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The Mediating Role of Self-Esteem in the Relationship Between Perfectionism and Imposter Syndrome Across Different Age Groups

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Abstract: The present study aimed to investigate the mediating role of self-esteem in the relationship between perfectionism and impostor syndrome across different age groups. A total of 210 adult participants, aged between 25 and 55 years, took part in the study. Data were collected using the Rosenberg Self-Esteem Scale to assess self-esteem, the Frost Multidimensional Perfectionism Scale to measure perfectionism, and the Clance Impostor Phenomenon Scale to evaluate impostor syndrome. The research employed a quantitative design, and data were analyzed using SPSS. Correlational analysis revealed a significant negative relationship between perfectionism and impostor syndrome ($r = -0.386$, $p < .001$). However, mediation analysis indicated that self-esteem did not serve as a significant mediator in the relationship between perfectionism and impostor syndrome. Furthermore, this mediating effect remained nonsignificant across the different age groups (25–35, 35–45, and 45–55 years), suggesting that age does not influence the role of self-esteem in this relationship. These findings contribute to a better understanding of the psychological mechanisms underlying perfectionism and impostor syndrome in adulthood.

Keywords: *Self-Esteem, Perfectionism, Impostor Syndrome, Adulthood*

1. Introduction

1.1 *Self-Esteem*

Self-esteem refers to an individual's perception and evaluation of their own value and worth (Rosenberg, 1965; Burkitt et al., 2024). It reflects a subjective sense of self-worth, including acceptance of oneself and a generally favourable self-attitude (Ryszewska-

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Łabędzka et al., 2023). Smith and Mackie describe it as how we evaluate ourselves, with self-esteem reflecting either positive or negative feelings about oneself (Kumar, 2014). Self-esteem involves both cognitive beliefs, like "I am competent" or "I am worthy," and emotional responses such as pride, shame, triumph, and despair. It can be understood as both a trait and a state. As a trait, self-esteem involves a consistent and enduring self-assessment, while as a state, it is influenced by specific situations and can fluctuate based on contextual factors. It is the evaluative component of self, involving a sense of worth, pride, and discouragement. Furthermore, self-esteem is closely tied to self-consciousness, influencing how individuals view themselves.

Individuals can possess either high or low self-esteem, which develops based on their positive and negative life experiences. High self-esteem is associated with positive self-views and a strong sense of worth and likability, whereas low self-esteem is characterized by negative self-evaluations and a poor self-image. Self-esteem is a key factor in psychological well-being (Baumeister et al., 2003; Zeigler-Hill, 2013; Burkitt et al., 2024), with higher self-esteem being linked to improved well-being, satisfaction in relationships and work, and better physical health (Orth et al., 2012; Paradise & Kernis, 2002; Burkitt et al., 2024).

Additionally, self-esteem plays a key role in promoting to overall well-being and happiness. It also supports more effective coping in emotionally challenging circumstances, such as illness or social isolation during a pandemic (Ryszewska-Łabędzka et al., 2023). In contrast, low self-esteem can lead individuals to avoid engaging in new experiences or activities. Moreover low self-esteem is also related to negative consequences such as eating disorders (Krauss et al., 2023; Burkitt et al., 2024), as well as depression and anxiety (Sowislo & Orth, 2013; Burkitt et al., 2024). Given its significant impact on mental health, it is crucial to identify the factors and processes that influence self-esteem. Studies examining self-esteem across different stages of adulthood have indicated that levels of self-esteem tend to remain relatively stable during early and middle adulthood, with a slight upward trend extending into late midlife (Huang, 2010; Orth et al., 2011; Wagner et al., 2013; Wagner et al., 2024). In contrast, findings regarding older adulthood are varied—some research suggests a decline in self-esteem after the age of 65 (Orth et al., 2010; Robins et al., 2002; Shaw et al., 2010; Wagner et al., 2024), while other studies report consistent levels, or even increases in later life (Marsh et al., 2010; Wagner et al., 2024). Notably, recent studies confirm that these patterns are primarily due to age-related changes rather than cohort effects (Orth et al., 2010, 2011; Wagner et al., 2024).

1.2 *Imposter syndrome*

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The concept of impostor syndrome, originally termed the "impostor phenomenon," was introduced by Clance and Imes in 1978. Through their research involving 150 women—many of whom held PhDs, excelled academically, or were accomplished professionals—they noted a consistent pattern: despite external recognition and achievements, these women persistently doubted their abilities. They believed their success was due to luck rather than competence. The impostor phenomenon (IP) is defined by persistent feelings of inadequacy or a sense of being a fraud, particularly in intellectual or academic contexts (Clance & Imes, 1978; Pákozdy, 2023). Those with high IP levels often find it difficult to accept their accomplishments, attributing them to external factors like chance, and are more likely to experience anxiety, depression, and low self-esteem (Rohrmann et al., 2016; Schubert & Bowker, 2019; Wang et al., 2019; Pákozdy, 2023).

