emphasis on representationalism and foundationalism, which highlighted the mind's role in knowledge acquisition.

Locke and other 17th-century epistemologists did not view knowledge as justified true belief, as they did not see it as a relation between a person and a proposition. Instead, they viewed knowledge as a relation between persons and objects rather than persons and propositions. Locke's idea was to study how our minds worked and how we could better understand what we know (Jolley, 1999). He believed that the mind, as conceptualised by Descartes, should be the subject of science based on Newtonian physics, explaining how ideas and representations from objects yield knowledge and determining the limits of human knowledge. According to Locke, epistemologically significant action takes place at the observer's level. His concession that pre-conceptual experience is the basis for conceptual knowledge compromised his project. Locke's Cartesian notion of mind led him to interpret imprinting as a sort of understanding (Rorty, 2010).

Kant enters a philosophical world dominated by the problem of epistemology. Kant saw the shortcoming in Lockean empiricism and sought to rectify it as a model of experience essentially involving both passive receptivity and active thought. Locke himself had recognised the need for the mind to play an active role in combining and comparing ideas, but given his entirely sensory conception of ideas, there was no way to introduce the logical structure required for thought. According to Kant, the above problem arises because empiricism overlooks a level of mental activity that must take place before the empirical ordering of ideas that Locke had described. Kant's account of cognition involves two irreducibly different sorts of representations, intuitions, and concepts: passively received intuitions are representations relating to single objects, and actively applied concepts are universal representations relating to any number of objects. These two sorts of representations are brought together in an act of unification, which Kant called 'synthesis', and it is the act of synthesising intuitions and concepts into a unity that constitutes a judgement (Guyer, 1987).

Kant saw his predecessors as either empiricists, who tried to reduce concepts (generalised ideas) to intuitions (immediate sense impressions), or rationalists, who tried to reduce intuitions to concepts. Both, he maintained, failed to realise that an experience of an object requires both conceptual and intuitive elements, the conceptual providing the framework of intelligibility without which the object could not be presented and the intuitive providing the content without which the framework would be merely an empty scheme (Guyer, 1987). The answer to the defining question of epistemology – how can our representations accurately represent objects? – was that the very meaning of 'objects' requires that an object be properly co-related with the mind's rules for forming representations of it.

Kant holds that ideas, perceptions, and experiences are not pictures of independently present things. They are logical judgements and propositional components of the theory through which we understand and become conscious of what we know. These assumptions acquire significance from their place in theory and are justified as knowledge by their logical coherence (Allison, 1983).

Thus, Kant is the first philosopher to think of the foundations of knowledge as propositions rather than objects. Kant, however, confused justification with the causal explanation. By characterising a mental state as knowledge due to its cause (transcendental conditions) rather than the arguments that can be made for it, Kant continues to be trapped in the presumptions of the epistemological or cognitive notion of knowing. Therefore, Kant only made partial progress towards a conception that is not based on perception, even if he advocated knowledge as propositions.

Descartes, Locke, and Kant addressed the structure and source of knowledge, but they went wrong by tying epistemology to empirical evidence, logical concepts, or a combination of the two. Considering this, it is important to consider Sellars's pivotal decision to reject the epistemology-centred philosophy.

From Sense Data to Concepts: Analysing the Fallacy of *the Given*

Sellars's 'Myth of the Given' mostly discusses empiricism and the Philosophy of mind. He questions the empiricist thesis that pre-conceptual experience is the foundation for conceptual knowledge, which was later resurrected by the analytical school. Russell, Ayer, and Moore were among the analytical philosophers who popularised the idea that 'sense data' are mind-dependent things whose existence and characteristics are immediately known to us through perception. In his essay, Sellars questions the traditional empiricist assumption that our ability to use language and our knowledge of the world must be grounded in immediate sensory experiences, in raw feels and pre-conceptual sensations that are just 'given' during our transactions with objects. Sellars was influenced by T.H. Green's assertion that empiricists such as Locke confused causation with justification – a comparison – is the main point of his critique. According to Green, the empiricist agenda is defective because it is impossible to have basic sensory experiences without relational judgements. He maintained that even simple sensory judgements are implicitly relational, implying sequence and degree (Nettleship, 1906). Since empiricists hold that reality is revealed in experience, unadulterated by comprehension, this result has implications for skepticism. Green accepts this skeptical conclusion by denying the empirical knowledge of objects. Sellars goes along with Green and claims that "Sense grasps no facts, not even such simple ones as something's being red and triangular" (quoted in De Vries, 2005, p. 5). As a result, he agrees with Green's description of sensations as dumb and maintains that it is one thing to experience a red triangle, but it is another to comprehend it as such, and only the latter has epistemic significance.

Sellars's general analysis of the epistemic dilemma is that empiricism has confused two different ideas, namely, sensations as natural inner processes and the notion of sensations as instances of immediate, non-inferential knowledge. Empiricism needs both, but they conflict with each other. On the one hand, it needs the ability to feel to be an innate one – an ability we can share with pre-linguistic children and non-linguistic animals – to anchor claims to knowledge on the raw impact of the environment. But on the other hand, it needs sensations to be grasped conceptually – which Sellars thinks of as an acquired linguistic ability – for them to provide a foundation for more complex knowledge. This is because, for instance, a red experience cannot be used to infer anything, but the fact that one is experiencing a red sensation may allow one to conclude. Even though these two conditions cannot be reconciled, Sellars believes that empiricism requires sensing to be both an inborn skill and a conceptual understanding. Nevertheless, in their attempt to bring them together, empiricists were involved in a crossbreeding that produced 'mongrel' conceptions like Locke's straightforward concepts and the sense-data of logical positivism (Sellars, 1997).

Sellars may have brought new clarity to the criticism of sensory 'givens', but he was only updating an extant line of thought, one which had been common among philosophers between Green and Russell. However, Sellar's criticism was unique in both its breadth and the profound inferences he was willing to make. Sellars makes it apparent right away that he is aiming for the full framework of givenness (Sellars, 1997), which is the broad notion that some things can be taken for granted or regarded as unquestionable as a matter of principle. Therefore, although Sellars focuses on empiricist proposals, his ideas are meant to be applied to a much broader range of situations.

Knowledge as a Linguistic Practice

According to Sellars, all awareness is linguistic. To support his claim, he makes a distinction between (1) awareness as discriminative behaviour (the innate ability of sentient beings to register environmental inputs, a trait shared by humans and amoebas) and (2) awareness that entails the capacity to recognise the type of thing something is (the capacity of sentient beings to perceive something as such and such (Sellars, 1997). The first kind of awareness deals with causal interactions with the outside world, such as being impacted by pain or reacting differently to environmental stimuli. Although Sellars acknowledges the existence of such states and episodes, he maintains that they cannot contribute to the foundation of knowledge. The reason for this is that knowledge, or justified true belief, is always propositional; it is the conviction that such and such is true. Furthermore, inferences drawn from other propositions can only support a proposition. Therefore, knowledge claims can only be supported by the second kind of awareness. It is not the raw stimulus in the perceptual field that is relevant to knowledge, but the awareness that "this is red", which contributes to the formation of justified true belief.

Empiricism tried to show how all concepts arise from instances of sensory experience. Sellars, like Wittgenstein, argues that one must already possess a wide range of concepts before one can have sensory experience in the epistemically relevant sense. To be aware of something in a way that can serve as the basis for knowledge, we must know what sort of thing it is, and that means being able to experience the thing under a description – to see that it is F but not G, not H, and so on. We "have the ability to notice a sort of thing" only if we already" have the concept of that sort of thing" (Sellars, 1997, p. 87). Rather than some abstract code overlaying prelinguistic knowledge, language is how we first become conscious of things by tying them together within an intersubjective and comprehensive web of significance.

Sellars gave rise to a notion of knowing that is completely at odds with the representationalist idea. According to the representationalist conception, knowledge begins in acquaintance with our private mental states, a fact that generates the veil of perception problem. But for Sellars, by contrast, the concept of a mental state is "as intersubjective as the concept of a positron" (Sellars, 1997, p. 107). It is something we can only pick up by joining a community of language-users. Evaluation and justification based on evidence standards are part of the normative linguistic environment for discussing knowledge. According to Sellars, describing a mental state as an instance of knowledge does not entail providing an empirical description of it, as we might do when describing the size or shape of something, but rather situating it within "the logical space of reasons" (Sellars, 1997, p. 76), which is the linguistic context in which it is conceptually related to a variety of facts and states of affairs that may rationally be inferred or justified on its basis. For instance, saying "John knows it's raining" puts John in a situation where we anticipate that he will be able to support his statements with other pertinent statements. According to Sellars, having a concept entails being able to use a word, which implies that having a concept entails participating in a linguistic society where claims are justified. The ability to follow the rules that regulate a linguistic community's common space of reasons is always a prerequisite for awareness in the pertinent sense. Therefore, justification is always based on societal norms. "The essential point is that in characterizing an episode or state [of observing] as that of knowing…, we are placing something in the logical space of reasons, of justifying and being able to justify what one says" (Sellars, 1997, p. 87). Consequently, we must be content with knowledge that is founded on "what society lets us say" and abandon the impulse to bind our beliefs to a given to shield them from the whims of the social world (Sellars, 1997, p. 174).

This means giving up the traditional philosophers' job of going after objective truth which they think is certain and it is possible through representationalism. As regards representation, it is worth quoting Robert Brandom (2000) in the following passage: "Normative relations are exclusively intravocabulary..." Representation purports to be both a normative relation, supporting assessments of correctness and incorrectness, and a relation between representing within a vocabulary and represented outside of that vocabulary. Therefore, the representational model of the relation of vocabularies to their environment should be rejected. The idea here is that if we reject the 'Myth of the Given' in favour of linguistic holism, then whether something counts as correct or incorrect (i.e., how we normatively evaluate it) is determined by 'what society lets us say': it is a linguistic or 'intravocabulary' affair. Representation, on the other hand, is an 'extravocabulary' affair. It is a relation between language and the world itself and yet representations are also supposed to be evaluated as either correct (when they correspond to the world) or incorrect (when they do not). Since this correctness could not be determined by 'what society lets us say' – to determine it would require us to 'step outside our skins' – it follows that representationalism is incompatible with linguistic holism. So representationalism should be rejected along with the 'Myth of the Given'.

Conclusion

To sum up, prelinguistic 'givens' that form the foundation of all other knowledge do not exist. Sellars contends that knowledge is an ongoing, self-changing process. It is predicated on the interpretive contexts provided by language. Human intellect depends on belonging to a language group. Language alters the structure of the mind itself, making it more than merely a tool for communicating predetermined ideas. As a result, knowledge is created without any assumptions, and our experiences are conceptually mediated. Therefore, knowledge is not something that arises from sense. The application of interpretive skills, which are fostered by social contact, is how knowledge is obtained.

Thus, it is appropriate to think of knowledge as a system of inferential arguments. Knowledge is shaped via community discussions, which can cause any belief to shift. As a result, the empiricists were wrong to search for 'givens' or the unquestionable foundations of knowledge. Knowledge is a self-correcting process that is influenced by language, environment, and social behaviours. Sellars's idea of knowledge is insightful and helps us rethink our notion

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of epistemology, founded on atomistic and static ideas, to see knowledge as a flexible and dynamic undertaking.

Even though Sellars's critique of the 'Given' has its merits, it has many flaws. His rejection of the 'Given' failed to consider perception's alive and situated nature. Knowledge begins as a lived and pre-reflective encounter with the world. Meaning emerges through the dynamic interplay of perception, action, and context. Thus, one cannot reduce the experience to merely linguistic or conceptual mediation. Again, knowledge is not confined to the conceptual operations of the human subject, as Sellars proposed. It arises from the networks of interaction where non-human entities like objects, tools, and technologies play an active role in framing knowledge. Sellars failed to address the material and technological mediators that contribute to the production of knowledge by focusing only on the conceptual framework. Epistemology requires a wider understanding of how perception, embodiment, materiality, and historical context contribute to the production of knowledge.

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Disability and the Construction of Abnormality: Perspectives of Michel Foucault

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Abstract

Michel Foucault's theories of power and knowledge have had a remarkable impact and a profound influence on a wide spectrum of disciplines such as literature, psychology, politics, criminality, disability studies and so on. Disability is considered as a category that deviates from social norms. This paper explores the intersections of Foucault's notions of power, knowledge and normalization in the light of people with *disabilities. It can be argued that disability is not a mere medical condition, but a social construction shaped by numerous parameters. Disability is conceived both as a site of power relations and a means of social control. Through the creation of docile bodies, the normalization of bodies and medicalization of disability; the modern institutions exert control over disabled individuals. The paper concludes by offering possible avenues of resistance through activism and alternative ways of understanding disability which can challenge power relations, aiming to foster ways to create an inclusive and equitable society.*

Key-Words: Disciplinary power, bio-power, normalization, docile body, medical gaze, subjectification, resistance

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Statement of the Problem

Michel Foucault's notions of power highlights the ways in which modern institutions exercise control over the body through applying various forms of surveillance. However, little has been conducted on how power, knowledge and normalization relate to disability. This paper investigates how knowledge of disability through monitoring, diagnosis and treatment creates power relations that normalize certain bodies. Thereby, influencing self-awareness and social stigma of people with disabilities.

Research Objectives

i. To explore Foucault's theory of power and their role in creating disability

ii. To analyse how the disabled come to recognize and internalize their disability

iii. To access the impact of medical gaze on the construction of disability

iv. To investigate the ways in which the body is made docile

v. To examine how individuals are involved in their own subjection

vi. To understand how resistance play a significant role in emancipation

Methodology

The in-text citations and reference list are formatted as per the APA style 7th edition. The methodologies employed in this paper to address the research objectives are descriptive and critical. Descriptive methodology sets the stage for introducing the novel topic. Critical methodology involves deep thinking which is brought about by the clarification of concepts through a well-structured thought process. Meaningful conclusion is the outcome of critical thinking which is facilitated by answering the what next question.

General Introduction

The intersections of Michel Foucault's theory of power and the notion of disability offers a critical framework for understanding how disability is constructed. The society's role in constructing disability cannot be undermined as it provides platforms for defining and categorizing individuals with disabilities. Foucault's thought challenges the traditional notion that power is repressive and negative, rather power is productive and positive. Productive power decides who should be considered as normal. Power produces certain categories of individuals while marginalizing others. This paper seeks to examine the ways in which Foucault's ideas can shed light on how disability is constructed.

The Role of Power in Constructing Disability

Foucault was reluctant to define power in his early writings. In his *Subject* *and Power,* he gave a precise definition of power. "In effect, what defines a relationship of power is that it is a mode of action which does not act directly and immediately on others. Instead it acts upon their actions: an action upon an action, on existing actions or those on which may arise in the present or the future"(Foucault, 1982, p. 220). Power is not a quality possessed by an individual or a group, its presence is felt in relations. It is relations among people characterized by fragility, particularity, anonymity, flexibility, unstableness and reversibility. Power is a system, a network of relations involving the whole society, rather than a relation between the oppressed and the oppressor; individuals are not just the objects of power, but they are the locus where power and the resistance to it are exerted (Mills, 2003, p. 3).

The institutionalization of Disability through Disciplinary Power

Foucault outlined the transition from sovereign power- the direct visible control of a monarch to disciplinary power which is subtle operating through normalization, surveillance and internalization of norms. Foucault adds: "Disciplinary power defined how one may have a hold over others bodies, not only so that they may do what one wishes, but so that they may operate as one wishes, with the techniques, the speed and the efficiency that one determines. Thus discipline produces subjected and practiced bodies, docile bodies" (Foucault, 1995, p. 137).

Institutions are sites where disciplinary power operates most efficiently. Foucault in his *Madness and Civilization* traces the paths in which the mentally ill became confined in institutions. These institutions employed the method of intense surveillance and control. The goal was to help individuals, these also served to isolate and normalize them. Similarly, institutions aimed to correct the perceived abnormalities of the disabled through unnecessary interventions. The aim is not to cure or manage disability, but to enforce social norms. Surveillance is one of the most effective ways of practicing disciplinary power. Foucault's concept of the panopticon which is an architectural design where a single guard can observe all inmates without being seen is a powerful metaphor for understanding modern forms of surveillance. This mode is not limited to observation, but extends to constant monitoring, diagnosis and assessment by medical professionals and others to conform to certain ideals of normalcy.

Correlation between power and knowledge

Foucault's path breaking thought was the inseparability and intertwinement between power and knowledge. He focused on the relative nature of knowledge. He states: "If I had said, for meant, that knowledge was power, I would have said so, and, having said so, I would have had nothing more to say, since, having made them identical, I don't see why I would have taken the trouble to show the different relations between them. What I set out to show was how certain forms of power that were of the same type could give rise to bodies of knowledge that were extremely different both in their objects and in their structure" (Foucault, 1988, p. 264). Power is followed by knowledge and vice versa. All knowledge is the product of power struggles. Both are irreducible to each other and are not identical. Medical and psychological knowledge systems define and categorize disability in terms of deficiency or dysfunction. This knowledge is shaped by power relations which determine the ways the disabled are to be treated.

Normalization and the Pathologization of Disability

The society establishes norms of behaviour and ability. These norms are not written, but reinforced through societal expectations and repeated institutional practices. Foucault opines: “The judges of normality are present everywhere. We are in the society of the teacher-judge, the doctor-judge, the educator-judge, the social worker-judge; it is on them that the universal frame of the normative is based; and each individual, wherever he may find himself, subjects to his (sic) body, his gestures, his behaviour, his aptitudes, his achievements”(Foucault, 1995, p. 304). Anything that does not conform to these standards is considered deviant. Disability fails to meet the required standards of efficiency, productivity and independence. Normalization employs means of social control. To normalize the disabled body, corrective measures such as medical interventions, special education programs, institutionalization and rehabilitation are employed with the sole aim to integrate them into the mainstream society.

Bio-power and the Regulation of Bodies

Foucault introduced bio-power which is the modern incarnation of regulatory power mechanisms. He defined bio-power as: “By this I mean a number of phenomena that seem to me to be quite significant, namely, the set of mechanisms through which the basic biological features of the human species became the object of a political strategy, of a general strategy of power, or, in other words, how, starting from the eighteenth century, modern Western societies took on board the fundamental biological fact that human beings are a species. This is roughly what I have called bio-power”(Foucault, 2007, p. 1). Bio-power is the strategic relationship among human population, their body, corpus of knowledge and political power. The aim of bio-power is to improve the efficiency of life which is operated through the mechanisms of disciplinary power and norms. It stands in contrast to sovereign power which is exercised through violence or the right to kill. Bio-power operates through the management of life, health, reproduction and mortality created and maintained by institutions like schools, hospitals, prisons, factories and mental asylums. Practices like surveillance, medicalization and forms of social categorization are employed. The society or the government decides what is normal or acceptable. Foucault claims: “A power whose task is to take charge of life needs continuous regulatory and corrective mechanisms” (Foucault, 1990, p. 144). A body which is abled body, healthy and productive is historically constructed and reinforced by medical institutions, social norms and cultural traditions. Disability is a deviance from these established standards. Institutions played their role in producing knowledge about disability. Labelling someone as disabled is not a medical diagnosis, but a social title which is marginalized and devalued.

The Medical Gaze of Disability

At the heart of Foucault’s *The Birth of the Clinic* is his notion ‘medical gaze’. The medical gaze refers to the ways in which medical professionals ignore the identity of the patients, thereby reducing the body to an object to be examined and treated. This perpetuates power earning the authority to classify individuals based on their physical or mental conditions. This gaze is the contributing factor to visible truth. The clinical gaze enabled medical men to assume considerable social power in defining reality and hence in identifying deviance and social order (Turner, 1987, p. 11). Through the medical gaze, disability is seen not as a physical condition, but a site of power relations that determines how disability is treated, governed and categorized. An unhealthy relationship is created between the medical professional as the expert and the disabled individual as the object of care. A hierarchy between those considered to be normal and those deemed abnormal is established. The disabled individuals are objects to be studied and categorized, not individuals with unique experiences. The focus is shifted from person’s experiences of illness to the diagnostic categories that define and regulate them. Thus, disability becomes a medical condition that need to be controlled rather than a lived experience. The medical gaze tries to normalize disability with the sole aim to make them functional in society by restoring normalcy.

Disability and The Docile Body

Power operates through the regulations and training of bodies. Knowledge gained through the operations of power mechanisms produces docile bodies. Foucault writes: "The body is also directly involved in a political field; power relations have an immediate hold upon it; they invest it, mark it, train it, torture it, force it to carry out tasks, to perform ceremonies, to emit signs. This political investment of the body is bound up, in accordance with complex reciprocal relations, with its economic use; it is largely as a force of production that the body is invested with relations of power and domination" (Foucault, 1995, pp. 24-25). The docile body is trained and disciplined through systematic control. This body is not produced by violence or coercion, but through subtle regulatory operations like surveillance, routines and conformation to norms. The individuals internalize the norms, shaping their behaviour to conform to societal expectations. The body is continuously targeted to meet the external pressures reinforcing the social norms of ability. The disabled individual is subjected to interventions designed to bring them closer to the ideal of normality.

Disability and subjectification are closely related. Subjectification is an active process where individuals come to understand themselves and are constituted as subjects through power mechanisms. Individuals participate in their own subjection. In the case of disability, this process is facilitated through numerous factors like social and cultural norms, educational settings and medical diagnosis. Disabled persons are subjected to categories of normalization that dictate the terms of ableness through the gaze of the medical professionals, public and social workers. Disability is also subjected to the mechanisms of bio-power where the governance and regulation of the body by the modern state reinforces practices of dependency and marginalization.

Scope for Resistance

The discussion is not about the ways in which power regularizes and disciplines, but opens possibilities of resistance and the reconfiguration of subjectivity. Foucault justifies: "Where there is power, there is resistance, and yet, or rather consequently, this resistance is never in a position of exteriority in relation to power ... these points of resistance are present everywhere in the power network" (Foucault, 1990, p. 95). For the disabled, resistance can assume various forms. They can resist the imposed norms. This involves challenging the dominant narratives of ability. The disability rights movement which advocates for the rights, autonomy, accessibility, inclusion and dignity of disabled people is a form of resistance to the unwanted control that seeks to normalize disability. Modern institutions, practices and discourses that produce and enforce ableism need to be transformed. The medical knowledge that defines disability need to be critiqued and deconstructed. The attempt is to redefine disability in the phase of ability to live a full and meaningful life by dismantling the power structures that promote marginalization.

Conclusion

Foucault's explorations of disciplinary power, normalization and docile body offer critical insights into the means by which disability is socially constructed. Disability is a reflection of social practices that privilege certain individuals over others by employing the mechanism of normalization. This perpetuates inequality. The challenging task is to question these norms, create new subjectivities and celebrate differences and diversities. Foucault's ideas are a catalyst for rethinking disability and works to reinforce the new thought that disability should not be marginalized, but something that need to be recognized as an integral part of human experience hence fostering social inclusion, empowerment and equality.

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An Analysis of Eco-Philosophical Concepts in Jainism

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Abstract

Jainism shows reverence towards all life forms in nature. In Jainist perspective, each soul has an inherent value, whether mobile or immobile. Even the material formations possess a potential life force and are considered respectful. Jains are great advocators of eco-philosophic approaches. They believe an ideological change from the human side is more significant in regaining ecological harmony. Human attitudes should be enriched with compassion, love, and respect for all life forces. This article attempts to unravel the eco-philosophical aspects of Jainism, especially in the notion of the integrity of souls.

Keywords: *Jainism, eco-philosophy, Jīva, Ajīva, Mahāvratas, Anekāntavāda, Karmācakra*

Introduction

The environment is in a dangerous situation where an urgent concern is needed. Nature has already been destroyed in various ways by human overindulgence over the centuries. Humans are the only creatures on earth with unending wants and unfulfilled contentment.

Humans are considered to be the most civilised beings on earth, but for Jains, equal significance is given to all life forces. Humans do not have any extra privilege in nature. They neither are superior nor deserve any particular position. "Jainism reveres all life, irrespective of its place in the biological hierarchy" (Tatia, 2002, p. 4). Human is one among all other creatures, such as birds, insects, and plants. In Jaina's philosophy, the integrity of all souls is greatly respected.

Like every religion, Jainism works on purifying the soul by eradicating the ego. They propound a specific code of conduct that creates a friendly relationship between humans and nature. According to Jaina's philosophy, each person should be responsible towards his or her fellow beings. They believe ignorance makes humans the destroyer of nature's harmony. One who has a realisation in its pure sense cannot see anything apart in the universe. The universe is a chained, continuous whole where mutual love, dependence, and respect are indispensable.

Anthropological actions proved to be hazardous to the well-being of nature and are evoking alarming concerns about the harmony of the same. The eco-centric approach to life put forward by Jaina philosophy helps to rectify the root cause of these ecological crises, i.e., anthropocentrism, and it also provides ways to solve them. Those prone to wrongdoing are far away from emancipation or *kaivalyā*. The mind should be purified from all the karmic particles of *krōdha* (anger), *Lōbhā* (greed), and *Mōha* (delusion). A spiritually purified mind could see the inherent value in all souls. It is the key to ecological harmony.

The categories of Jainism, *jīva and ajīva,* hold solid eco-philosophical foundations. Jains believe that there is life even in atomic forms. Earth, water, fire, and air are categorised under ajīva. However, it possesses some kinds of potential life forces. Even a rock can evolve into a living being, but its consciousness is dormant. Every material formation has a latent potential life force; hence, it has to be protected.

Both Jainism and Eco philosophies aim to promote an ideological change, which aids in cultivating a mindset without greed that could bring positive changes in nature. Everyone should understand the integrity of all life forms with a mind enriched with love, kindness, compassion, and respect. This article intends to find the eco-philosophical notions in Jainism and their relevance to the current scenario.

Methodology

The methodology employed in this article is mainly analytical. It also involves descriptive and critical methods.

Eco-Philosophy and Eco-philosophical Concepts in Jainism

Arne Naess, the propagator of eco-philosophy, begins his notion by asserting the point of self-realisation. He states, "Nothing exists apart, Neither a person, nor a species, nor an environmental problem" (Naess, 1989, p. 6). Eco philosophy propagates the idea of mutual dependence, respect, love, and empathy towards all life. One cannot sustain without the other. The universe is an interlinked chained continuum. The pond, rain, fire, sand, plants, and bacteria belong to that continuous everlasting chain.

Eco philosophy is the way to ecological wisdom. It is a comprehensive study examining the real root of the crises. It is a philosophical approach where the role of the human psyche in environmental issues is greatly emphasised. According to Eco-philosophy, more than any technological quick-fix solution, a change in the human mind is necessary in the present scenario.

"Humankind is the first species on earth with the intellectual capacity to limit its numbers consciously and live in an enduring, dynamic equilibrium with other forms of life. Human beings can perceive and care for the diversity of their surroundings" (Naess, 1989, p. 23). Being rational beings, humans have a high responsibility towards nature. They can protect and preserve nature's sustainability through self-discipline, love, and kindness. The foundational principles of deep ecology propagated by Arne Naess and George Sessions resonate with the core principles of Jainism.

Human interference in the world has already exceeded the limit. The ideological change from the human side is significant. Humans should appreciate the quality of life by realising the inherent value of non-human beings rather than concentrating on the high standard of living. Every being has an inherent value independent of human usefulness. Humans do not have any right to destroy the diversity and richness of nature, but they are obliged to protect nature (Naess & Sessions, 1986).

Jaina's classification of categories and great vows also discusses the worth of the non-human world. For them, every soul has worth in itself and deserves consideration from our side. The metaphysical theory of *anekāntavāda* seeks the environment's welfare by promoting the large diversity of nature. Jainism also believes human has some obligation towards their surroundings, which can be fulfilled by self-discipline. Human should train their mind with love, kindness, and compassion.

Integrity of Souls in Jaina Categories

Jainism divides the whole world into two coexistent categories: Jīva and Ajīva. The life force in each living form is called jīva. For Jainism, the world is the whole of jīvas. *Tattvartha-sūtra* states that eighty-four lakh species exist (Umasvati, 1990). The very essence of jīva is consciousness and energy. All souls are considered to be qualitatively alike. Jainism believes that all these physical realities of the earth possess souls and vary only on the degrees of consciousness. Hence, for Jainism, the raindrops and sand particles have souls in them, but they are bound by karma and, therefore, are inactive.

Jīva has been classified into two, *muktā* and *baddha*. Muktā is the liberated who have purified their soul. No karmic bondage will be left in them, and those souls is considered to be free and blissful. Baddha means the bound souls and is again categorised into *trāsa* and *sthāvara.* The mobile souls, like animals, birds, and insects, come under the trāsa. At the same time, sthāvara includes immobile souls of trees, plants, material atoms of earth, water, fire, and air.

In the category of trāsa, souls are again divided according to their senses. The two senses include worms. Ants are an example of three senses souls. Wasps and bees have four senses, whereas men and other animals are categorised as beings with five senses. All these categorisations are based on the spiritual development of the beings.

The general classification of things as living and non-living is based on the parameters of mobility, growth, reproduction, and response to stimuli, but for Jainism, it is nothing but consciousness. A liberated person has a higher consciousness, whereas the consciousness of a rock is latent. This is what makes a difference in the biological order, but the value of each soul is the same.

In Christopher Key Chapple's opinion, Jainism cannot be separated from the view that the whole world can feel our presence. According to him,

Not only do animals possess cognitive faculties including memories and emotions, the very world that surrounds us can feel our presence. From the water we drink to the air we inhale, to the chair that supports us, to the light that illumines our studies, all these entities feel us through the sense of touch, though we might often take for granted their caress and support and sustenance (Chapple, 2002, p.130).

The non-human world surrounding us deserves respect from human beings. Every person is responsible for cultivating an accommodative attitude towards all beings in nature. Jainism believes that following an ethical code of conduct could lead to true environmental awareness.

Vows of Jainism for Ecological Harmony

According to Jainism, one should be very careful about one's actions. Non-harming, in its complete sense, is impractical while living; humans commit violence even if they are drinking and breathing; it is unavoidable, though the harm caused to other beings can be reduced. Mahavira says, "If you are aware of all your actions and are careful about what you do in relation to other living beings, you will develop spirituality and be in perfect harmony with the natural world" (Shilapi, 2002, p. 161). Humans are responsible for cultivating ethical conduct to protect and respect the various life forms in the universe.

Jainism proclaims five great vows (*Pañca Mahāvratāḥ*) for spiritual purification. *Ahiṃsā, sātyā, aṣṭeya, aparigrahāḥ,* and *brahmacaryā*. All these vows depict the environmental concerns of Jainism in a wide range. Mahāvīra says, "No being in the world is to be harmed by a spiritually inclined Person, whether knowingly or unknowingly, for all beings' desire to live and no being wishes to die. A true Jain, therefore, consciously refrains from harming any being, however small" (Jaini, 2002, p. 142). Every soul has the right to live. No one is privileged to interfere or harm the lives of others.

The *Ācāraṅgasūtra* emphasises that bondage and emancipation are there in the same person; the killer and the killed are the same. Ignorance makes humans a sinner, and knowledge makes them liberated (as cited in Tatia, 2002). A liberated one will be capable of seeing intrinsic value in each life. Each individual should work for a pure realisation. This is what both Jainism and eco-philosophy aim for.

Every individual should be truthful towards themselves and to other beings. No wrongdoings are allowed under the Jain code of conduct. Those who act against the vow of sātyā emancipation will not be possible. Being truthful towards others is also a part of respecting the value of the other.

Aṣṭeya, or non-stealing, has more significance in the present scenario. Humans exploit all the natural resources to satisfy their desires. Every resource in the nature is meant for all the creatures. Humans are not privileged to overconsume those. So, one has to consume what is given to one. Overconsumption is similar to stealing. When people stop their greed and minimise consumption, most environmental problems like resource depletion, deforestation, and pollution will be reduced. Then there will be hope for the restoration of nature's balance.

The fourth vow of Jainism is aparigrahā or non-possessiveness. Humans should develop an attitude of detachment from worldly cravings, which is essential for spiritual purification. Aparigrahā aims to provide a minimalistic living. Every person should live according to their needs, not based on wants, because the wants are always unending. Natural resources should be utilised with care because they are limited. Aparigrahā helps to develop an attitude of non-attachment and consideration. Humans become considerate towards their fellow beings and future generations.

Brahmacaryā, the fifth vow, makes humans self-disciplined. Controlling the mind from passions and desires is very significant for self-realisation. In the vow of brahmacaryā, individuals learn to suppress worldly pleasures, which will help maintain ecological minimalism and resource conservation.

All these five vows depict the core principles of eco-philosophy. They are very substantial for environmental sustainability. It helps to reduce resource depletion and improve ecosystem preservation. It paves the way toward ecological wisdom.

Anekāntavāda

Ideological dogmatism creates a superior ego in humans, and they consider themselves the masters of the whole ecosystem. It makes them approach nature with greed, anger, and aversion. Anekāntavāda helps to eradicate absolutism from minds and create tolerance and empathy towards other beings.

According to anekāntavāda*,* reality is multi-faceted. Everything has multiple aspects; one who sees only one aspect is ignorant. One should learn to see nature and the beings with a mind of tolerance and acceptance. Every being has the right to live. Humans should understand nature from a broader perspective, and moving from an anthropocentric view to eco-centrism is essential. Anekāntavāda can act as a great tool to avoid humankind's self-serving nature and create a peaceful bond with our ecosystem.