Individuals with impostor feelings often feel the need to meet exceptionally high standards and may overwork themselves due to a "superman/superwoman" mindset (Clance, 1985; Pannhausen et al., 2020). They tend to hold unrealistic expectations and strive for flawlessness (Imes & Clance, 1984), which aligns closely with perfectionistic traits like self-criticism and high-performance demands (Flett & Hewitt, 2002; Frost et al., 1990). These individuals may adopt perfectionistic self-presentation strategies, such as hiding imperfections, to avoid being perceived as inadequate (Hewitt et al., 2003; Pannhausen et al., 2020). While perfectionism is driven by internal pressure, impostor syndrome stems from a fear of being seen as a fraud (Cokley et al., 2018), leading people to use perfectionist behaviors as a way to mask their insecurities.

The impostor phenomenon is made up of six distinct elements that can vary in intensity among individuals. These include a strong desire to always be the best, the mistaken belief that extraordinary abilities are standard, a fear of failure, feelings of fear and guilt associated with success, and a tendency to undervalue one’s own skills and competencies (Sakulku& Alexander, 2011; Dudau, 2014). Individuals with Impostor Syndrome often experience heightened anxiety and fear due to their inability to meet excessively high expectations or to be exposed to others (Saputri &Khoirunnisa, 2024). Some of the adverse effects of imposter syndrome includes psychological stress, anxiety, and depression, as well as emotional burnout, which is marked by feelings of exhaustion, low self-esteem, detachment, and reduced productivity. This is driven by self-doubt, leading individuals to avoid tasks that could enhance their performance and to reject positive feedback, ultimately resulting in a lack of motivation and a skewed perception of their abilities (Chandra et al., 2019; Saputri&Khoirunnisa, 2024).

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1.3 *Perfectionism*

In the early studies of perfectionism, most researchers regarded perfectionism as a personality trait with negative self-worth, characterized by striving for perfection and setting excessive-performance goals, and accompanied by a tendency to evaluate behavior too harshly (Flett & Hewitt, 2002; Fang & Liu, 2022). Perfectionism is a complex personality characteristic marked by the pursuit of exceptionally high, and often unattainable, standards along with a desire to meet these expectations flawlessly (Flett & Hewitt, 2002; Frost et al., 1993; Stoeber, 2018; Kwarcińska, 2022). Individuals with this trait frequently engage in excessive self-criticism, especially when they feel they have fallen short of their goals. Signs of perfectionism can appear early in life, including during childhood and adolescence (Flett et al., 2002a; Stoeber et al., 2009; Kwarcińska, 2022), and can influence various aspects of functioning—ranging from academics and sports to hobbies. In adulthood, it can also affect romantic relationships, career roles, and parenting (Flett et al., 2003; Piotrowski, 2020a; Stoeber, 2018; Kwarcińska, 2022). While perfectionism may impact multiple life domains, it typically emerges in areas of personal significance unique to each individual (Stoeber, 2018; Kwarcińska, 2022).

Several empirical studies have identified two distinct dimensions of perfectionism that are especially important to differentiate (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Frost, Heimberg, Holt, Mattia & Neubauer, 1993; Stoeber & Otto, 2006; Fang & Liu, 2022): Evaluation Concerns Perfectionism (ECP) and Personal Standards Perfectionism (PSP). ECP, also referred to as perfectionistic concerns, represents the more negative features of perfectionism, such as the fear of making mistakes, anxiety over others' judgments, a perceived mismatch between one’s performance and expectations, and strong negative reactions to imperfection (Fang & Liu, 2022).

In contrast, PSP—also called perfectionistic strivings—relates to the desire to achieve perfection and the tendency to impose extremely high personal standards on oneself. Studies indicate that perfectionistic concerns tend to correlate with lower self-esteem, supporting earlier views that link perfectionism to self-criticism and diminished self-worth. In contrast, perfectionistic strivings are often associated with higher self-esteem (Ashby & Rice, 2002; Burkitt et al., 2024; Fekih-Romdhane et al., 2023; Khossousi et al., 2024; Moroz & Dunkley, 2015; Raudasoja et al., 2023; Sheveleva et al., 2023; Taylor et al., 2016).

Perfectionism was originally seen as a one-dimensional concept, but this perspective shifted in the early 1990s when two research groups, Frost et al. (1990) and Hewitt & Flett (1991), introduced a multidimensional framework of perfectionism (Dudau, 2021). From a

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multidimensional perspective, Frost et al. (1990) categorized perfectionism into six dimensions: Concern over Mistakes (CM), Personal Standards (PS), Doubts about Actions (DA), Parental Expectations (PE), Parental Criticism (PC), and Organization (O) (Fang & Liu, 2022). Frost proposed that CM is the central trait of pathological perfectionism, while PS and Organization reflect the positive aspects of perfectionism associated with striving for high achievement. Numerous studies have shown that individuals who experience the impostor phenomenon are more likely to exhibit maladaptive perfectionist behaviors, such as excessive preparation and persistent dwelling on mistakes (Bravata et al., 2019; Cowie et al., 2018; Cusack et al., 2013; Lee, 2021; Vergauwe et al., 2015). Perfectionism has been found to be associated with a variety of psychopathological phenomena, such as depression, anxiety, obsessions, eating disorders, and psychosomatic disorders (Kearns et al., 2007; Egan et al., 2011; Fang & Liu, 2022).

2. Rationale of the Study

The constructs of perfectionism, self-esteem, and impostor syndrome have been widely studied in global contexts, particularly among student populations. However, a significant gap exists in understanding how these psychological constructs interrelate in adult populations, especially across different stages of adulthood. Most existing studies tend to focus on adolescents or emerging adults (typically aged 18–25), thereby overlooking the evolving and context-specific psychological dynamics in mature adults navigating work, family, and societal expectations.

Furthermore, while a considerable body of research has explored these variables individually, there is a lack of integrated examination of perfectionism, self-esteem, and impostor syndrome within a single framework in the Indian cultural context. Given India's collectivistic social structure, emphasis on academic and professional success, and gendered expectations, the psychological manifestations of these traits may differ considerably from those in Western populations where most of the research originates.

Another crucial gap lies in the absence of comparative analysis across age groups within Indian adults. The developmental trajectory of self-esteem is known to change over time, and both perfectionistic tendencies and impostor feelings may evolve with personal growth, career development, or sociocultural pressures. Yet, research in India has not explored how these constructs interplay across distinct adult age bands (e.g., early adulthood, midlife), nor whether age moderates or influences the strength of their relationships.

This study, therefore, addresses these important gaps by:

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- Focusing on a diverse adult sample rather than students,
- Conducting the research specifically within the Indian population, and
- Integrating all three constructs—perfectionism, self-esteem, and impostor syndrome—into a single study while also examining age-group comparisons.

By doing so, it aims to offer culturally grounded insights and extend the existing psychological literature to better understand the mental health and identity challenges faced by Indian adults.

2. Review of Literature

Relationship Between Perfectionism and Impostor Syndrome

A robust set of studies has established a direct relationship between perfectionism and impostor phenomenon, reinforcing the theoretical basis for examining how self-esteem mediates this link. Dudău (2014) investigated Romanian university students and found that impostor feelings were strongly associated with self-evaluative perfectionism—particularly concern over mistakes, the need for approval, and rumination—rather than conscientious forms of perfectionism. This highlights the role of maladaptive cognitive patterns in fostering impostorism. Pannhausen et al., (2022) confirmed this trend by showing that dimensions such as socially prescribed perfectionism, concern over mistakes, and doubts about actions significantly predicted impostor scores. Importantly, the study found that perfectionistic concerns had a stronger impact than perfectionistic strivings, suggesting that maladaptive perfectionism is more central to impostorism than goal-oriented striving. Additionally, Sheveleva et al. (2023) also found that maladaptive perfectionism was linked to neuroticism, which predicted impostor tendencies among Russian students. Self-esteem partially mediated this relationship, suggesting that low self-esteem may intensify impostor feelings. These associations were consistent across cultures.

Likewise, Koshy et al. (2022) examined emerging adults and found significant correlations between various dimensions of perfectionism and impostor traits such as competence doubt, frugality, and the need for sympathy. The study also highlighted how fear of failure was intertwined with both impostor traits and perfectionistic orientations. Keerthi and Athira Aneesh extended this work in a sample of young adults, demonstrating a strong positive correlation between impostor syndrome and overall perfectionism. Interestingly, no significant gender differences were observed in either impostor feelings or perfectionistic tendencies, suggesting that the perfectionism–impostor link is stable across sexes. Abdul Raoof (2023) supported these findings in a sample of Indian engineering students, showing

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that both self-oriented and socially prescribed perfectionism positively correlated with impostorism, while other-oriented perfectionism did not. These findings affirm that perfectionism—particularly when it involves internal pressure or external expectations—plays a central role in fostering impostor feelings, setting the stage for the mediating role of self-esteem.

Self-Esteem as a Mediator Between Perfectionism and Impostor Syndrome or Psychological Distress

Several studies have directly investigated the role of self-esteem as a mediating variable between perfectionism and impostor syndrome or related negative outcomes such as depression, anxiety, or distress. For instance, LaSota (2006) examined whether self-esteem mediates the relationship between perfectionism and mental health outcomes in undergraduate students. The study revealed that self-esteem significantly mediated the effects of maladaptive perfectionism on symptoms of depression, anxiety, and overall psychological distress. In contrast, adaptive perfectionism showed no such mediation, suggesting a potential protective quality. Cokley et al. (2018) further explored this mechanism, focusing on two key dimensions of perfectionism: discrepancy (maladaptive) and standards (adaptive). Their findings indicated that self-esteem partially mediated the link between discrepancy and impostor feelings—wherein lower self-esteem fuelled stronger impostor beliefs. Conversely, the standards dimension exhibited a negative indirect effect on impostor feelings via increased self-esteem, suggesting a buffering effect of healthy perfectionism when coupled with solid self-worth.

Popovska Nalevska Gorica (2024) contributed to this discussion in the context of gifted adolescents in North Macedonia. Among these students, who are often intellectually advanced but emotionally vulnerable, the study found that self-esteem significantly mediated the relationship between both positive and negative forms of perfectionism and impostor syndrome. This emphasizes the importance of fostering emotional resilience and stable self-worth in gifted populations to combat the development of impostor feelings. Similarly, Marcus Lasota and Christopher Kearney (2017) found that self-esteem fully mediated the relationship between maladaptive perfectionism and psychological distress—but only among men. Specifically, perfectionistic dimensions like concern over mistakes and parental criticism predicted depression and anxiety through the erosion of self-esteem. This gender-specific finding indicates that men may be particularly sensitive to the internalized pressure of maladaptive perfectionism, experiencing diminished self-worth that ultimately fosters impostorism and mental health struggles.