Karmācakra and Ecological Crises

Jainism concentrates on the purification of the soul by removing karmic bondage. Only a human life that is lived according to the spiritual vows of Jainism could attain enlightenment. Individuals can do a lot for the good of their surroundings. Lack of awareness of them creates problems in nature. If people are not ethically guiding their lives, their minds will be polluted with avarice. All ecological issues are deeply associated with the human mind. Jainism, being a religion, conceives ecological problems as spiritual problems.

According to Jainism, all the effects on nature are due to the Karmācakra (cause-effect cycle). Wrong deed creates wrong effects, and good deeds result in fruitful effects. Bad experiences occur due to the Karmic particles present in the human soul. The bondage is removed in four stages: *Āsrava, bandha, saṃvara, and nirjarā.* Whenever a human mind is cluttered with desires and passions, the Karmic flow (āsrava) occurs. Āsrava can be considered as the first cause of issues. The karmic particles pollute the human soul, and they sin. The state of binding of karmic particles into the soul is called bandha. Āsrava can be controlled by the Triratnas of Jainism, i.e., right faith, knowledge, and conduct. The stoppage of a new karmic particle entering the soul is saṃvara. Then, the gradual exhaustion of already existing karma is called nirjarā. It is the stage that leads man into liberation. Liberation makes one's mind pure; A pure mind never does any harmful deeds towards the ecosystem.

Conclusion

The environmental crises have a long history of wrong human deeds as the main cause. It is high time that human beings should revive their relationship with nature. Eco-philosophy is a philosophical approach towards nature that deeply analyses environmental problems and their fundamental causes. Humans should understand the depth of the ecological crises and their future consequences. Nature is not human-centred; non-human beings also have inherent value in themselves beyond human utility. Everything in the world is mutually dependent. Nothing has existence as their own. In eco-philosophy, the human obligation to preserve nature is emphasised. Attitudinal change of individuals could positively reflect on nature. Being rational, each person is responsible for the non-human world surrounding them.

Jainism's epistemological, metaphysical, and ethical teachings have strong eco-philosophical foundations. The categories of jīva and ajiva are coexistent in nature. It discusses the integrity of each soul, whereas the five vows of ahiṃsā, sātyā, aṣṭeya, aparigrahāḥ, and brahmacaryā emphasise the significance of protecting and respecting the life of other beings. Anekāntavāda helps to create a compassionate and accommodative attitude in humans by accepting the value and richness of ecological diversity. Jainism believes all ecological problems are rooted in a lack of spiritual awareness. It is human wrong deeds that create drastic consequences in nature. Everyone should work for pure realisation by eliminating unending passions from the mind. Then, most of the environmental problems, such as pollution and overconsumption of natural resources, can be reduced. Cultivating love and kindness towards other beings is the basis for ideological change. Each life's integrity should be protected. Jaina's teachings will help to cultivate good ethical conduct to regain harmony with nature.

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Ethical Conduct of Research and Publication in Philosophy

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Abstract

This article sheds light on the ethical issues related to the different stages of research in philosophy. Considering the impact of research output on human life, it is of no doubt that ethical conduct is indispensable in the research process. But from the selection of a research problem to the successful presentation and publication of the research findings, there are chances for misconduct. There are malpractices common to research in all disciplines such as fabrication, falsification, plagiarism, and conflict of interest. However, natural sciences, social sciences, and humanities have pitfalls pertaining to their respective nature of inquiry also. Research in the field of philosophy does not generally include experiments on humans or animals. Pursuing research with hardly any basic knowledge about the nature of philosophical problems, limiting literature review for personal convenience, absence of open and critical attitude while reading and understanding philosophical works, and dishonest practices including idea-plagiarism in reporting the findings are a few important ways in which the integrity of research is compromised in philosophy. In this article, I shall discuss the possible ways in which malpractice emerge in the different stages of research in the discipline of philosophy. I shall also explain how scientific misconduct in research like fabrication, and falsification that are mostly discussed with respect to the natural sciences and social sciences, appear in the discipline of philosophy.

Keywords: Integrity, Research, Ethical Conduct, Philosophy, Critical Attitude, Idea-Plagiarism

Introduction

Integrity is an important attribute of humans that is significant throughout their life. It stands for honesty, sincerity, innocence, and being responsible. One who maintains self-integrity as well as respects the integrity of others is highly appreciated by the society. Ethics is the study of the set of principles that distinguish between acceptable and condemned behaviours (Resnik, 2020). To follow some ethical code of conduct, i.e., to be ethical, is the way to preserve integrity.

Academic integrity is the presence of the above-said character in all the activities one engages with in the academic field. As a student, teacher, or an official in the educational institutions, there is high scope for being ethical. Different guidelines or codes have thus been formulated worldwide as well as pertaining to individual nations or institutions to ensure the absence of unacceptable activities in the domain of knowledge.

Research is an important stage of academics that has a great impact on the society as a whole. It is the systematic inquiry carried out to contribute to the bundle of human knowledge, by discovering new realms or revising the existing models, which finally results in the betterment of human life. It is therefore of no surprise that a huge investment is done for smooth and productive conduct of research. The demand for research output is evident in the funding of various research projects by the government or other organisations through which well-experienced researchers carry out creative experiments or extensive surveys that result in the development of society. The fellowships given to research scholars during their tenure of PhD also mark the value of research. Considering the onus of responsibility on those who partake in research activities, it is of no doubt that integrity is indispensable in the research process.From the selection of a research problem to the successful presentation and publication of the research findings, each stage of research is prone to corruption. Numerous instances of such misconduct in the past years have led to the formulation of codes for ethical conduct of research. Measures to create awareness regarding the issues of research misconduct and their harmful impacts along with the strategies prescribed to overcome them have recently been on a rising graph. There are issues common to research in all disciplines such as fabrication, falsification, plagiarism, and conflict of interest. However, natural sciences, social sciences and humanities have pitfalls pertaining to their respective nature of inquiry also. Causing harm to humans or animals is an issue that mainly occurs in the physical or medical sciences, where various experiments are carried out. The issue of maintaining confidentiality is important in social sciences where interviews or surveys are popular. Researches in philosophy and languages, which may not include experiments either in the laboratory or natural setting, and surveys or interviews, are prone to various corruptions related to reading, writing, and judgement.

Several factors prompt a researcher to employ malpractices. A few of them are described below.

Competition: Research output is in high demand and the number of researchers is increasing day by day. Academic institutions consider the doctorate degree or research papers published as a measure to compare candidates for the post of lectureship. A faculty who is a research supervisor wishes to increase the number of researches guided by him. So, the effort to improve the profile and develop a career finds easier ways of fulfilling the requirements which sort to various dishonest deeds.

Research metrics and ranking: Journals and authors are assessed according to the number of papers published and the number of citations received for the same. Institutes and universities are also ranked based on the research output disseminated. This can lead to chances of commission of malpractice or omission of reporting and correcting the same.

Focus on quantity rather than quality: The two factors above clearly indicate the emphasis given to the quantity of works accredited rather than the quality of the output. Those who resort to misconduct have an attitude of trying to maximise the number of publications even by compromising the quality because of the habit in the system of higher education to value the one having multiple papers of average grade as a better candidate than the one who has a single paper of highly appreciated quality.

Prestige of authorship: Every human being in one or the other way wishes to get recognised and become famous. The privilege of being known as the one who discovered an idea or the one whose works get repeatedly cited by others, once experienced by an academician, may force the person to publish even the ideas of others as one's own. The reluctance to acknowledge credit to the sources that helped him is because of the wish to get the status of someone who did everything on his own.

Poor infrastructure for research: Research activity depends not only on the hard work of a researcher but also on the kind of environment provided to the researcher. Lack of necessary facilities and poor observation of rules and regulations in colleges or universities put the researchers under pressure. Solutions are found by them through the breach of ethics.

The damages caused to the society as a whole because of the application of poorly conducted research output are irrecoverable.[1] Also, ethical violations get exposed sooner or later and they leave persistent black marks in the profile of a researcher. Therefore, ethical conduct of research is the need of the hour.

Numerous studies have been undertaken and many works have been published on the ethical conduct of research and publication. Even though a majority of such works relate to the research in natural sciences and social sciences, the ethical issues in research in arts and humanities have also been touched upon at least in the form of general overviews. However, in the discipline of philosophy, what we would find are only those published works and lectures or discussions that guide a research aspirant in various stages of research like the selection of a problem, reading of philosophical texts, and writing philosophical articles/theses.

This article is the outcome of a qualitative study to understand the dimensions in which ethical issues arise in research in philosophy. It employs the analytical method to understand the ways in which ethical conduct is compromised at each stage of research and publication in the discipline of philosophy. I shall first brief the peculiar nature of research in philosophy and then analyse the possible ways in which malpractices emerge in the different stages of research beginning from the selection of a research problem to the publication of the findings. I shall then describe the ways in which the scientific misconduct in research like fabrication and falsification that are mostly discussed with respect to the natural sciences and social sciences, appear in the discipline of philosophy. I shall also point out the factors that prompt a researcher in philosophy to be unethical or the challenges that make it difficult for the researcher to appreciate an ethical conduct.

1 See Shamoo & Resnik (2015) for case studies that show the harmful impact of poorly conducted research on society.

Research in philosophy

Philosophy is a subject that deals with the problems on the fundamentals of reality. Rather than discovering the answers to the what, when, and how of everything, it goes into the realm of why questions and penetrates the wall of one's beliefs and assumptions. As the content is highly abstract, contributing to its bundle of knowledge is not easy. Research in philosophy is different from that of the sciences because here the experiments are conducted in the laboratory of the intellect. Reflection is the method, and concepts, ideas, and assumptions form the objects on which observations are recorded and inferences are made. Language is the important medium through which ideas are communicated to others as well as their views are understood.

The research process in philosophy comprises the following activities :

- Choosing a specific area
- Reviewing the existing literature related to the area chosen
- Discovering gaps that provide scope for research
- Developing the research problem in clear and definite terms
- Formulation of a hypothesis
- Selection of appropriate methodology like critical, comparative, and so on.
- Collection of relevant materials that mainly include text in the form of books, articles, and letters.
- Interpreting the data by reading, analysis, reflection, and critical evaluation.
- Arriving at conclusions
- Writing the research thesis in the prescribed format
- Publishing the findings

Research in the field of philosophy does not generally include experiments on humans or animals as in the domain of sciences. But still it contains large scope for other malpractices. Being ethical is a serious task for a researcher in philosophy. Ethical issues related to the different stages of research in philosophy are dealt with in this section.

Ethical conduct in the initial stage of research in philosophy

Motive behind the research: The ideal research in philosophy conforms to the rule of 'work is worship' and is motivated mainly through the intellectual thirst that encourages active search after the answers to particular questions. Many candidates join for PhD simply to achieve a degree that adds to their profile and helps them to get a job. They write research papers only to fulfil the quantitative criteria. Such candidates only have the motivation to get rewarded. They lack the motive for contributing to knowledge or finding the solutions to problems. The quality of the research work is compromised in such cases and the research integrity is not assured.

Lack of basic knowledge and research aptitude: Research is the highest level of academic engagement. One is admitted to the research only after completing education for more than 10 years in schools and around 5 years in colleges or universities. It is not harsh to expect some basic understanding of the topics related to the disciplines studied. Medium level fluency in academic or official language is also an expected outcome of the 15 years of academic life. Due to many reasons all those who have undergone such an academic life may not have gained proper knowledge in the subjects and the ability to comprehend, speak, and write without grammatical errors. Research in any discipline requires dedication, reflection, problem solving approach, and time management. Philosophy demands intellectual curiosity, capacity for high degrees of generalisation (Ramachandran, 1984), critical thinking ability, and an appreciable proficiency in the language. Ramachandran (1984) says, "Symbols, formulae, visual aids, etc. would do part of the job in other fields. But in the rarefied atmosphere of abstract concepts as in philosophy we cannot succeed in communicating our ideas without a very carefully framed language" (p. 9). Candidates who lack the required knowledge and aptitude, when admitted to research, find it much difficult and they put their supervisors under immense pressure. Somehow if they complete the research and if their work is of poor quality, they are being unethical to themselves as well as to the serious academicians who read their thesis or paper with the expectation to find some new ideas therefrom.

Choosing a specific research topic: The areas of research in philosophy are many. There are different traditions in philosophy such as Indian and Western traditions, and in both of them there are studies pertaining to branches such as Epistemology or the study of knowledge and its sources, Metaphysics or the study of the real nature of the world and self, Ethics or the study of good, bad, right and wrong, Logic or the study of the method of reasoning etc. The traditions contain various inner schools that differ in their views on topics related to the branches. Different thinkers have emerged in these schools who have engaged with problems connected with some or all of the aforementioned domains. The area chosen for research can be related to the views of a particular school from a tradition or a thinker coming under that school. The focus can also be on a particular concept wherein various views on the same put forward by different schools or thinkers are examined. The research can also be done as a comparative study between the views of two schools, or between thinkers from same or different schools.[2] The choice of the area must be based on the genuine interest and knowledge of the researcher. One cannot do sincere work if one does not like what one deals with. Without essential preliminary understanding of a topic, research in it is impossible because the aim of research is not to get an understanding of some topic but to contribute to the knowledge. Researchers in

2 For a brief account of various types of topics chosen for research in philosophy, see Ramachandran (1984, Chapter III) philosophy are being unethical to themselves as well as the philosophy fraternity if they simply choose a topic without any interest and basic knowledge in order to 'somehow' complete the activity.

Ethical conduct in the execution stage of research in philosophy

Review of literature and formulation of research problem: The review of earlier works including books, articles, and theses related to the chosen area is done in order to know what all issues have been addressed and what all dimensions were explored. This helps to know the current state in the field of philosophy. Issues or dimensions of issues that have not been researched upon can be thus found out. Research questions and problems are formulated and validated based on the same. A problem which is under-researched, has contemporary relevance, and promises advancement in the field, must be formulated. The sincere and serious review done repeatedly often enforces revision in the formulation of the research problem. However, researchers may have the tendency to ignore some earlier works even though they are very important and impactful in the field, just because of the complexity of th matter dealt with or the length of the text. It is also possible that the work in which the language is difficult with respect to the level of the researcher gets ignored. There are chances that the researcher who is not able to find a new problem chooses an issue without novelty. The attempt to omit mentioning the review of earlier works on the same topic can happen then. All these are dishonest practices.

Collection of material: The material to be collected for research in philosophy is nothing but various kinds of text. All available resources can be approached for the same. One should not be lazy in exploring the databases and libraries to collect the relevant articles and books. Some data may go unnoticed and come to the attention of the researcher only in a later stage. There should not be any reluctance in accommodating the same. Discounting the value of any work because of the prejudices towards an author, a source, or the time-period of its publication, and giving too much value to any work because of the same sort of prejudices have to be avoided. Based on the topic of research, the data required can also be in the form of real-life experiences shared by people. Confidentiality of the details shared by the people interviewed by the researcher must be maintained. Informed consent also must be ensured whenever necessary.

Analysis of the materials collected: Data analysis in the research in philosophy amounts to the reading, understanding and evaluation of the collected texts. Reading philosophical texts is different from that of a scientific work with facts or fictional writing with a storyline. Various ideas or perspectives on the world, and life are expressed through language in philosophical works. To read them requires much concentration and patience. An open-minded approach is recommended. Bias towards a tradition, school, or thinker is a hindrance in the proper comprehension of a text. An idea of a thinker should be studied from their frame of reference and criticised from other standpoints. One's own beliefs or assumptions that have been part and parcel of life for many years have to be questioned and revised at times while dealing with the ideas in philosophy. Researchers have the right to interpret ideas or views in their own way in a discipline like philosophy. But this does not mean that they can read and assess the text of a thinker in a far deviated manner. Deliberate distortion or inadvertent missing of a point should not happen. However, accurate application of logical rules and fallacies must be applied to analyse the arguments in the text. Ignoring the fallacies in the works is also unethical. All these show the need for an unbiased, open-minded, and neutral attitude while reading and analysing the materials collected without which a researcher will not be able to do justice to those works.[3] A researcher should also try maximum to read philosophical works in their original

3 Rosenberg (1996, Chapter 13) and Saunders et al. (2010, Chapter 2) provide useful guidelines on reading philosophical texts.

language. Translated works cannot express the minute details because of the differences in the scope of words in different languages. Reading and analysis of the relevant data are crucial stages of research in philosophy which calls for sincerity, honesty, application of acquired knowledge and reflective thinking.

Ethical conduct in writing and publishing the findings

After reading and analysing the collected material, the researchers have to write their findings and attempt to provide a solution for the problems discussed. The tentative conclusion or hypothesis adopted in the beginning should be verified for confirmation or rejection.