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Similar findings were reported by Sheveleva et al. (2023), who examined the role of self-esteem in the relationship between maladaptive perfectionism and impostorism among Russian students. The researchers found that self-esteem partially mediated the relationship between maladaptive perfectionism and impostorism. Moreover, Gorica (2024) studied gifted secondary school students in North Macedonia, exploring the relationship between perfectionism, self-esteem, and impostor syndrome. The findings showed that self-esteem significantly mediated the link between perfectionism and impostor syndrome, highlighting the need to strengthen self-esteem to reduce impostor feelings in gifted adolescents. Additionally, Ling Chai et al. (2019) provided compelling evidence from a large sample of Chinese college students, showing that self-esteem partially mediated the relationship between perfectionism (both adaptive and maladaptive) and depression. Maladaptive perfectionism predicted higher depression levels, while both adaptive perfectionism and self-esteem were protective factors. These studies collectively underscore the critical mediating function of self-esteem, not only in linking perfectionism to impostor syndrome but also in influencing broader emotional and psychological outcomes.

Impostor Syndrome as a Mediator Between Perfectionism and Psychological Outcomes

A third group of studies offers an interesting inversion of your research model by examining impostor syndrome as a mediator between perfectionism and mental health outcomes, such as anxiety, depression, and suicidal ideation. For example, Wang et al. (2019) examined Russian college students and found that impostor syndrome fully mediated the relationship between perfectionism and anxiety, and partially mediated the relationship with depression. Additionally, impostor feelings moderated the link between perfectionism and depressive mood—suggesting that individuals without impostor tendencies were less affected by perfectionism-induced depression. This points to impostor syndrome as a critical psychological mechanism through which perfectionism translates into emotional distress. Similarly, Brennan-Wydra et al. (2021) investigated medical students and found that impostor phenomenon mediated the relationship between maladaptive perfectionism and suicidal ideation. These findings raise important clinical implications: not only does maladaptive perfectionism fuel impostor feelings, but these feelings, in turn, escalate risk for severe psychological outcomes such as suicidal thoughts.

In a study closely related to student wellbeing, Pákozdy et al. (2024) found that impostorism fully mediated the negative relationship between maladaptive perfectionism and happiness. Using a sample of university students, the researchers also observed that impostor feelings were negatively correlated with both self-efficacy and happiness, and positively

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associated with maladaptive perfectionism. Importantly, this study also revealed gender differences, with female students reporting significantly higher levels of both impostorism and perfectionistic concerns. The mediating role of impostorism in the perfectionism–happiness link suggests that reducing impostor-related beliefs may be a promising target for interventions aimed at improving overall student mental health and wellbeing.

Self-Esteem Across the Lifespan and Its Influencing Factors

Several studies explore the trajectory of self-esteem throughout the lifespan and the factors that influence its development. Ryszewska-Łabędzka et al. (2022) examined self-esteem in older adults, finding that lower self-esteem was significantly associated with factors such as education below the secondary level, poor financial status, and impairments in sensory and communication abilities. These factors not only impacted self-esteem but also overall bio-psycho-social functioning. Wagner et al. (2013) conducted a large cross-sectional study across the adult lifespan, noting that romantic relationships and subjective health were key factors in higher self-esteem. They found that while self-esteem remained relatively stable across adulthood, the strength of associations with resources like health and neuroticism varied by age. In older adults, subjective health had a stronger influence on self-esteem.

Orth et al. (2010) further corroborated these findings, showing that self-esteem follows a quadratic trajectory, peaking around age 60 and declining thereafter. In their study, women initially had lower self-esteem than men, but by old age, their self-esteem trajectories converged. Srivastava and Agarwal (2013) found that in their young adult sample, gender did not significantly influence self-esteem, suggesting that self-esteem might operate differently across various age groups and gender, offering nuanced insights into its development and stability over time.

Gender Differences on Imposter Syndrome, and Perfectionism

Gender plays a significant role in the experience of impostor syndrome, as multiple studies suggest. Price et al. (2024) conducted a meta-analysis that confirmed women consistently report higher levels of impostor feelings compared to men, with variations across geographic regions and academic fields. Their findings indicate that the gender gap in impostor syndrome does not diminish over time. Similarly, Shill-Russell et al. (2022) examined medical students and found that female students were more likely to experience impostor syndrome, regardless of their academic performance, reinforcing the idea that gender significantly influences the experience of inadequacy in high-achieving environments. Nighat and Thangbiakching (2023) further emphasized gender differences in impostor

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syndrome, showing that female college students in India reported higher levels of impostor syndrome than their male counterparts, with a moderate positive correlation between impostor syndrome and anxiety levels. These studies underscore that gender is an important factor in how individuals experience impostor syndrome, particularly in academic and professional settings.

Thakur et al. (2024) found that women exhibited higher levels of self-critical perfectionism than men, while individuals from higher socioeconomic backgrounds reported greater perfectionism, suggesting that both gender and socioeconomic pressures shape perfectionistic tendencies. Saputri and Khoirunnisa (2022) highlighted that internal factors such as perfectionism and low self-confidence, along with external factors like academic and family environments, contribute to the development of impostor syndrome. This study underscores that perfectionism, combined with low self-esteem, is central to understanding the onset of impostor syndrome.