Fabrication: Fabrication in research is cooking up data without sufficient experiments or observation. It "is the act of concocting results, of reporting observations that were never made, of inventing something in order to deceive" (Chaddah, 2021, p. 19). For example, one may not conduct scientific experiments in the prescribed manner but make up some results. Or a researcher may not actually conduct surveys or interviews but make up some statistical data. This research malpractice has its presence in the discipline of philosophy also. It happens when the researcher presents data that do not exist. For example, all the ideas expressed through suitable words by the researcher should be derived from supportive premises using proper logical deduction or induction rules. Conclusions not derived from such rational processes, but made deliberately, account for fabrication. Writing that a thinker or a school has such and such views without any evidence to show in the related works, is another instance of this misconduct.

Falsification: "Falsification is to alter (information, data, a document, or evidence) so as to mislead. It is the fudging of results, or of conveniently omitting the data that will not allow one to reach the conclusions being presented" (Chaddah, 2021, p. 19). Adjustments are made to the original data before presenting them to keep the desired hypothesis free from counter-arguments or to increase the evidence supporting it. While reading and analyisng philosophical texts, a thinker's statements or arguments can be deliberately misrepresented or adjusted so as to prove not what is evident but what the researcher wishes to get proven. There are topics in philosophy which discuss serious social, political, and religious issues. Falsification may be done so as to not report those ideas or views of a thinker or a school which go against the common beliefs in the society. Researchers may be pressurised to do the same even by the institution in which they work. So, the fear of getting excluded or losing opportunities might prompt the researcher to falsify the analysed information while reporting the conclusions of the inquiry.

Writing style: There are some universally accepted norms and technicalities that should be followed while writing a research thesis or a research paper. The language used must not accommodate any words that hurt the sentiments of any group of people. Words containing discrimination of race and gender are to be avoided. There should not be any comments disrespecting the dignity of a philosophical thinker. A writing style with too much praise on oneself or any other thinker is also not recommended. Avoiding ambiguous language must also be practiced. Following proper grammatical and punctuation rules and adhering to the guidelines of writing developed by organisations like MLA and APA are appreciated. Seeking the help of colleagues is common. However, it should not go to the extent that one does not write the work by oneself but somebody else such as a colleague or relative, or even some professionals do that for the person, with or without expecting returns. Both parties are being unethical here.

Plagiarism: A research thesis or paper may not have all its content new. The ideas or words of previous thinkers make up the ground on which new ideas are built. Sentences or phrases from other texts can be directly quoted or paraphrased but the sources have to be accurately cited. "Plagiarism does not give credit where it is due, and is an attempt to steal credit by unethical conduct during the dissemination and publication process" (Chaddah, 2021, p. 22). Plagiarism is the act of using in one's writings, the ideas or words of other authors but not giving them the credit they deserve through proper referencing. It ranges from accidental negligence to cite the referred source to deliberate attempt to claim the prestige of authorship. A researcher who has poor language may copy the words of others. Another researcher may find it difficult to use different words for the same concept than used by other authors and try to use the words of others instead of writing in one's own words. These are varieties of text-plagiarism. The researcher who lacks the ability for intellectual exercise and reflection, tries to copy the ideas of others. This is called idea-plagiarism[4] which is more serious than text-plagiarism. Text-plagiarism can be detected easily as compared to the idea-plagiarism. A victim of plagiarism can submit proofs for the presence of the victim's own words or sentences in another's work. But it is not easy to detect idea-plagiarism. Philosophy is a discipline that provides high chance of plagiarism in text and ideas. Self-plagiarism happens when one uses the ideas or words included in one's previous works in his new work but fails to mention the source. It is suggested that any sentence in one's writing which is not his own idea or words, and are taken directly or inspired by those of others, must be properly mentioned. Various software for plagiarism detection have been developed recently. A certificate showing the originality of the work is mandatory nowadays in order to get published. Plagiarism is a serious malpractice that shows a researcher's dishonest attitude. It spoils the researcher's reputation once exposed. It also affects others as their hard work is not given due credit and they have to fight a lot against the injustice. Experts advise the upcoming researchers to take necessary precautions for being "neither a perpetrator, nor a victim, of plagiarism" (Chaddah, 2021).

Overlapping and redundant publications, and salami slicing: A paper published in one platform (journal or conference) must not be republished in another. Publication of works which have evidently redundant content is also not appreciated. The practice of splitting one work into different segments and then publishing all of them separately in order to increase the number of publications is called salami slicing, and is another form of publication misconduct. Offering authorship in return for some other benefits, and threatening or forcing to include one's name as a co-author of a work. are other versions of the same. Philosophy which heavily relies on words and ideas suffers heavily from these unethical behaviors.

Deliberately resorting to predatory journals: The mandatory requirement of getting published for PhD or getting considered for jobs, puts researchers in philosophy under immense pressure. The scarcity of journals in philosophy that publish articles in the area chosen by a researcher, the delay caused in the confirmation of acceptance or rejection of an article after review by a journal, and the time taken to publish an article even after accepting the same by a journal make a researcher resort to malpractices. Also, researchers who feel themselves as incapable of producing good quality works would be keen to get published 'wheresoever' and 'howsoever' just to meet the mandatory requirements. The only respite for such researchers comes in the form of those journals that do not have the desired quality and are not recognized by regulatory boards. They are called predatory journals as they dwell upon the helplessness of the researchers and assure quick publication of a work without much scrutiny by accepting money. Even though publishing in this manner assists in fulfilling some criteria according to the need of the researcher, they provide no scope for the appreciation, correction or improvement of one's work.

4 Idea-plagiarism is called "paraphrase-the-idea-and-claim-as-original" type, as distinct from text-plagiarism which is "cut-and-paste" type. See Chaddah (2021, p. 25)

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Other ethical concerns

Use of AI tools for reading and writing: Apart from the ICT tools for data collection, coding, and statistical works, a number of other software have been developed recently based on AI that make it easy to summarise a given article, thesis, or book, and paraphrase a given piece of text. Such tools are used by researchers in philosophy to understand the key points of some literature that they read, and to paraphrase the original content whenever needed at the time of writing articles or theses. The reason behind the employment of such software would be the lack of time for a meticulous reading, or the inability to comprehend the content even after multiple readings because of the rigorous nature of the language used therein, or the poor vocabulary of the researchers that make it difficult for them to paraphrase the words of another author. In any case, the summary or paraphrase provided by an AI tool would not provide a proper understanding of the material as the software works only according to the information already available and accessible to it. Even if the output meets the best of the standards, the researchers cannot claim it as a product of their deliberation.

Role towards colleagues: Researchers may have to help each other in their work. Formal and informal discussions are ways to analyse and revise one's views. A colleague can stimulate the re-reading of a philosophical text. Such support should be clearly acknowledged in the research work. But there are issues of intellectual theft when the discussions of a researcher's findings with a colleague result in the attempt of that person to accommodate the same in that person's work, or claim the authority of the same. Such persons may also try to publish the same in their name before the researcher. Jealousy, competition, and discrimination that happen in many forms have to be overcome effectively.

Role of research supervisors: Academicians are also prone to unethical behaviour when they take the role of a supervisor to guide some research work. A research supervisor in philosophy must be well experienced and have in-depth knowledge in the area of research. The supervisor who decides to guide a candidate for the research activity despite knowing the absence of desired aptitude in the candidate, or the one who decides to guide a research project in the area which is unfamiliar to himself is being unethical in his practice. Forcing the researcher to revise or omit ideas which are logically consistent and have proper reasons as ground, but go against the likes or interests of the supervisor is a practice that has to be condemned. A supervisor, who is arrogant to accept the views of the researcher, who never thinks of self-correction or improvement, or who is jealous of the researcher rising above and getting more famous than himself, is not qualified for the position. Discrimination with respect to race, gender, and economic status or any sort of inhumane behaviour is not expected from a supervisor. Accommodating more researchers under one's guidance just to increase the number up to the allowed quota and compromising the quality of the works, when done by supervisors cause serious damage in the advancement of philosophy as a discipline. The supervisors should be a guide, mentor and teacher to the research scholars working under their supervision.

Conclusion

Even after the developments in natural and social sciences, philosophy as a discipline is continuously expanding its boundaries. Research in philosophy has a huge role unless it is destroyed by the practitioners inside the domain. A researcher in the field of philosophy is prone to various forms of misconduct in each stage of the work. Absence of required aptitude, and the focus limited to personal gains become obstacles to a serious and sincere conduct of inquiry in philosophy. Along with that the pressure offered by the academic environment and the current trends in the discipline also pave the way for many unethical practices. This paper has only briefly discussed a few issues. Each of these has scope for further in-depth reflection. The attitude towards philosophy and the nature of the academic setting wherein philosophical activity is carried out differ across traditions. So many other issues concerning the ethical conduct of research in philosophy may also exist.

However, I would like to conclude by stressing that the measures to overcome these challenges lie both in the individual and institutional realms. A researcher in philosophy has to make sure that he or she goes in the right path and does not get persuaded by the quick but dishonest means. Academic bodies and the organisations of philosophers also have to play their part in the proper enhancement of research in the discipline. The habit of focusing more on quality rather than quantity has to be inculcated in the mind of a researcher through orientation sessions, and rules and regulations regarding research must be revised accordingly.

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Becoming Cyborg: Quest for Identity and Ethical Nuances

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Abstract

Cyborg (cybernetic organism) is a living being including both bio-mechatronic and organic body parts. Cybernetic organisms, a combination of humans and machines, have already entered everyday life, the military, popular culture, and the other fields since the emergence of cyborg research and studies in the mid-1980s. This article explores the complex and nuanced journey of becoming a cyborg, and the implications for our understanding of identity and ethics. When we explore the intersection of technology and human identity, we must consider the ethical implications of cyborg identity.

Keywords: Cyborg, Identity, Enhancement, Post-gender, Embodiment.

Introduction

"A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction." Donna Haraway. (2016).

The rapid advancement of technology has led to the emergence of a new form of human existence: the cyborg. The concept of the cyborg has evolved to encompass a wide range of human- machine interfaces, from prosthetic limbs and implants to brain- computer interfaces and wearable technology. As we increasingly integrate technology into our bodies and minds, we are forced to confront fundamental questions about identity, agency, and ethics. The concept of cyborg identity offers a unique lens through which to examine and challenge traditional notions of identity. By embracing the integration of human and machine, individuals can transcend the limitations of traditional identity categories.

The Cyborg

The word 'cyborg' (cybernetic organism) was originally coined in 1960 by Manfred Clynes and Nathan Kline (1995). As engineers working for the United States' N.A.S.A. (National Aeronautics and Space Administration) program, Clynes and Kline's (1995) cyborg vision is a human/ machine hybrid that modifies humans for space, rather than creating extraterrestrial human-friendly environments. Therefore, the cyborg is a liberating mechanism from human environments via a 'self-regulating man-machine system' (Clynes & Kline, 1995). Considered to be more flexible than human organisms alone, this hardware-based 'man-machine' system is incorporated into a space suit that alters various bodily functions (Tomas, 1995; Clynes and Kline, 1995). Clynes and Kline's (1995) cyborg vision is therefore a 'superman' dream of 'post biological evolution', which fuses space exploration with medicine, implants, and electronic modification to create human dependence, rather than interdependence, on machines (Gray, 2002; Tomas, 1995).

'Cyborg', a compound noun derived from 'cybernetic organism', refers to a human, or sometimes an animal, whose body is augmented by technological parts or organs. Although cyborgs are generally thought of as creatures of science fiction, actual developments in medical technology and prostheses over the late 20th and early

21st centuries have been hailed as creating 'cyborgs'. Hence, in science-fiction film and literature, cyborgs are most commonly depicted as technologically enhanced humans, but actual everyday examples would include the heart patient with a pacemaker. The term has been particularly influential in communication and cultural studies debates on science, technology, and the body through the work of Donna Haraway (Giddings, 2016).

Donna J. Haraway is an American professor emerita in the history of consciousness and feminist studies departments at the University of California, and a prominent scholar in the field of science and technology studies. Donna Haraway's academic training is as a biologist and philosopher, and her political affiliations are those of a socialist feminist. She wrote her *Cyborg Manifesto* in 1986, revising and expanding it again for publication in 1991. The anchoring metaphor for her essay, is the image of cyborg. She defines this image in four different ways. The first is as a "cybernetic organism". The second is as "a hybrid of machine and organism". The third is as "a creature of lived social reality", and the fourth is as a "creature of fiction". (Haraway, 2016).

Cyborg changes what counts as experience

It is important to understand that for Haraway, these four descriptions of the cyborg (cybernetic, hybrid, of the present, and of the future) are not discrete, but rather co-determinate. For instance, Haraway argues that in philosophical terms, there is no real space between 'lived social reality' and 'fiction', because one category is constantly defining and refining the other. Haraway points out how feminists have deployed the notion of 'women's experience' using it both as "fiction and a fact of the most crucial, political kind". In a similar way, Haraway argues, the cyborg will "change what counts as experience" for women in the late twentieth century. Haraway says, the struggle to define and control the cyborg amounts to a border war and the border of the cyborg is an optical illusion. Haraway writes, "we are cyborgs", whether we know it or not, if only because it is the cyborg which "is our ontology, it gives us our politics" (Haraway, 2016).

Haraway's Border crossings

Haraway cites three crucial "border crossings" which she argues make the call to "return to nature" an impossibility for feminists. (Haraway, 2016). The first is the boundary breakdown between humans and animals, which has occurred as a result of things like pollution, tourism, and medical experimentation. The second boundary transgression Haraway describes is between humans and machines. In the past, machines were not self-moving, self-designing, and autonomous. Today, however, machines are making "ambiguous the difference between the natural and the artificial," writes Haraway. Without ever citing the internet or virtual reality technologies, she alludes to as much when she writes, "Our machines are disturbingly lively, and we ourselves frighteningly inert". The third boundary crossing Haraway calls a subset of the second: the eroding space between "the physical and the non-physical". (which is now termed as virtual). Challenging the traditional dualisms, Haraway says, the cyborg challenges traditional dualisms such as human/machine, nature/culture, and male/female. Haraway's cyborg celebrates hybridity and multiplicity, acknowledging the complexity and diversity of human experience.

Haraway's implications for identity politics

Haraway's cyborg resists essentialism, challenging the idea that identity is fixed and inherent to the individual. The cyborg acknowledges the intersectionality of identity, recognizing that individuals inhabit multiple identity categories simultaneously. The cyborg is a symbol of feminist and socialist politics, highlighting the need for a more inclusive and equitable society. Haraway deals specifically with the issue of feminist political organizing in light of cyborg politics. She counsels against identity politics, noting "there is nothing about being 'female' that naturally binds women". Instead, she advocates the practice of affinity politics which operate by way of "oppositional consciousness." She strongly criticizes the radical feminism of Catherine MacKinnon, arguing that the search for the "essential woman" is not only elusive, it is dangerous. Indeed, feminist might be better served, Haraway notes, by considering "woman" to be a socially constructed category, deployed in a communications network, along the lines of "homosexual" and "youth." Cyborg imagery suggests "a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves". Haraway's cyborg is a symbol of feminist and socialist politics, highlighting the need for a more inclusive and equitable society. (Haraway, 2016).

Cyborg: A Post Gender Subject

Donna Haraway's work on the cyborg has been influential in exploring the idea of a post gender subject. According to Haraway, the cyborg has the potential to transcend traditional gender categories and embody a more fluid and flexible understanding of identity.

We used to locate the human subject in different perspectives. The traditional, philosophical, ethical, and digital perspectives consider human beings in terms of gendered identities. But in a posthuman perspective we cannot limit the human into gendered identities. The posthuman subject/ cyborg crosses the traditional perspectives and it can be located in the post gender environment. Post genderism focused on the idea of eliminating or moving beyond gendered identities. As a techno body, the cyborg reconstructs the body in a manner that liberates it from social categorizations. In post genderism one is neither a man nor a woman nor any other assumed gender role. The cyborgian enhancements happening in the body would altogether change what it means to be human, woman, and man. Haraway's metaphor of the cyborg (Cybernetic organism) has been labelled as a post gender statement. Cyborg is a hybrid of machine and organism can transcend gender binaries and can thus constitute a way out of binary thinking used to classify our bodies and our machines and accordingly lead to openness and encourage pluralism and indefiniteness. The cyborg also challenges essentialist notions of identity, which posit that certain characteristics or traits are inherent to an individual or group. The cyborg embodies hybridity, combining different elements to create a new whole (Haraway,2016).

Theoretical perspectives:

1. Donna Haraway's cyborg Feminism: Haraway's work on the cyborg emphasizes the potential for feminist and socialist politics, highlighting the need for a more inclusive and equitable society.

2. N. Katherine Hayles' Posthumanism: Hayles' (1999) work on posthumanism explores the implications of emerging technologies on human identity and embodiment, highlighting the need for a more nuanced understanding of the human machine interface (HMI).

3. Rosi Braidotti's Metamorphoses: Braidotti's (2002) work on metamorphoses explores the potential for transformation and becoming, highlighting the need for a more dynamic and flexible understanding of identity and embodiment.

The Rise of the Cyborgs

A cybernetic organism is a being that combines human and machine elements, enhancing physical and cognitive abilities. There are different types of cyborgs:

1. HMI cyborgs: Implants or wearables enhancing human senses and abilities. (e.g., smartwatches, fitness trackers).

2. Prosthetic cyborgs: Artificial limbs or organs replacing or augmenting human ones (e.g., mind-controlled arms).

3. Brain computer interface (BCI) cyborgs: Direct neural connections for controlling devices. (e.g., deep brain stimulation). Elon Musk's brain machine interface Neuralink is one of the current developments in this area.

4. Genetic cyborgs: Genetic engineering and biotechnology integrating human and machine.

The key researchers and theorists in this area are, a). Donna J. Haraway (*A Cyborg Manifesto,* 1985), b). Andy Clark (*Natural-born Cyborgs,* 2003), c). N. Katherine Hayles (*How We Became Posthuman*, 1999), d). Kevin Warwick (*Cyborg and AI Researcher*).

Kevin Warwick concludes his essay, *Cyborg Revolution* with the following questions:

"In the near future, cyborgs based on existing technologies and technologies that are currently in the pipeline will probably be little different from humans. Apart, that is, from the odd extra sense or communication skill. However, as the technology and interfacing improve, will this mean the abilities possessed by cyborgs eventually change the rules and fabric of social life? The big question will be what happens to ordinary humans, those who are not part-machine. Will they still have a substantial role to play?" (Warwick, 2014)

Kevin Warwick, a professor of cybernetics at the University of Reading in the UK, took his job seriously that he has merged with his work. Using himself as the testament, he is on a mission to happen to be the world's first most complete cyborg (Keer & Khan, 2018). Warwick worked with multiple electronic implants since 1998, he implanted microchip in his arm for RFID and biometric tracking.

The Cyborg Identity

The concept of cyborg identity explores how individuals with integrated technology, such as prosthetics, implants, or BCI, perceive and express their sense of self. The key aspects of the concept are the following.

1. Hybridity. Cyborgs embody a fusion of human and machine, challenging traditional notions of identity.

2. Embodiment. The integration of technology into the body raises questions about the relationship between the self and the physical body.

3. Agency and control. Cyborgs may experience a shift in agency and control, as technology influences their thoughts, actions, and perceptions.

4. Identity performance. Cyborgs may perform their identity through their technological enhancements, negotiating societal expectations and norms (Gillet, 2006).

The Quest for Identity

The concept of cyborgs can lead to identity crisis, both for the individuals who integrate technology into their bodies and for society as a whole. The integration of technology can challenge traditional notions of bodily autonomy and integrity. Cyborgs may struggle to reconcile their sense of self with their technological enhancements. Cyborgs may face social stigma, discrimination, or marginalization, leading to identity crises. When it comes to the society, the emergence of cyborgs challenges traditional notions of what it means to be human. Cyborgs blur the lines between human and machine, forcing society to reevaluate its values and norms (Mazis, 2008). Ethically the development and use of cyborg technologies raise complex ethical questions, such as privacy, autonomy, and accountability.

Traditional notions of identity and cyborg identity

There are some traditional notions which explain the identity in particular manner. According to essentialism, identity is fixed, essential, and inherent to the individual. Sometimes identity is considered as normative categories where the identity is shaped by normative categories, such as gender, race, and sexuality. One more traditional notion is there in which identity is defined by binary oppositions, such as male/female, human/machine, and able-bodied/disabled. Cyborg identity challenges essentialism and it blurs the lines between human and machine. It subverts traditional binary oppositions, highlighting the complexity and multiplicity of identity. Cyborg identity allows individuals to forge their own paths and create new identity narratives.

Ethical Questions Regarding Cyborg Identity

The emergence of cyborg technology, which blurs the boundaries between humans and machines, gives rise to a multitude of ethical and moral challenges that necessitate comprehensive investigation. As these technologies become more advanced and widespread, questions arise regarding informed consent, privacy, autonomy, and social equality. The integration of technology into our bodies and minds raises a series of complex and nuanced ethical questions (Pelegrin- Borondo, et al., 2018).

Ethics of enhancement

1. Do individuals have the right to enhance their bodies and minds using technology, or does this compromise their autonomy and agency? (Autonomy and agency).
2. How can we ensure that individuals provide informed consent for technological enhancements, particularly if these enhancements have unforeseen consequences? (Informed consent).
3. Who has access to technological enhancements, and how can we ensure that these enhancements are distributed equally? (Access and equity). (Coeckelbergh, 2017).

Ethics of identity

1. Self and identity: How do technological enhancements impact our understanding of self and identity?
2. Authenticity and integrity: Can technological enhancements compromise our authenticity and integrity, or do they enable new forms of self-expression?
3. Responsibility and accountability: Who is responsible and accountable for the actions of a cyborg individual?

Ethics of HMI

1. Boundary maintenance: How do we maintain the boundaries between human and machine, and what are the implications of blurring these boundaries?
2. Trust and reliability: How can we ensure that technological enhancements are trustworthy and reliable, particularly in situations where human lives are at stake?
3. Transparency and explainability: How can we ensure that technological enhancements are transparent and explainable, particularly in situations where decision-making processes are complex and opaque?

Ethics of cyborg communities

1. Inclusion and exclusion: How do we ensure that cyborg communities are inclusive and equitable, and that individuals are not excluded or marginalized based on their technological enhancements?
2. Power dynamics: How do we address power dynamics within cyborg communities, particularly in situations where technological enhancements confer advantages or disadvantages?
3. Social and cultural implications: How do we consider the social and cultural implications of cyborg communities, particularly in situations where technological enhancements challenge traditional norms and values?

These questions require a nuanced and multidisciplinary approach, one that takes into account the complex interplay of technological, social, and cultural factors that shape our understanding of identity and ethics.

Conclusion

The trajectory of becoming a cyborg is a complex and nuanced one, marked by a series of identity crises and transformations. As we integrate technology into our bodies and minds, we are forced to confront fundamental questions about our sense of identity and agency, and to navigate the complex web of social and cultural norms that govern our interactions with technology. Ultimately, the quest for identity and ethics in the context of human machine integration requires a nuanced and multidisciplinary approach, one that takes into account the complex interplay of technological, social, and cultural factors that shape our understanding of identity and ethics.

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Constitution for Affirmative Action

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Abstract

Affirmative action is undertaken in many countries to bring social justice and equality accessible to people belonging to all sections of the society. In India, clauses enshrined into the Constitution of India are the primary means to ensure such action. These clauses embody a vision that is rooted in the principles of democracy and social justice. This article attempts to identify and place the many clauses for affirmative action in the Constitution in their historical and philosophical context, attempting to capture them in both letter and spirit.

Keywords: Affirmative action, Caste, Constitution, Democracy.

Introduction

Affirmative action points to the policies and programmes undertaken in many countries to provide preferential treatment to members of disadvantaged groups, to enable them to get access to preferred positions in the society, from which they would otherwise be excluded or be under-represented (Deshpande, 2013, p. 8). The rationale behind affirmative action looks at the social, economic, and political gaps that exist in a society between privileged and disadvantaged groups. The gaps are typically due to historical discrimination, exclusion, and denial of resources. Legal provisions applicable to all categories of people against oppressive practices as well as specific measures to give advantages to members of the disadvantaged groups are part of the broad scheme of affirmative action.

In India, clauses enshrined in the Constitution of India are the basis for enforcing the policy of affirmative action. As the country is celebrating in 2025 the 75th year of the Constitution coming into effect, an attempt is made here to place these provisions in their historical and philosophical contexts, while attempting to capture them in both letter and spirit.

The historical context

A look through history offers insights about the context which necessitated affirmative action in India. The hierarchical caste system practiced in India, with strict rules of purity and pollution across the hierarchy and the practice of untouchability, is considered as the primary reason for the stratification of the Indian society (Ambedkar, 2020, p. 8 -9). Social and economic exclusion, denial of resources and discrimination, enforced across centuries, created wide disparities between people belonging to the different groups, with the 'untouchables' or people outside the caste system and tribals (Adivasis) being the most oppressed. Naturally, caste has been chosen as the primary basis on which affirmative action is based in India.

Many actions taken up from the latter half of the nineteenth century and later in the twentieth century during the colonial times when India was under the British rule, can be seen as leading to the affirmative action provisions in the constitution of independent India (Deshpande, 2013, p. 44 - 53). The periodic census conducted in colonial India that brought out different factors about the population, attempts by the rulers of some princely states and the British government to remove discrimination based on Caste in admission to schools, in usage of public facilities and in jobs, as well as some positive endeavors like providing quotas for people of backward classes to become members of legislative assemblies were important milestones. The efforts made by various Hindu reform movements, caste organisations, and anti-untouchability movements all over India were very crucial. Progressive rulers of some princely states like Mysore, Baroda, Kolhapur, and Travancore enforced quotas in Government service for backward classes. Rise of Dr. B. R. Ambedkar as the voice of the 'Depressed Classes', as untouchables were called at that time, was a major factor. Discussions in the Round Table Conferences conducted during 1931-1932, the Government of India Act of 1935, and the formation of new federal and state assemblies as well as provincial governments in 1937 were also decisive milestones.

As India was approaching independence, the Constituent Assembly was formed in 1946, with Dr. Rajendra Prasad as Chairman, to frame a constitution for the new nation. Dr. Ambedkar was the Chairman of the drafting committee. The assembly held detailed discussions during 1946 - 1949. The Constitution of India was finalised in November 1949 and came into effect on 26 January 1950.

The Constitutional Provisions

Policies for affirmative action are enshrined in the Constitution of India. The provisions include both directives and guidelines (Deshpande, 2013, p. 54 – 82; Bakshi, 2023). These span measures for equality as well as preferential quotas to benefit the target groups, which include members of Scheduled Castes (SCs) which make up the earlier 'Untouchables', Scheduled Tribes (STs) containing many marginalised tribes selected based on a criterion, Other Backward Classes (OBCs) based on a selection of groups not too high on the caste hierarchy nor beyond it, and Economically Weaker Sections (EWS) of the society which are not in any of the other lists. In addition, women have also been identified for special benefits.

In the Constitution, Articles dealing with equality and prohibition of discrimination come under the umbrella of measures for equality. These include Article 14 which stipulates fundamental rights and equality before law to all citizens, Article 15 which prohibits discrimination based on one's religion, race, sex, caste, and place of birth, and Article 16 which provides equality of opportunities in public employment. Untouchability has been abolished under Article 17, which also forbids that practice in any form.

Article 46 is a directive to the State to take action to promote the interests of weaker sections of the society, in particular the SCs and STs. It calls for provisions to promote educational and economic interests as well as to provide protection from social injustice and exploitation. The directive has been implemented in the form of preferences for people belonging in the special categories in public sector jobs, educational institutions, and legislative sphere. Additionally, welfare measures are undertaken and special provisions provided in various development expenditures. Relaxation of age limits for service entry, reduction in the qualification criteria for admissions, fee concessions, separate allocations in national development plans, and setting up of national commissions are examples of such actions.

The state enforces the clauses for affirmative action in the Constitution through a process that includes legislative and administrative measures, as well as judicial interventions.

A comprehensive listing of all the provisions in the Constitution towards affirmative action is beyond the scope of this article.

The Philosophical Rationale

One way to look at affirmative action is as a progressive endeavour on the part of the society to set right historical wrong doings. The philosophical argument for affirmative action takes us to different theories including the social contract theory of philosopher Thomas Hobbes, who argued that we obtain the moral virtue of justice when we keep our contracts (Feiser, 2001). The American philosopher John Rawls who has developed a strong contemporary argument based on the social contract theory, puts forth fairness as the primary principle of justice (Rawls, 1999). The two ideal principles of justice include the principle of equal liberty, which means that everyone has the same basic liberties, which can never be taken away. The second principle addresses equality. Rawls argues that social and economic inequalities necessitate that two conditions must be satisfied. Offices and positions must be open to all under conditions of 'fair equality of opportunity'. Elimination of discrimination and providing everyone equal access to education are examples of such measures. The second condition, termed as the 'difference principle', necessitates that the greatest benefit of the least-advantaged members of society who are at the bottom of the economic ladder, must be considered. This notion is at the core of affirmative action.

The Responsiveness

One of the hallmarks of the Indian Constitution is its responsiveness. It is a consciously evolving document. The provision for making amendments to the Constitution enables it to respond to new insights and contemporary requirements. Over the years, the Constitution has been amended 106 times, involving addition, expansion and deletion of articles and clauses. Many of the amendments were about provisions for affirmatory action. A continuous and ongoing process of relevant legislations and judicial interventions have also made the affirmative action policies in the Constitution to continuously expand and to evolve (Bakshi, 2023).

The very first amendment, made in 1951, had dealt with affirmative action. Article 15(4) was the clause involved and mandated special provisions for people belonging to the categories of SC, ST, and socially and educationally backward classes. The amendment in 1990 which extended benefits to OBCs was a major milestone, and had come about as a consequence of the recommendations of the second Backward Classes Commission, which had been set up as directed in Article 340. Other major amendments in the area of affirmative actions include the 73rd and 74th amendments in 1993 about reservation of seats in local legislative bodies to SCs, STs, and women, the 77th amendment in 1995 which was about giving special privileges during promotions in jobs, the 87th amendment in 2002 about reservation of seats in the Lok Sabha and state legislatives, and the 103rd amendment in 2019 which mandated quotas for EWS sections of citizens. Multiple amendments of Article 334 have been made to enable extension of the period of reservations from the original duration. We may recall that the most recent amendment to the Constitution, which was the 106th amendment in October 2023, was also about affirmative action and provided for 33% seats for women in Lok Sabha and state legislatures.

Critical Reactions

There have been criticisms about the rationale as well as the status of implementation of affirmative action policies as enshrined in the constitution (Deshpande, 2013, 83 - 148). Quotas have been objected to as being unfair, against merit and efficiency, as punishing the present generation for damages done in the past, as reinforcing caste lines instead of striving for a caste-free society, as exempting beneficiaries from the rigours of market competition and as destroying the competitiveness of the Indian economy. There have also been arguments about the need for additional measures to ensure effectiveness as well as the need for other socio-economic factors as the basis for the actions. It has also been commented that though the implementation of quotas has improved overall in all spheres, it remains uneven across jobs, between states and across institutions despite safeguards. The need for regular and detailed reviews about the status of implementation has been highlighted, as also the need to ensure that the quotas remain as a temporary measure.

Discussion and Conclusion

It can be seen that the provisions for affirmative action in the Constitution of India mirror the historical struggle in India for equality and social justice. The Constitution truly embodies the context under which it was created, the social realities that made each of the provisions necessary as well as the evolution of the political scenario and reformist thought that led to the formulations.

The concept of social justice means that all social primary goods including liberty, opportunity, income, wealth, and the basis of self-respect are to be distributed equally. It can be seen that the clauses pertaining to affirmative action embody the will to enshrine the principles of social justice in the Constitution.

The clauses stipulated in the Constitution empower and enable, while clearly specifying the boundaries for actions, thereby adhering to the true principles of democracy. The visionary makers of the Constitution have made sure that it remains flexible and responsive, evolving continuously in order to improve more and more and to respond to changing circumstances. New provisions get added as more understanding, awareness, and better clarity emerge about what is further needed, so that the Constitution of India continues to be the most important facilitator for social justice in the country.

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Situatedness of Knowledge as a Resolvent for Epistemic Injustice

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Abstract

Social epistemology is the philosophical analysis of how social practices, institutions, and interactions constitute the episteme of individuals and groups. Epistemic injustice, being a significant part of social epistemology, attempts to know the influences of a person's social identity, role, and position in determining their value as an epistemic subject. Miranda Fricker, who coined the term, divided epistemic injustice into testimonial injustice and hermeneutical injustice. The former is giving less credence to speaker than what actually deserves and the latter points to the lack of concepts for understanding and/or communicating socially significant aspects of one's experiences. This epistemological analysis, illuminating the discriminations of epistemic subjects based on their social positioning, represents the concerns of feminist epistemology. Feminist epistemology with its key concept- situatedness of knowledge- upholds the vitality of perceptions and situations of the subjects in the constitution of knowledge.

The stream of feminist ethics appears as encountering a kind of epistemic injustice, precisely of hermeneutical injustice, as ruling philosophical ethics and it stems as a quest for solution to such an epistemic injustice. Here, it demands an alternative epistemological foundation which helps setting the framework for feminist way of dealing with ethics. Such a foundation can be seen in feminist epistemological theory of situatedness as demonstrated by Donna Haraway as it propagates embodied accounts of truth. Thus, the aim of this article is to analyse the degree of hermeneutical injustice residing in the field of philosophical ethics viewed in the eyes of feminist ethics and to examine the scope of the epistemological theory of situatedness as an alternative epistemological framework which acts as a resolvent of this hermeneutical injustice as necessitated by feminist ethics.