Related Factors—Hope, Academic Pressure, and Cultural Context

Other studies have broadened the conceptual framework by exploring related factors that influence or interact with the perfectionism–impostor–self-esteem triad. Iwenofu, Dupont, and Kaczkurkin (2024) explored how hope can buffer against both perfectionism and impostor syndrome, mediated by trait anxiety. Their findings suggest that hopeful individuals experience lower anxiety, which reduces both perfectionistic tendencies and impostor feelings—highlighting the potential of hope-based psychological interventions. In the academic domain, Lee et al. (2021) found that honors program participation and socially prescribed perfectionism were significant predictors of impostorism. The competitive academic environment and elevated expectations likely exacerbate impostor feelings, particularly when perfectionistic tendencies are socially reinforced.

Similarly, Dennehy and Whitley (2023) showed that athletes experience impostor feelings in response to performance pressure and socially driven perfectionism. These findings emphasize how external evaluative environments—whether academic or athletic—can fuel maladaptive self-perceptions. Lastly, Burkitt et al., (2024), through the lens of self-determination theory, showed that perfectionistic concerns are linked to needs frustration and lower self-esteem, while perfectionistic strivings align with needs satisfaction and higher self-esteem. This study offers a valuable theoretical framework for understanding how different types of perfectionism influence self-worth and, ultimately, impostor experiences. Bravata et al. (2019) conducted a systematic review on impostor syndrome and found it was strongly associated with depression, anxiety, burnout, and poor job satisfaction, further emphasizing

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the psychological burden of impostor syndrome. Their findings suggest that perfectionism, particularly maladaptive perfectionism, exacerbates these negative outcomes, with self-esteem acting as a mediator. Additionally, their study found that ethnic minorities reported higher levels of impostor syndrome, suggesting that cultural background and social context play an important role in shaping these experiences. Saputri and Khoirunnisa (2022) also identified external factors like family environment, academic settings, and social support as contributing to the development of impostor feelings. These findings align with the understanding that impostor syndrome is not solely an internal psychological issue but is deeply influenced by one's social and cultural context.

3. Methodology

3.1 *Aim*

To examine the mediating role of self-esteem in the relationship between perfectionism and impostor syndrome across different age groups, and to explore age-related variations in these relationships.

3.2 *Objectives*

1. To examine the relationship between perfectionism and impostor syndrome among adults aged 25 to 55.
2. To explore the mediating role of self-esteem in the relationship between perfectionism and impostor syndrome.
3. To compare the strength of the mediation effect of self-esteem across different age groups (25–35, 35–45, 45–55).

3.3 *Hypothesis*

H1: There will be a significant relationship between perfectionism and impostor syndrome among adults aged 25 to 55.

H2: Self-esteem will significantly mediate the relationship between perfectionism and impostor syndrome.

H3: The strength of the mediation effect of self-esteem in the relationship between perfectionism and impostor syndrome will differ across age groups (25–35, 35–45, 45–55).

3.4 *Research Design*

A research design refers to the structural framework that guides the selection of appropriate methods and techniques for conducting a study. It helps researchers tailor their methodological approach to align with the subject matter, thereby improving the clarity and effectiveness of the research process(QuestionPro, n.d.). The present study refers to a

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quantitative, non-experimental correlational design, incorporating both mediation and moderation analyses to explore the complex interrelationships among perfectionism, impostor syndrome, and self-esteem across different age groups.

3.5 ***Variables***

- ***Independent Variable:*** Perfectionism
- ***Dependent Variable:*** Imposter Syndrome
- ***Mediating Variable:*** Self-Esteem

3.6 ***Sample and sample selection***

The sample consisted of 210 adult participants, equally distributed across three age groups: 25-35, 35-45, and 45-55, with 70 individuals in each group. The most common age range was 35-45 years, with a standard deviation of 0.82. Gender distribution showed that 59.52% (n = 125) of participants were female, while 40.47% (n = 85) were male.

Inclusion Criteria:

- Individuals must be between 25 and 55 years of age to be eligible for participation in the study.
- Participants must be Indian citizens.

Exclusion criteria:

- Individuals below 25 years or above 55 years of age were not included in the study.

3.7 ***Description of the tools used***

Rosenberg Self Esteem Scale: Developed by Morris Rosenberg, it is a ten item scale that helps in deducing the global self-esteem of individuals responding to it. All statements have four possible responses, which are - strongly agree, agree, disagree and strongly disagree. It is scored on a likert scale basis with a scoring rating of 0,1,2,3 (0 for strongly agree, 1 for agree, 2 for disagree and 3 for strongly disagree). There are 4 statements that possess reverse scoring phenomenon. These statements are statements 3,5,8 and 9. Their scoring is described as follows - 0 for strongly disagree, 1 for disagree, 2 for agree, 3 for strongly agree. Below mentioned are the psychometric tools of the scale.