Keywords: Epistemic injustice, Hermeneutical injustice, Feminist epistemology, Feminist ethics, Situatedness

Feminist Ethics: A Critique to Philosophical Ethics

Margaret Urban Walker (1989), the renowned American philosopher and academic, in her article, 'Moral Understandings: Alternative "Epistemology" for a Feminist Ethics', defines feminist ethics as feminist critique of philosophical ethics which strives for a restoration of legitimacy of women's way of perceiving moral problems and self-images by bringing to light the male-domination and the consequent omission of representation of modes of life and forms of responsibility which are not theirs . There had always been a feminist way of dealing with moral problems or one which is different from that of men that has never been counted as something upon which moral deliberations are to be made. Ethics is governed by a particular view of life and truth, a male point of view, which is universalised and idealised and everyone else are forced to come under this roof irrespective of their particular perspectives or differences. What seem insignificant in the life of a man are trivialised and seen as sub-standard affairs by giving them the title ‘natural’, bringing them down to the level of animality. The perfect example of this would be how ‘mothering’ is considered ‘just’ natural and as holding no value in ethical discourses. Virginia Held (1990) in her article ‘Feminist Transformation of Moral Theory’ gives instance of how David Heyd, in his discussion of supererogation, views a mother’s sacrifice for her child as belonging to the sphere of natural relationships and instinctive feelings which lie outside of morality and this attitude could be attributed as the general characteristics of most of the philosophers. Throughout the history of ethics, the realm of natural instincts and affairs is simply held as opposed to what is called ‘ethical’. The ethical implications of such a domain have never been a part of moral discussions.

Held (1990) enumerates three key features of feminist ethics which she developed from a thorough analysis of the questionable aspects of the history of ethics and the features constitute an emphasise upon emotion more than reason, focus on private spheres of life rather than public affairs, and finally conception of self as related to particular others, neither as ego nor as universal self. As mentioned above, emotions and instincts are kept out as disturbances to morality in the history of ethics, which is regarded as relying on rationally constituted impersonal moral truths. This is well exemplified in Kant’s Categorical Imperative where universalisability is the very criteria which determines the quality of moral propositions and reason remains steadfast measure of it. Against this attitude, feminist ethicists argue for the cultivation of desirable forms of emotions. Here, emotional apprehensions like caring, trust, sensitivity, empathy, and not rational calculations guide us to morality. The second element denotes the distinction maintained between public life and private life and the denigration of the latter. This point is to be read in association with the third feature which is viewing self in relation with particular others. Ethics has been built on the abstraction of self in isolation from their relations with others. Impartiality is strictly maintained. The problems concerning relations, conflicts in responsibilities, and making and maintaining relations which incorporate one’s daily life are never taken into account. Feminist ethics subsumes to the conception of self in a network of relations with other people and this is ratified by an extensive study on women carried out by Carol Gilligan (1982) who formulated the theory of ethics of care. Appreciating such personal relations as framing the essence of individuals entails to a view of moral responsibility as a commitment to these relations which cannot be reduced to obligations to certain universal principles. These elucidations lead us to the conclusion that more than being a new system of ethics, feminist ethics emerged as a critique to philosophical ethics with an aim to throw light on its patriarchal attitude and its exclusion of feminist perspectives on ethics.

Traces of Hermeneutical Injustice in Philosophical Ethics

The term Hermeneutical injustice is devised by Miranda Fricker in her work *Epistemic Injustice: Power and the Ethics of Knowing.* In the expositions on epistemic injustice, she distinguishes between Testimonial injustice and Hermeneutical injustice, the former as occurring in the stage of communication of knowledge where the hearer is prejudiced to give a deflated credibility to speaker’s words while the latter as arising in an earlier stage of understanding one’s own experience which is troubled due to a lack of collective hermeneutical resources which in turn affects its intelligible communication (Fricker, 2007). The injustice is measured in terms of the wrong inflicted. Testimonial injustice causes a detriment in the capacity of the speaker as a subject of knowledge and even in a deeper level, it affects self-development of the person. Hermeneutical injustice creates a group of hermeneutically marginalised people who get no access for equal participation in the practices through which social meanings are generated and so their experiences are ill-understood even by them. She termed this harm as situated hermeneutical inequality which is the social situation where a collective hermeneutical gap prevents them from making sense of an experience which is strongly in their interests to render intelligible (Fricker, 2007). When a hearer practices reflexive critical sensitivity in attending to relative unintelligibility and understands that it is caused by such a collective judgement accordingly, hermeneutical justice is maintained. Otherwise, it is their capacity as subject of social understanding is affected whereas in testimonial injustice, their capacity as giver of knowledge gets wronged.

Fricker has commented on the inefficiency of ethics in taking account of our epistemic conduct and its rights and wrongs as a general observation. Nonetheless, her work appears as an investigation on the ethics and politics of our epistemic practices. Although she has mentioned about hermeneutical injustice in ethics as occurring in the form not in content, where the characteristic expressive style constitutes hindrance to their communicative efforts as the intuitive and emotional expressive style is heard as not fully rational and thus makes hermeneutical gap (Fricker, 2007).

It is already made clear how a patriarchal slant sustains the province of ethics. In the process of universalisation of certain norms, standards of living, and views of life and truth, a group of people who cannot confirm to these get marginalised. Such an ethics is constructed on an epistemological structure which takes moral truth to be impersonal, objective, universal principles to which only reason can usher us. Setting certain perspectives as 'the truths' is a strategical silencing of the others. When selected dimensions of life are valued as ethical, based on this episteme, all the other get disadvantaged having no apparatus for claiming moral meanings of their experiences. It leaves them incapable of understanding and communicating the morality of their personal and social experiences due to the lack of collective hermeneutical resources within the system of ethics. The extent of injustice in such a marginalisation is clear when the detriment it causes in their capacity as subjects of moral understanding is realised.

Fricker (2007) keenly maintains that the hermeneutical disadvantages in understanding meanings of certain experiences are counted as epistemic/hermeneutic injustice only when it is born out of persistent and wide-ranging unequal relations of social power and causes trouble or keep them vulnerable. In other words, in an epistemological level, the powerful gets an unfair advantage in structuring collective social understandings. A play of unequal power relations is quite apparent in ethics and it acts as the root cause of the damage in women's development as moral agents. It represents certain people as unsuitable due to prejudicial stereotyping as a way to keep hermeneutical participation out of their reach and this concept of power is termed as identity power by Fricker (Fricker, 2007). Such an identity power in ethics keeps women unfit in ethical discourses from time immemorial and leaves them unaided in giving moral meaning to their instincts and inclinations which can actually play a part in ethical theorisations. As Fricker observes, a hermeneutical marginalisation brings structural prejudice in collective hermeneutical resource, which here in the domain of ethics, makes it insufficiently influenced by the subject group and unduly influenced by more hermeneutically powerful groups, giving a clear picture of discrimination and consequent oppression.

Situated Knowledges as an Alternative Epistemology for Feminist Ethics

"I am arguing for politics and epistemologies of location, positioning and situating, where partiality and not universality is the condition of being heard to make rational knowledge claims" (Haraway, 1988, p. 589). This is the remark on epistemological conceptualisation by Donna Haraway which is explicated in "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial

Perspective". And we can see the foundations of a more inclusive ethics, as envisioned by feminist ethics, more secure here, as a way out from the constraints of hermeneutical injustice.

The problem of hermeneutical injustice in the field of ethics is the result of an underlying epistemology which attempts to make moral meanings of social experiences based on a set of universal principles taken as moral truths, which makes another part of life remain unnoticed. A resolvent for this problem is to be initiated from a restructuring of such an epistemological approach. Walker (1989) suggests such an alternative epistemology where individuals are to be taken as irreplaceable occupants or non-repeatable instances owing to the histories, identities and affective definitions. Such an embodied account of knowledge is advanced in the notion of situated knowledges. She advocates to have "an account of radical historical contingency for all knowledge claims and knowing subjects, a critical practice for recognising our own 'semiotic technologies' for making meanings" (Haraway, 1988, p. 579). In such a feminist epistemological theory, her contention is the need, not for a theorisation of the world, but an earth-wide network of connections, where translation of knowledges among very different and power-differentiated communities is possible (Haraway, 1988). Objectivity of partial perspectives is ensured here and the standpoints of the subjugated are preferred, as the ultimate aim here is the formation of an epistemological theory which reduces the chances of organising worlds by means of domination. Her contempt is towards objectivity of a view from above, a master view as incorporating everything. She replaces it with "the joining of partial views and halting voices into a collective subject position that promises a vision of the means of ongoing finite embodiment, of living within limits and contradictions of views from somewhere" (Haraway, 1988, p. 590).

These deliberations depict the compatibility of situated knowledges with feminist ethics, or precisely as an epistemological framework for feminist ethics. The silencing of certain voices itself is the problem of concern in both situated knowledges and feminist ethics. The accentuation of these voices in the processes of making meanings of social experiences in general as envisaged by the doctrine of situated knowledges will eventually lead to making it heard in moral meaning formulations for an all-encompassing ethical life. Both the streams strive for an eradication of perpetual superiorities and subordinations by contemplating reality to be complex, diverse, contradictory, and partial where the object of knowledge cannot be separated from the subject. Haraway (1988) represents object of knowledge as an actor or agent which gets involved, along with the subject, in the process of giving account of the world. The multidimensionality of subjectivity is also maintained where self is conceived as always incomplete, partial, and constructed, and its imperfect connections make it possible to join with another for a shared vision (Haraway, 1988). It could be seen that this epistemological proposal is grounded on an account of self and world as essentially in connections and relations. This feminist perspective on reality constitutes the essence of the conception of self in feminist ethics too. Thus, for Walker's (1989) urge for an alternative epistemology built upon the three elements of attention, contextual and narrative appreciation, and communication, the doctrine of situated knowledges is the perfect elixir.

Conclusion

The article focuses on the incompetence of epistemological cogitations which is argued as the source of discriminations prevalent in the history of ethics. Feminist ethics as a stream, formed for the purpose of uncovering inadequacies of ethics in the inclusion of differences of perspectives owing to male supremacy, is presented as a critique to philosophical ethics. Such a domain is in need of a sound epistemological outlook which legitimises the knowledge claims of those subordinated or silenced voices or at least making them being listened. The implications of marginalisation of a particular group of people from participation in courses of furnishing social understandings are found on the notion of hermeneutical injustice which is a form of epistemic injustice. Here, due to power politics, certain set of people, without having collective hermeneutical resources, remain unaided in understanding and communicating specific socially significant experiences and continue to be weakened and disempowered. Examining this epistemic injustice in the specific field of ethics makes it clear the deprivation it causes to women in their development as moral agents. Ethics lacks such hermeneutical resources due to its patriarchal theorisations which keeps particular dimensions of life unnoticed.

The need for an inclusive epistemology takes us to the notion of situated knowledges as it attempts to substitute the objectivity of a master view with the objectivity of partial perspectives. Among these perspectives, those of subjugated are stressed as it ensures more inclusive, transforming account of the world. It aims to form an epistemological theory which reduces the chances of organising worlds by means of domination. It allows to view individuals as incomplete, partial, and constructed which eases translation of knowledges without being biased or prejudicial. Consequently, everyone becomes participants in hermeneutical practices where hermeneutical injustice holds the least scope. Feminist ethics calls for such an epistemological foundation that, by accounting for the contingent, contradictory, contextual, and complex nature of moral understandings and moral agents, provides apparatus which aids women in understanding and communicating the moral meanings of their experiences, moral theorisations of their natural instincts like mothering, conflicts of responsibilities, moral dilemmas encountering in interpersonal relations, and feelings of caring, trusting, and empathy.

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The Epistemic Significance of Thomas Kelly's Normative Structure of Bias

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Abstract

This article intends to discuss the issue of bias and reflects on the affinity between bias and knowledge. Based on Thomas Kelly's philosophical exposition of bias, the article intends to provide a simplistic and accessible frame from which philosophical reflections on the notion of bias can be understood. It is intended to gain insight into the epistemic significance of bias. It enquires into questions such as, whether a biased person can know and whether a biased belief can qualify as knowledge. What is the possibility to know something to be true even if one is biased with respect to that knowledge and whether true belief, which is also a manifestation of bias, can qualify as knowledge?

Keywords: Epistemology, Implicit bias, Bias blind spot, Norm-theoretic account

Introduction

What is bias? This is perhaps the most common question in the theory of knowledge. Bias is one of the problems of knowledge. We all encounter bias in our daily living, among people, objects, or processes. Bias has a multifaceted nature. It may oftentimes be used with a negative connotation, yet it is seen to play a vital role in knowledge acquisition. Bias remains an interesting topic of enquiry across the various disciplines of knowledge.

The Inevitability of Bias

We often like to think that our actions are shaped by our choices, and our choices are mostly shaped by careful and well-thought-out deliberations. However, research from the social and cognitive sciences suggests that a wide range of automatic habits and unintentional biases shape all aspects of social life. Bias is a uniquely human attribute. Bias is associated with the very structure of the human mind, which does not record events precisely and accurately, with no selectivity or creativity, as a machine would do. The human mind, as noted earlier, is not passive, but rather vital and highly selective. Perception is not random but it is a process that follows a specific pattern whose aspects can be partly identified (Elmessiri, 2006, p.26). Bias has undoubtedly been with us. In the present age we are overly concerned with bias and possess a tendency to see or conceptualise our most pressing social problems in terms of bias.

Bias is a tendency to favour or oppose a person, group, or idea, often in an unfair, inaccurate, or prejudicial way. Biases can be innate or learned, and can be harmful. Bias is defined by the Oxford dictionary as a prejudice in favour of or against one thing, person, or group compared with another, usually in a way considered to be unfair. The Cambridge dictionary describes bias as the action of supporting or opposing a particular person or thing in an unfair way, because of allowing personal opinions to influence your judgement. It includes the meaning of adopting some people's view and rejecting that of others. It is this meaning of bias that is adopted in this article.

Bias, an omnipresent force, seems almost unavoidable. Our inability to acknowledge our own fallibility not only reveals but also reinforces this bias. Biased media outlets significantly influence the political opinions and voting choices of millions. Discriminatory policies systematically favour certain racial groups over others. We often judge ourselves more leniently than our peers, and also more favourably than objective evidence supports.

The inevitability of bias (and the fact that it is bound up with what is human and cultural) should by no means be a reason for grief or frustration. If disentangled from its negative sense, bias is not at all a defect. The problematic of bias can then be re-evaluated from a different perspective. Thus, instead of placing one's bias over against the bias of the other, bias can be re-defined as the inevitability of human uniqueness and the possibility of freedom of choice (Elmessiri 2006, p.29).

Can Science Be Objective?

Science has also been afflicted by different conflicts of interests, politics, and other biases. The replication crisis and high-profile cases of misconduct, however, have renewed concerns about the generation of biased data and conclusions, owing perhaps to the outsized influence of apparently '"non-epistemic values'," such as political ideology and personal gain (May, 2021). There is the ideal that science is objective and transparent. Societal values and norms can shape the direction of scientific inquiry. Even with objective data, interpretation is subjective. Different scientists may draw different conclusions from the same data, influenced by their own perspectives. Despite these limitations, science continuously strives to minimise bias through rigorous methodology, transparency, critical thinking, and questioning assumptions. Thus, while science is not perfectly objective, it is a self-correcting process that continually seeks to minimise bias and arrive at the most accurate understanding of the natural world. By recognising the limitations of human objectivity and implementing rigorous methods, scientists strive to produce reliable and unbiased knowledge.

Philosophical Basis

The philosophical basis of bias is a multifaceted topic explored in relation to epistemology, ethics, and philosophy of mind. In philosophy, an interest in the topic of bias predates any of the figures or texts that are treated as canonical by the western philosophical tradition. In the East, Confucius took the absence of bias to be one of the characteristic features that distinguishes the virtuous person from others (Kelly 2022, p.17). In classical Greece, Socrates employed a method of questioning and critical thinking to expose the limitations of human knowledge and the potential for bias in everyday beliefs. Skeptics questioned the possibility of certain knowledge, highlighting the role of subjective biases in shaping our beliefs. Medieval philosophers also discussed the nature of human error and the importance of divine revelation to overcome cognitive limitations. Contemporary epistemologists have delved deeper into the nature of bias, exploring its various forms and its impact on knowledge acquisition. While the concept of bias itself might not have been explicitly defined, the underlying concerns about the limitations of human understanding and the potential for error in reasoning have been central to philosophical thought for millennia.In logical thinking, when a premise is implicitly accepted in our theories and methods, it becomes a philosophical bias.

Implicit Bias

Many different types of bias have been identified. Biases could be explicit or implicit. It is explicit when it is intended and implicit when it is not intended. Implicit bias includes the subconscious feelings, attitudes, prejudices, and stereotypes an individual has developed due to prior influences and imprints throughout their lives (Ikhianosime, 2021).

Individuals are unaware that subconscious perceptions, instead of facts and observations, affect their decision-making. Gender bias against women and androcentric cataloguing of women can arguably fall under implicit bias (ILO,2020).

Philosophically, implicit bias suggests that people can act on the basis of prejudice and stereotypes without intending to do so (Brownstein, 2015). Implicit bias leads to discriminatory behaviour in favour or against a subject, and these raise metaphysical, epistemological, and ethical questions. We all hold implicit biases. Implicit bias is challenging to recognise in oneself. Implicit biases operate outside of a person's awareness and control. Implicit bias can be in direct contrast with one's own beliefs and values. One may not even be aware that one holds these biases, or that they are affecting one's attitudes and behaviours. Implicit biases are difficult to identify. Social scientists cite implicit or automatic mental processes to explain persistent social inequities and injustices in a broad range of contexts, including educational, corporate, medical, and informal '"everyday"' settings (Beeghly& Madva, 2020, p.14).

The Bias Blind Spot

Relying on both social science research and philosophical argument, Kelly argues that we all have a bias blind spot. In his view, we tend to see ourselves and our judgements as more objective and less biased than other people and their judgements. It turns out that, when we consider whether other people are biased, we frequently reason in a way that is fundamentally different from the way we think about the possibility that we ourselves are biased. When we consider the possibility that someone else is biased, we often rely on our lay theories about the circumstances in which people tend to be biased, and we apply those theories to the case at hand (Kelly 2022, p.171). Here he implies that when it comes to other people, we apply our theories to their particular circumstances in order to confirm their biases. On the other hand, when it comes to ourselves—when we try to detect our own biases through introspection—we typically disregard the theories we apply to others. This results in a bias blind spot.

Bias–Knowledge connection

Bias affects the production of knowledge profoundly. It can influence research outcomes, historical narratives, and also public understanding. Recognising and addressing bias is crucial for producing more accurate, reliable, and comprehensive knowledge across all fields. Thomas Kelly explores the connections between bias and knowledge. A natural thought is that being biased at least, when the bias in question is sufficiently strong excludes knowing. A person who genuinely knows is free from biases that determine what they believe. One can genuinely know something even if one is biased with respect to that knowledge. Biased believers can sometimes know, even when they believe in accordance with their biases, and even if those biases guarantee that they would believe as they do even if the truth were otherwise (Kelly, 2022, p. 333). Being biased is consistent with knowing.

In a typical situation, stating that someone is biased regarding a particular issue, or that their perspective on that issue is biased, would generally be seen as a negative remark. On the other hand, acknowledging that someone truly knows something to be true, rather than simply believing it, suggests a positive assessment. A reckoning of the 'bias-knowledge' equation is attempted to by Kelly. He cites the example of a biased judge to highlight this point. In the context of a criminal trial, there are concerns that the judge may harbour bias against the defendant. This bias, if present, could potentially influence his judgement, leading him to conclude guilt even when the evidence is inconclusive or weak. The judge's belief, formed through such a biased process, cannot be considered knowledge. Even if the defendant is indeed guilty, the judge's conclusion lacks the necessary epistemic justification. One common way that cognitive biases manifest themselves is by making our beliefs insensitive to the truth, in the technical sense of '"insensitive'" employed by epistemologists (Kelly 2022, p. 334).

In a contrasting manner Kelly also presents a scenario where a parent's belief in their child's well-being is so strong that it becomes insensitive to contrary evidence. Even if evidence suggests otherwise, the parent's psychological mechanisms would likely lead them to dismiss or explain away such evidence to maintain their desired belief. This highlights the concept of a '"biased knower'" where strong personal investment in a belief can hinder objective judgement and lead to a distorted perception of reality. Biased believers can sometimes know, even when they believe in accordance with their biases, and even if those biases guarantee that they would believe as they do even if the truth were otherwise. In this respect, being biased is not inconsistent with knowing (Kelly, 2022, p. 336).

Norm-Theoretic Account of Bias

Thomas Kelly's norm-theoretic account of bias is a central concept in his book, "Bias: A Philosophical Study." This account provides a framework for understanding bias as a systematic departure from objective norms or standards of correctness. In both everyday life and in the sciences, a great deal of our thought and talk about bias seems to be captured by the following idea: a bias involves a systematic departure from a norm or standard of correctness. This is the fundamental idea of what I will call the norm-theoretic account of bias (Kelly, 2022, p.129). Kelly says that bias involves a systematic deviation from genuine norms or standards of correctness. This means that biased beliefs or judgements deviate from what would be considered rational or justified according to relevant epistemic or moral norms. This predictable departure from the relevant norms can be due to various factors, such as cognitive biases, emotional biases, or social influences. He offers multiple accounts or cases to illustrate the idea that bias involves systematic departures from norms.

The term '" norm'" is multifaceted and can be interpreted in various ways. Kelly does not refer to statistical norms, which relate to average values within a population. Even if a group deviates from these statistical norms, it does not necessarily indicate bias. Similar is the case of social or gender norms, which represent unwritten rules or expectations within a society or group. Instead, the relevant sense of '"norm'" here pertains to standards of correctness or rationality. These norms are objective and independent of individual beliefs or preferences. They are grounded in principles of logic, evidence, and sound reasoning. A biased belief or judgement, therefore, is one that systematically deviates from these objective norms or standards of rationality.

Kelly distinguishes between two senses of bias while explaining his norm-theoretic account of bias. The pejorative sense refers to bias as a negative evaluation of a person or his or her beliefs. It implies that the person is systematically departing from objective norms in a way that is harmful or unjustified. The non-pejorative sense refers to bias as a systematic departure from a standard of correctness, without necessarily implying a negative evaluation. For example, a biased coin is not morally bad, but it systematically deviates from the norm of fairness. Kelly (2022) argues that it is essential to recognise the nuanced differences between pejorative and non-pejorative biases. Bias can both hinder and facilitate knowledge acquisition. While pejorative bias, which is harmful and unjustified, clearly obstructs knowledge, non-pejorative bias, though it deviates from objective norms, can sometimes guide our thinking towards fruitful insights. Although the norm-theoretic account is not itself an account of our practices of attributing bias, it naturally gives rise to certain ideas about how bias attributions work, and much of its theoretical utility consists in these connections.

Kelly (2022) presents a comprehensive

framework for understanding the norm-theoretic account, which sheds light on our everyday and scientific discussions of bias. He argues that morality and rationality can sometimes necessitate bias. He contends that groups can exhibit bias even if individual members are not biased. He further suggests that we are often rationally compelled to believe that those who disagree with us are biased, regardless of our knowledge of their beliefs or psychology. Kelly defends the concept of ' "biased knowing"' and explores its implications for philosophical methodology.

The epistemology of disagreement

A common response to disagreement is to discount the other person's opinion on the grounds that the person isor might be biased. Kelly gives an in-depth account of a disagreement about the constitutionality of abortion rights in the United States. The author believes that abortion is a constitutionally protected right, despite lacking formal legal training. The author's belief is challenged by a friend of a friend who cites the opinion of a late Supreme Court Justice Antonin Scalia, who strongly opposed abortion rights.

In cases of disagreement, we discount some people's opinion, either wholly or in part, on the grounds that they are biased; or on the grounds that there is a significant chance that they are; or because the possibility that they are is salient and we are not in a position to rule it out. Kelly suggests that once a person, like Justice Scalia, is perceived as biased on a particular issue, his or her intelligence, legal expertise, and knowledge of arguments on both sides become irrelevant. In fact, these qualities can make the biased persons more dangerous, as they can use their skills to construct convincing arguments that support their biased viewpoint, misleading both themselves and others. Kelly proposes that even if an unbiased person's justification for identifying bias relies on assumptions that the biased person might reject, this does not invalidate the assessment. The unbiased persons, being more rational and less susceptible to bias, are better equipped to withstand challenges to their judgement. Additionally, Kelly hypothesises that initial accuracy in bias detection can lead to a snowball effect. In his point of view, judgements about bias are subject to strong "rich get richer, poor get poorer" effects, according to which initial differences in accuracy lead to greater differences at later times, as believers fall into epistemically virtuous and vicious cycles.

Conclusion

The topic of bias has received considerable attention in recent times yet, there are a range of issues that need to be philosophically pursued. This article intends to draw attention to the need of a philosophical discussion of bias, especially on the structural connections between bias and knowledge. Thomas Kelly exposes the idea that, far from excluding knowledge, biases are essential to knowing, and deeply implicated in paradigmatic instances of knowledge acquisition and human reasoning. This notion has also been suggested by leading thinkers of contemporary philosophy such as Thomas Kuhn, Noam Chomsky, and Nelson Goodman. Kelly explains how this idea can be consistently reconciled with the commonsense idea that beliefs that are the manifestation of bias are not knowledge and offers positive suggestions about how and when bias excludes knowledge.

However, it may also be noted that rather than fully addressing the complex and multifaceted nature of bias, Kelly's framework is criticised for primarily focusing on deviations from norms and standards of correctness. Kelly's explanation of the bias blind spot is criticised for not fully accounting for the psychological and social factors including cognitive biases and social dynamics that shape individuals' perceptions of bias. Critics contend that Kelly's normative approach fails to adequately consider the cultural and contextual influences on bias perception, arguing that norms of correctness vary across cultures and contexts, making a universal approach unsuitable. However, Kelly's theory of philosophical bias offers insights into understanding the nature of knowledge, decision-making, and the persistence of bias, showing its continued relevance in modern epistemological debates.

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Affirmative Actions for Women's Safety: A Study on Kerala Police's Initiatives for Gender Justice

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Abstract

This study examines the affirmative actions undertaken by the Kerala Police to promote gender justice and ensure women's safety. Despite progress in various spheres, women in India continue to face numerous challenges, including violence, harassment, and discrimination. The Kerala Police launched several initiatives aimed at addressing these issues and promoting gender justice, and fostering a safer, more inclusive environment for women. The study finds that the Kerala Police's initiatives, such as Pink Patrol, Women's Help Desks, and self-defence training programmes, have contributed significantly to enhancing women's safety. However, challenges persist, including inadequate resources, societal attitudes, and institutional barriers.

Keywords: Violence against women, Self-defence training, Institutional reforms, Policy interventions, Gender-based violence

Introduction

The safety and well-being of women is a pressing concern globally, with gender-based violence (GBV) being a pervasive and insidious issue that affects women and girls across cultures, classes, and communities. As per the UN Women Organisation data, globally, almost one in three women have experienced physical and/or sexual violence at least once in their life (Global Database on Violence Against Women | UN Women Data Hub, n.d.). In India, the issue of women's safety has gained significant attention in recent years, particularly in the wake of high profile cases of violence against women. In 2022, there were 445256 incidents of crime against women reported in India. That is over 1220 cases a day, that is, those that are officially reported and collected by the National Crime Records Bureau. It is inevitable that the true prevalence of this kind of gender-ed violence will exceed the reported figures (National Crime Records Bureau, 2022). According to the UN Women Organisation, gender justice refers to the fair and equitable distribution of rights, resources, and opportunities between women and men, girls and boys, and individuals of diverse gender identities and expression (Secretary-General Ban Ki-moon, 2010).

Violence against women and girls is deeply rooted in unequal distribution of power between men and women in society. This phenomenon can be understood through gender framework, which recognises that while sex is a biological characteristic, gender is a socially constructed concept that defines expected behaviours, roles, and characteristics for men and women. Affirmative actions and gender justice are intricately connected concepts that are essential for promoting equality, rights, and participation of women. Affirmative actions are a means to achieve gender justice. By addressing the historical and systematic inequalities faced by women, affirmative actions can help to promote gender justice. When a company or Government invests time and money to ensure that individuals are not subjected to discrimination on the basis of their gender or ethnicity, this is known as affirmative action (Crosby et al., 2006). The affirmative action involves intentional efforts to recruit, retain, and promote members of underrepresented groups, with the goal of achieving a more diverse and inclusive environment. However, it can only be effective in promoting gender justice if they are designed and implemented in a way that addresses the specific needs and concerns of women. This requires an understanding of the social, cultural, and economic contexts in which women live and work. It also requires a commitment to challenging and transforming the existing power dynamics that perpetuate gender-based inequalities and violence. Gender justice is a fundamental right that is essential for promoting equality, dignity, and well-being for all individuals. It involves addressing the root causes of GBV, such as patriarchal norms, gender inequality, and discriminatory attitudes. Gender justice requires promoting equal rights, opportunities, and treatment for individuals of all genders, and ensuring access to justice, healthcare, and social support for survivors of GBV.

The police play a vital role in maintaining law and order, protecting citizens, and upholding justice. However, when it comes to gender justice, the police have often been criticised for their inadequate response to violence against women. Common women, in particular, face numerous challenges in accessing justice, including lack of awareness, socio-economic constraints, and patriarchal attitudes. In this context, affirmative actions by the police are crucial to promote gender justice and protect the rights of women.

Women's security is an inalienable human right that is essential for the realisation of gender equality and the empowerment of women. The concept of women's security encompasses not only physical safety but also emotional, psychological, and economic well-being. Despite being a fundamental human right, women's security remains a distant reality for millions of women around the world. The Universal Declaration of Human Rights (UDHR) and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) recognise women's security as a fundamental human right. Article 3 of the UDHR states that "everyone has the right to life, liberty, and security of person" (United Nations, n.d.). Similarly, CEDAW emphasises the importance of women's security in achieving gender equality and empowering women. Women's safety and security are pressing concerns in contemporary India, with increasing reports of violence, harassment, and discrimination against women. In response, the Kerala Police has launched several initiatives aimed at promoting women's safety and gender justice. This study evaluates the effectiveness of these initiatives and assesses their impact on promoting women's safety and security.

Globally, law enforcement agencies have implemented varied measures and policies to combat violence against women. A notable feature of policing worldwide is the establishment of women's police stations, which have been operational in countries such as Argentina and Brazil since the 1980s, and have since been replicated in other Latin American nations, Africa and Asia (Porter, 2023). In Germany, police have the power to order the offender to leave the home and prohibit him from re-entering in case of domestic violence (European Institute for Gender Equality, 2016). In order to promote and encourage women's representation, experience, and general well-being in law enforcement, the United States launched the 30*30 project. In India, Haryana police introduced the Durga Shakthi app specifically for women security, Telangana police established a division for women's security known as SHE squads, and Kolkata police have Winners patrolling. The Mumbai police established 91 Nirbhaya Squads, which are composed of highly skilled female police officers, to combat crimes against women. Kerala Police's affirmative actions for women's safety are exemplary, with initiatives such as the Pink Police, Women's Desk, and All Women Police Station.

Kerala Police Initiatives

The Pink Police patrol public spaces, such as bus stations, railway stations, and markets, to prevent and respond to crimes against women and children. This visible presence of women police officers helps to deter potential offenders and provides a sense of security for women and girls. Apart from taking cases, the Pink Police provide essential assistance to women and children in emergencies. The services provided by the Pink Police include taking women and children who are stranded at night to safe places, taking those involved in road accidents to hospitals, protecting children from the sale of narcotics, and finding children who wander away from school (The Malayala Manorama Report, 2018). Kerala Police is the first among the nation to start All Women Police Station (AWPS) in Kozhikode (The Hindu Bureau, 2023). There are 14 Women Police Stations in the state, which are working specially for women and children. The purpose of AWPS is to ensure protection of women and children and for safeguarding their rights while dealing with complaints by and against them. The AWPS provides a comfortable and non-intimidating space for women to report crimes, such as domestic violence, sexual assault, and harassment (Natarajan, 2016). Women often feel hesitant to report crimes to male-dominated police stations, fearing ridicule, blame, or further victimisation. The AWPS addresses this concern by providing women a space where they can feel safe and supported. The establishment of AWPS also promotes gender equality within the police force. By providing opportunities for women police officers to take on leadership roles and handle complex cases, AWPS helps to break down patriarchal attitudes and biases within the force.

A Women Help Desk is a dedicated space within a police station where women can report crimes, seek assistance, and receive support. The Women Help Desk is typically staffed by women police officers who are trained to handle cases related to violence against women, such as domestic violence, sexual assault, and harassment. The Women Help Desk increases accessibility for women who may faces barriers in reporting crimes or seeking assistance, such as lack of awareness, fear of retaliation, or social stigma. It is a tangible example of gender justice and affirmative action. In a similar vein, initiatives such as the 'Jwala' programme and Self-Defense Training Programme conducted by the Kerala Police aim to empower women in Kerala by boosting their self-confidence and equipping them with skills to defend themselves against potential crimes. These programmes exemplify a proactive approach to promoting gender justice and enhancing the safety and well-being of women. Since 2015, Kerala Police have been organising self-defence training programme as a part of its Janamaithri Suraksha Project. More than seven lakh women had got self-defence training as of March 2023 (Reporter, 2022).