Reliability: Cronbach's alpha typically around 0.77

Validity: High Construct Validity

Frost Multidimensional Perfectionism Scale: A comprehensive scale that helps analyse different dimensions of perfectionism in different individuals, one of the utility being, assessing overall level of perfectionism in the individual, which is being considered as a resource in this study. It was developed by Frost et al (1990) and has 35 items in its

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inventory. It is scored on the base of a five-point scale for its five responses to each statement, which are- strongly agree, agree, neutral, disagree, strongly disagree. None of the scales in this scale follow a reverse scoring regime. Below mentioned are the psychometric properties of the scale

Reliability: Alpha .90

Validity: Convergent Validity

Clance Impostor Phenomenon Scale: Developed in 1985 by Pauline Clance, Clance Impostor Phenomenon Scale is a twenty items scale that helps in assessing the level of an individual's interpretation of them being an impostor in any role or aspect of their life. It is scored on a five pointlikert scale based on the five responses present on the scale, which are - not at all true, rarely, sometimes, often, very true. Below mentioned are the psychometric properties of the scale:

Reliability: Alpha values ranging from 0.84 - 0.96

Validity: Construct, convergent and discriminant validity

3.8 *Procedure*

A primary research requires intensive background research and rationale deduction before any sort of work to practically begin. Likewise, this research was initiated after a preliminary study of pre-existing literature, to establish the utility of this research. Following this, further exploration was done to find valid scales that work well with the Indian adult population, that can help us work on our set objectives and test the chosen hypothesis. As the scales were finalised, a google form was created for online circulation and a physical form was also created for peer and professional circulation and data collection purposes. The collection tools clearly stated an undertaking of consent of the participant and clear allowance to withdraw from the study at any given time, if they wish to do so. A total of two hundred and ten responses were collected with each age category having an equal number of responses to make fair statistical analysis. In the final step of the research study, suitable statistical tools were utilised to ensure accurate analysis of data.

3.9 *Statistical Analysis*

The collected data were analyzed using IBM SPSS Statistics (Version XX) and Hayes' PROCESS Macro (Version X). Both descriptive and inferential statistical techniques were employed to address the research objectives and test the hypotheses. Initially, a normality test was conducted to assess the distribution of the data. Following this, descriptive statistics were calculated to summarize the key features of the data. Correlation analysis was then performed to examine the relationship between impostor syndrome and perfectionism. Next, mediation

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analysis was conducted to evaluate whether self-esteem serves as a mediator in the relationship between impostor syndrome and perfectionism. Finally, moderation analysis was run to explore potential differences across various age groups in the strength of these relationships

4. Results

An excel sheet was prepared containing data from all the responses. It was then screened and put through different statistical tools and the data analysis was conducted. The analysis revealed the following results:

Table 1: ***Descriptive Statistics***

	Age Range	Gender
Mean	2.000	1.405
Std. Deviation	0.818	0.492

(Note. n=210. The table shows mean and standard deviation of age range and gender of all the participants).

The descriptive statistics showed that the majority of participants were in the 35-45 age range, with a standard deviation of 0.818. Additionally, most participants were female, with a standard deviation of 0.492.

Table 2: ***Pearson's Correlations***

			Pearson	
			r	p-value
Perfectionism	-	Imposter Syndrome	-0.386***	< .001

* p < .05, ** p < .01, *** p < .001

(*Note.* n=210. The table shows Pearson's correlation between Perfectionism, and Imposter Syndrome).

The table shows a negative correlation of -0.386 between perfectionism and impostor syndrome, which is highly statistically significant (p < .001). This indicates that the relationship is unlikely to be due to chance. Specifically, as levels of perfectionism increase, levels of impostor syndrome tend to decrease, and vice versa.

Table 3: ***Mediation Analysis***

Path	Relationship	B (Unstandardized Coefficient)	SE	p
a	Perfectionism → Self-	-0.021	0.016	.194

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	Esteem			
b	Self-Esteem → Imposter Syndrome (with Perfectionism)	0.369	0.239	.124
c	Perfectionism → Imposter Syndrome	-0.336	0.056	.000**
c′	Perfectionism → Imposter Syndrome (with Self-Esteem)	-0.328	0.056	.000**
Indirect Effect (a × b)		-0.00775		
Sobel Z		-1.00		> .05

(*Note.* n=210. The table shows the mediation of Self-Esteem in the Relationship Between Perfectionism and Impostor Syndrome).

The table shows that the unstandardized coefficients (B) for the paths reveal that the relationship between perfectionism and self-esteem (Path a) is not statistically significant (B = -0.021, p = .194). Similarly, the effect of self-esteem on impostor syndrome (Path b) does not reach significance (B = 0.369, p = .124). However, the direct effect of perfectionism on impostor syndrome (Path c) is significant (B = -0.336, p < .001). When self-esteem is included as a mediator (Path c′), the relationship between perfectionism and impostor syndrome remains significant (B = -0.328, p < .001). The indirect effect (a × b) is -0.00775, and the Sobel test (Z = -1.00, p > .05) indicates that self-esteem does not significantly mediate the relationship between perfectionism and impostor syndrome.

Table 4: ***Moderation Mediation Analysis***

Age Group	**Path a (Perfectionism → Self-Esteem)**	**Path b (Self-Esteem → Impostor Syndrome)**	**Interaction Effect (Age × Path a × b)**	**Indirect Effect (a × b)**	**Sobel Z & p (Sobel)**
25–35	B = –0.028, SE = 0.025, p = .264	B = 0.611, SE = 0.419, p = .149	B = –0.02, SE = 0.018, p = .304	–0.0171	–0.89, p > .05
35–45	B = –0.005, SE = 0.031, p = .860	B = –0.216, SE = 0.402, p = .593	B = 0.001, SE = 0.014, p = .839	0.00108	0.15, p > .05
45–55	B = –0.038, SE = 0.030, p = .214	B = 0.786, SE = 0.436, p = .076	B = 0.005, SE = 0.010, p = .674	–0.0299	–1.04, p > .05

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(*Note.* n=210. The table shows the moderated mediation of Self-Esteem in the Relationship Between Perfectionism and Impostor Syndrome Across Age Groups).

The interaction effect (Age × Path a × b) assesses whether age moderates the strength of the mediation. As all interaction terms have p-values greater than .05, there is no statistical evidence that the mediation effect differs across age groups. Additionally, the indirect effect (a × b) for each group remains non-significant (all $p > .05$), indicating that self-esteem does not mediate the relationship between perfectionism and impostor syndrome in any of the age groups.

5. Discussion

Adulthood is a developmental stage marked by complete physical maturity along with various psychological, social, and emotional changes(American Psychological Association, 2023). As individuals transition from adolescence into adulthood, they are expected to take increasing responsibility for their lives, make independent decisions, and become more self-reliant (Arnett, 2000; Keller, 2007). This life phase is shaped by key choices in education, career, living arrangements, relationships, and parenthood, all of which significantly influence one's future trajectory (Shanahan, 2000; Cohen et al., 2003; Keller, 2007).

In recent years, early and middle adulthood have been characterized as periods of intense identity exploration, where individuals try out different life roles before committing to long-term paths. However, this transition is not without its challenges. Many individuals experience psychological difficulties that hinder their ability to realize their full potential. Research suggests that during this stage, some adults report lower life satisfaction, increased emotional distress—such as anger, sadness, or worry—and, in some cases, poor mental health outcomes (Gondek, 2024). These emotional states can give rise to cognitive distortions or psychological patterns like impostor syndrome.

Impostor syndrome, also known as the impostor phenomenon, is marked by chronic feelings of inadequacy and the persistent fear of being exposed as a fraud, particularly in academic or intellectual settings (Clance & Imes, 1978; Pákozdy, 2023). Adding to these challenges, certain personality traits—such as perfectionism—may exacerbate feelings of self-doubt. Perfectionism is a multifaceted personality construct characterized by the relentless pursuit of high standards and the desire to perform flawlessly, often accompanied by critical self-evaluation (Frost et al., 1993; Flett & Hewitt, 2002; Stoeber, 2018; Kwarcińska, 2022). While striving for excellence can be adaptive in some contexts,

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maladaptive perfectionism is linked to increased stress, anxiety, and feelings of failure, especially when expectations are unmet.

On the other hand, some psychological traits can act as buffers against mental health difficulties. One such trait is self-esteem, which reflects an individual's overall sense of self-worth and self-evaluation (Kumar, 2014). High self-esteem has been associated with better emotional regulation, resilience, and lower susceptibility to negative psychological outcomes, including anxiety and depression.

The primary objective of the current study was to examine whether self-esteem mediates the relationship between perfectionism and impostor syndrome across different age groups. While prior research has investigated similar variables, most existing studies are predominantly Western-centric and focus mainly on students or emerging adults. There remains a considerable gap in the Indian literature, particularly regarding how these variables interact among adults in midlife.

To address this gap, the present study focused on an adult Indian population aged 25 to 55 years. Moreover, it uniquely brought together three key constructs—perfectionism, self-esteem, and impostor syndrome—that have not previously been studied in combination within this demographic.

The present study was conducted on a sample of 210 Indian adults aged between 25 and 55 years. To gather data, the Rosenberg Self-Esteem Scale was used to assess self-esteem, the Frost Multidimensional Perfectionism Scale was employed to measure perfectionism, and the Clance Impostor Phenomenon Scale was used to evaluate impostor syndrome. After collecting the data, statistical analyses were performed, and the results were organized into tables. As presented in the results section, Table 2 highlights the findings from the Pearson correlation analysis between perfectionism and impostor syndrome. The analysis revealed a significant negative correlation between the two variables ($r = -0.386$, $p < .001$), indicating that as levels of perfectionism increase, levels of impostor syndrome tend to decrease, and vice versa.

Although the current study found a significant negative relationship between perfectionism and impostor syndrome, it aligns with the findings of Khossousi et al. (2024), who reported a significant negative moderate correlation between self-esteem and perfectionistic concerns ($r = –.42$). These results suggest that certain aspects of perfectionism may be inversely related to impostor feelings, possibly due to the mediating role of self-perception variables such as self-esteem. However, the present findings diverge from several earlier studies. For instance, Dudău (2014) found a significant positive association between

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the impostor phenomenon and self-evaluative dimensions of perfectionism, such as concern over mistakes, need for approval, and rumination. Similarly, Koshy et al. (2022) observed that impostor traits—like competence doubt, frugality, and the need for sympathy—negatively correlated with different perfectionism types (self-oriented, other-oriented, and socially prescribed), while alienation and other-self divergence were positively linked to socially oriented perfectionism. Pannhausen et al. (2022) also reported mixed findings, where dimensions such as concern over mistakes and doubts about actions were negatively related to impostor syndrome, but personal standards showed a positive relationship. These discrepancies underscore the multifaceted nature of perfectionism and its complex relationship with impostor experiences. In contrast to our findings, Keerthi and Aneesh, Wydra et al. (2021), and Karim (2022) all reported significant positive correlations between perfectionism and the impostor phenomenon, further emphasizing the need to examine specific perfectionism subtypes and contextual factors that may influence these dynamics.