Self-defense programmes can promote gender justice in several ways like, it can empower women and girls to protect themselves against violence and abuse, which is a fundamental aspect of gender justice. By teaching women and girls self-defense techniques, these programmes help to challenge patriarchal attitudes and power dynamics that perpetuate violence against women. Self-defense programmes also promote gender justice by addressing the root causes of violence against women, such as patriarchy, misogyny, and sexism. Providing a safe and supportive space for women and girls to share their experiences, build confidence, and develop self-esteem. Nirbhayam and POL app are the women security applications designed to enhance the safety and security of women, particularly in situations where they may feel vulnerable or threatened.

These initiatives have contributed

significantly to promoting women's safety and empowerment, increasing women's trust and confidence into the police, improving response times to women-related cases, and enhancing collaboration between police and women's organisations. These initiatives play a crucial role in promoting gender justice by limiting GBV through affirmative actions. This study underscores the importance of affirmative actions in promoting women's safety and security. Increasing resources and infrastructure, enhancing community engagement and participation, and promoting societal attitudes and behaviours that respect and value women's rights and dignity are essential. Ultimately, promoting women's safety and gender justice requires a sustained commitment to challenging patriarchal attitudes and power dynamics, promoting education and awareness, and providing support and resources for women. The Kerala Police's initiatives demonstrate that, with dedication and commitment, it is possible to create a safer and more just society for women.

The primary issue with providing justice to women is the lack of female police officers. Women will have a greater understanding of the issues that other women confront, and the legislation itself requires that women police officers be present when interacting with women. As the number of female officers present increases, so does the level of security. Women are comparatively under-represented in the police force because it is a male-dominated profession. However, women make up only 11.7% of India's police forces (Jain, 2023), and the mandatory 33% reservation was not filled. As of 2017 January, only 6.3% of female personnel were in the Kerala Police force (Scroll.in, 2020). The patriarchal mindset of society and police officers also perpetuates institutional sexism and misogyny. Police departments may have policies and procedures that discriminate against women, or they may have a culture that tolerates or encourages sexist and misogynistic behaviour. This can lead to a lack of trust between women and law enforcement, making it more challenging to address and prevent violence against women. To address this, it is essential to provide training and education on GBV

Conclusion

The quest for gender equality and women's safety is a cornerstone of human rights, and proactive interventions are crucial to achieving this objective. In conclusion, the Kerala Police's initiatives to promote women's safety and gender justice represent a critical step towards creating more equitable and just society. By acknowledging the inter-sectional nature of violence against women and addressing the specific needs of marginalised communities, the Kerala Police have demonstrated a commitment to trans-formative change. By leveraging the strengths of community-based initiatives and technological innovations, the Kerala Police can continue to push the boundaries of what is possible in promoting women's safety.

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Reverse Migration: Challenges of Reintegration in Home Countries

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Abstract

Reverse migration, once an overlooked and under-researched area, is now gaining significance in global migration discussions. Reintegration, a crucial aspect of reverse migration, is recognised as a complex process that varies for each returnee. While the adaptation of migrants in host countries has been widely explored, less focus was given to the socio cultural and financial assimilation challenges faced by returnees upon returning home. People in destination countries frequently have severe reintegration difficulties, especially in terms of language and social adaptability. Although there is extensive theoretical literature on return migration and the reasons for returning, research on policies and reintegration processes remains limited. In response, many governments have developed policies and programmes aimed at encouraging the repatriation of their migrants and supporting their fruitful and lasting resettlement in their home country. This article seeks to examine the theoretical aspects of returnee reintegration by identifying the economic and socio-cultural challenges they face in their country of origin.

Keywords: Reverse migration, Economic reintegration, Socio-cultural adaptation, Policies for reverse migration.

Introduction

Migration studies have helped us better comprehend mobility and the intricacies of migration-related variety. It has built a separate body of knowledge that investigates the causes of migration, the processes involved, and the far-reaching consequences for both migrants and the societies with which they interact. Migration studies haves emerged as an interdisciplinary field, bringing together sociology, political science, anthropology, geography, law, and economics. Over time, its scope has broadened to include viewpoints from fields such as health studies, development studies, and governance studies, resulting in significant insights from these various disciplines.

Migration is becoming increasingly common in today's globalised environment. Many people see migration as a potential escape from poverty and a path to greater success, driven by the desire to improve their quality of life and seek better chances (King, Mata-Codesal, & Vullnetari, 2013). According to the IMO research, there would be 281 million international migrants in 2020, accounting for 3.6 percent of the world's population, and 831 billion international remittances worldwide in 2022.

Migration is a complex and dynamic process, making it difficult for governments and states to properly regulate and manage global population migrations. Instead of being defined by a single type of migration, most countries presently experience a variety of migration categories concurrently, including labour migration, family reunification, refugee flows, and permanent resettlement (Castles, de Haas, & Miller, 2005). Immigrants can travel across national or international borders for short or extended periods of time, either alone or in groups.

Migration has gained more attention in political discourse in recent decades (Castles, de Haas, & Miller, 2014). Because researchers have recognised that returnees contribute to economic growth, poverty alleviation, and sustainable development in their home nations. Through talent transfer, labour market expansion, investment stimulation, and cultural variety enrichment, returning migrants frequently make substantial contributions to their communities. In order to support their families and society at large, they also improve their local communities by contributing money, exchanging knowledge, and starting their own businesses. Return migration is becoming more and more acknowledged by policymakers as an essential part of comprehensive migration management. Coordination and cooperation between nations and non-state actors at the domestic and global sphere are necessary to achieve successful results in this field (IOM, 2018).

Methodology

Participants

This study involved analysis of 150 return migrants across different age groups based on their experiences and policy implications.

Data collection/ materials

The study employed a mixed-methods approach, combining online surveys and in-depth interviews to explore usage patterns and perceptions. This dual approach provided both quantitative insights and qualitative depth, ensuring a comprehensive understanding of the subject.

Analysis or methods

Statistical techniques were applied to analyse quantitative data and identify correlations, while insights from interviews provided a deeper understanding of behavioural impacts.

Results and Analysis

Reverse migration: A theoretical Analysis

Theories that explain why migrants decide to return to their home countries have a significant impact on reverse migration. According to Cassarino (2008), there are five main hypotheses that provide distinct viewpoints on reverse migration. Reverse migration, as defined by the theory of neoclassical economics, happens when migrants fail overseas or when their human capital is not compensated as anticipated. Return is seen by this perspective as a type of failure. On the other hand, the New Economics of Labour Migrating (NELM) hypothesis considers the come-back as the outcome of a ‘calculated strategy’ at the household area, in which migrants return after effectively accomplishing their migrating objectives. The possible effects that returning citizens may have on their home nations are the main emphasis of the structural approach. By keeping close relationships to their home countries through frequent visits and remittances, returnees might better prepare for reintegration, according to the transnationalism concept. Finally, according to the Social Network Theory, returnees gain from the social networks they established overseas since they offer them information and resources that will help them back home. Like transnationalism, this theory does not consider the migratory process to be over when reverse migration occurs.

Typologies of reverse migrants

Numerous academics have created reverse migration typologies, including Bovenkerk (1974) and Gmelch (1980). One of the most commonly discussed types of reverse migration under this framework is Cerase’s (1974) work, which differentiates between four types of first-generation immigrant returns: failure, conservatism, retirement, and innovation. When social or political reasons prevent immigrants from adjusting to their new nations, this is known as return of failure. They are motivated to return by the challenges they have assimilating into the immigration setting (for example discrimination and language barriers). Return of conservatism refers to migrants who initially intend to return after saving some money while migrating. They typically transmit remittances, stay longer in the migratory setting than the previous group, and carry out their financial objectives, such as purchasing real estate in their home country. They uphold the principles of their native society, thus instead of altering the social structure, they strengthen it there. Return of retirement is the term used to describe individuals who, when their working lives are over, intend to spend their old age in their home nations. Back home, they are thought to have virtually no influence on development. When immigrants are relatively well integrated overseas, have picked up new skills, and are more active in the host nation's society, creativity returns. The returnees are a vibrant group who see themselves as 'agents of the change' and who want to use their knowledge and skills gained in the host nation together with new ideals and values to transform their birthplace.

King (2000) offers a typology that differentiates between occasional, seasonal, temporary, and permanent returns based on the length of the migrant's stay back. More recently, Batistella (2000) distinguished four primary varieties using two variables, return time and decision to return, return of achievement, in which the migrant returns willingly after reaching their objective, Return of setback occurs when a migrant returns voluntarily before completing the migration process for reasons such as abuse, family problems, or dissatisfaction with their job; Return of completion occurs when a migrant returns after their contract is completed but would have preferred to stay; and Return of crisis occurs when a migrant is forced to return because of political unrest or natural disasters.

Marianne Haase and Pia Honerath (2016) classify returnees into four categories: volitional return migrants, second-generation 'quasi-returnees,' return migrants whose return appears voluntary but is frequently necessary, and involuntary return migrants. Legally undocumented individuals or those whose integration failed and they were deported are examples of involuntary repatriation. The second group of migrants includes those whose return may appear to be voluntary but is actually the consequence of unsuccessful attempts at integration or migration. The third category includes migrants who go back on purpose, usually after achieving their savings targets, learning new skills or pursuing higher education, or making business contacts that they may use back home. Diaspora members who are second or third generation who want to make investments in their parents' or grandparents' native country are referred to as the fourth group. Despite the fact that there are numerous forms of return migration, voluntary return is typically the most preferred.

Why do migrants return?

According to global statistics, a sizable percentage of migrants ultimately go back to their home nations. Information on reverse migration is still lacking, two out of five migrants often depart their host nation within five years of their advent (Wahba, 2015). In Slovakia, almost 10% of people who work overseas have come home (Masso et al., 2016). In region like eastern Europe and Asia. 20-30% of highly educated expatriates return to their home countries in their prime working years, contributing significantly to the income levels and wages of their home nations. (Mayr & Peri, 2008). According to studies by Dustmann and Weis (2009), within five years of their arrival, outmigration rates for the UK in the 1990s were approximately 40% for males and 55% for women.

There are a number of reasons why people from other countries decide to go back home. Some migrants decide to stay with their family who have acclimated to the new society, while others will return. This group is not likely to go back to their own country. Another group of migrants think about going back, but they never actually do it. Returnees, or those who leave their host nation for economic or non-economic reasons, make up the third group. Returning home may be due to personal reasons, familial matters, or nostalgia for one's native land. According to Dumont and Spielvogel (2008), there are four main causes of reverse migration: not being able to assimilate into the host nation, wanting to return home, reaching a financial objective, and having access to employment prospects in the home country because of skills acquired outside. Reverse migration should be viewed as a component of a larger migration cycle rather than as an isolated occurrence. It fits well with the framework of provincial and federal strategies for managing migration. This may occur soon after entering the host nation or years later, at different points in the migratory cycle. The decision of a migrant to return is uncertain.

Strategies of reintegration

Sussman (2000) identifies four distinct return migration strategies, multicultural, affirmative, additive, and subtractive. Unseen pre-immigration cultural identities that emerge shortly after migration are the root cause of subtractive and additive identity alterations. According to Sussman, the realisation of the differences between the home and host cultures is what is causing these changes. Although both types of identity shifts are characterised by high levels of stress upon return, additive identity shifters may seek opportunities to engage with members of the previous host culture, whereas subtractive identity shifters are more likely to seek opportunities to interact with other returning migrants. Because the contrasts between the home and host cultures are mostly ignored, affirmative identity shifters' home cultural identities are kept and enhanced during the migration journey. As a result, they experience less stress upon re-entry because their home cultural identity is less disrupted. Lastly, people who are intercultural identity shifters manage and maintain multiple cultural identities at the same time, which makes the process of returning to their original identity relatively easy. They seek out and form friendships with people from all cultural backgrounds, and upon their return, they may participate in a variety of international entertainment events.

International collaboration between countries of origin, transit, and destination is becoming more and more necessary as migration gets more complex. Multilateral initiatives have been started by the International Organisation for Migration (IOM) to promote productive collaborations on reverse migration. The IOM is essential in helping various returnee categories through its Assistance and Voluntary Return and Reintegration (AVRR) programmes. The IOM's initiatives, which at first concentrated on giving returnees transit, have developed to provide a set of assistance meant to encourage the welfare of returns. Three primary AVR programmes are run by the IOM: a) general return aid for refugees, irregular migrants, unsuccessful asylum seekers, and those who desire to leave their host countries; b) return and reintegration help specifically geared to suit the requirements of specific groups like skilled nationals or vulnerable populations; and c) assistance for migrants who become stranded while travelling (IOM, 2008). For returnees, these programmes improve reintegration support, information services, and counsel.

Return migration has grown to be a crucial component of many countries' migration plans in recent decades and is thought to be essential to efficiently managing migration. Lesińska (2013) distinguishes between passive and active state policy concerning return migration. A passive strategy reacts to the patterns of migration that already exist, which are frequently brought on by economic crises or increased unemployment in the countries of destination, which cause migrants to return home during trying times. And active state policies, on the other hand, is proactive and seeks to motivate migrants to return by acknowledging the advantages of doing so.

Many governments, especially those in less developed areas, have put policies or initiatives in place to make it easier for their inhabitants to return. According to the United Nations (2018) about 72% of nations worldwide have return migration policies, with the largest percentages found in Africa (78%) and Latin America and the Caribbean (88%), Research centres, ministries or agencies devoted to helping returnees, and online networks that link them to opportunities back home are all common components of these strategies (Debnath, 2016). States gain from reverse migration because it helps the nations of origin develop through investments, money inflows, and the transfer of skills and technologies.

Challenges of reintegration

Returning migrants may not be eligible for social security benefits in their home country. Eligibility for social assistance can be contested based on employment duration, nationality, migratory status, and job type (e.g. informal, domestic, self-employment, seasonal agricultural labour). Accessing social protection might be challenging owing to lack of knowledge, language challenges, and representation. Children struggle to reintegrate in their home country due to a lack of social assistance for their family. Family protection hinders children's reintegration into their home nation. Women migrant workers, who are more likely to work in the informal economy or in irregular situations, are more vulnerable. Migrants may contribute to social security schemes but do not receive benefits, and their rights may not be portable owing to lack of agreements. They are discouraged from returning if they are unable to keep or transfer their social security benefits, after contributing for years. Access to social protection, skills recognition, and other measures are crucial for returning migrant workers to restore their home economies after the COVID-19 pandemic.

Migrants who return to their home country or third-party countries may face significant hazards, such as unsuccessful asylum claims or the return of victims of human trafficking. Returnees' economic, social, and cultural rights may be at jeopardy, in addition to their civil and political rights. Limited return monitoring that does not include reception and identification of returnees upon arrival, as well as long-term post-return dynamics in the country of origin, may not adequately address significant hazards for returning migrants. Often, the problems that migrants may encounter upon repatriation can be predicted.

However, without comprehensive pre-return evaluations, states and stakeholders may not be aware of potential risks throughout the return process. There is a need for rights-based post-return and reintegration monitoring to ensure that returnees are not detained, their records are accurate, and they have access to necessary identity documents, health-care, and housing upon arrival. To ensure successful reintegration and ongoing access to rights and protection for returning child migrants, multidisciplinary mechanisms must monitor their situation, inclusion in national systems, and reintegration assistance for a sufficient period after their return.

Extending social protection coverage enhances financial stability for migratory workers, reducing poverty, inequities, and social exclusion. States should provide migrant workers with contributory and non-contributory social protection, including national social protection floors, as well as essential health care and income security for returning migrants and their dependents. Additionally, social security entitlements should be portable to allow returning migrants to maintain their rights.

Conclusion

The annual increase in the number of international migrants has an impact on people, their home and destination nations, and governmental policies worldwide. Due to the increasing number of returnees and refugees in many jurisdictions, return migration has attracted a lot of attention. Therefore, controlling these movements and addressing the detrimental effects they cause are urgently needed. Although the focus of this study is voluntary returns, which are frequently the desired option, it is evident that states also deal with involuntary returns of different kinds. Economic, familial, and personal factors are frequently the driving forces behind migrants going back to their native countries. Return migration in particular can have negative economic, social, and psychological impacts on returnees. Migration itself can be a difficult experience.

From the standpoint of social reintegration, returnees frequently encounter difficulties re-establishing their social networks and connections. In order to help returnees adjust, these networks are essential, especially when it comes to finding work, housing, and emotional support. This study has brought attention to returnees' sentiments of estrangement, loneliness, and frustration. Policies implemented by the state are essential in helping returnees reintegrate into society, both socially and economically. By encouraging entrepreneurship, the state can gain from the talents of the returnees, which can help create jobs for non-migrants and ultimately boost development and richness.

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