To further investigate the dynamics between these variables, a mediation analysis was conducted to examine whether self-esteem mediates the relationship between perfectionism and impostor syndrome across different age groups. As shown in Table 3, the relationship between perfectionism and self-esteem (Path a) was not statistically significant ($B = -0.021$, $p = .194$). Similarly, the effect of self-esteem on impostor syndrome (Path b) was also non-significant ($B = 0.369$, $p = .124$). However, the direct path from perfectionism to impostor syndrome (Path c) remained highly significant ($B = -0.336$, $p < .001$), even after introducing self-esteem as a mediator (Path c′: $B = -0.328$, $p < .001$). The indirect effect ($a \times b$) was minimal (-0.00775), and the Sobel test ($Z = -1.00$, $p > .05$) confirmed that self-esteem does not significantly mediate the relationship between perfectionism and impostor syndrome in this sample.

These findings contrast with some existing literature. For example, Cokley et al. (2018) found that self-esteem partially mediated the relationship between perfectionism and impostor feelings among college students. Their study indicated that maladaptive perfectionism led to impostor feelings both directly and indirectly via lowered self-esteem. Similarly, Sheveleva et al. (2023) and Gorica (2024) also reported partial mediation effects of self-esteem in the link between perfectionism and impostorism. The divergence in findings may stem from differences in sample characteristics—such as age, cultural context, and the type of perfectionism measured. While previous studies focused mostly on students or young adults in Western settings, the current study targeted a broader adult population in the Indian

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context, which may influence how self-esteem interacts with perfectionism and impostor syndrome.

After examining the overall mediating role of self-esteem in the relationship between perfectionism and impostor syndrome, the study further explored whether this mediation effect varied across different age groups—namely, 25–35, 35–45, and 45–55 years. To assess this, a moderated mediation analysis was conducted, as shown in Table 4. The results revealed that for all three age groups, the path from perfectionism to self-esteem (Path a) and from self-esteem to impostor syndrome (Path b) was not statistically significant (all p-values > .05). Additionally, the interaction terms (Age × Path a × b), which indicate whether age moderates the mediation effect, were also non-significant across the age groups. This suggests that age does not influence the strength of the mediation effect.

Furthermore, the calculated indirect effects (a × b) for each group—although slightly varying in value—were all non-significant, with Sobel test results confirming that none of the mediation pathways reached statistical significance. Thus, these findings indicate that self-esteem does not significantly mediate the relationship between perfectionism and impostor syndrome in any of the assessed age categories, and the mediation effect remains consistent regardless of age.

While several studies have supported the mediating role of self-esteem in the relationship between perfectionism and impostor syndrome, particularly among younger populations, the present study found no significant mediation effect of self-esteem, nor any moderation by age across the three age groups (25–35, 35–45, and 45–55). For instance, Cokley et al. (2018) found that self-esteem partially mediated the relationship between maladaptive perfectionism and impostor feelings among college students, with discrepancy showing a positive indirect effect via reduced self-esteem, and adaptive perfectionism showing a negative indirect effect. Similarly, Dimitrovska and Nalevska (2024) found a significant mediating role of self-esteem among gifted secondary school students. However, these findings may not generalize to older adult populations, where other life experiences, stressors, and coping mechanisms could play a more dominant role. Therefore, the current study contributes uniquely by suggesting that the mediating role of self-esteem between perfectionism and impostor syndrome may diminish or differ with age, highlighting the need for age-sensitive psychological research.

6. Summary And Conclusion

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The presented study is entitled “The mediation role of self-esteem in the relationship of perfectionism and impostor syndrome across age groups”, helps in understanding in several new dynamics. The most important and distinctive factor being assessment being done on a completely Indian subcontinent sample. The insights gained also showed how variables are consistent throughout the age groups if any other life altering events are not taken into account. Some results seemed to be approaching the borderline significant score, yet not major enough to be considered a valuable or significant result.

The following objectives were made:

1. To examine the relationship between perfectionism and impostor syndrome among adults aged 25 to 55.
2. To explore the mediating role of self-esteem in the relationship between perfectionism and impostor syndrome.
3. To compare the strength of the mediation effect of self-esteem across different age groups (25–35, 35–45, 45–55).

The following hypotheses were made:

H1. There will be a significant relationship between perfectionism and impostor syndrome among adults aged 25 to 55.

H2. Self-esteem will significantly mediate the relationship between perfectionism and impostor syndrome.

H3. The strength of the mediation effect of self-esteem in the relationship between perfectionism and impostor syndrome will not differ across age groups (25–35, 35–45, 45–55).

Findings of the study were optimized as follows:

1. A negative relationship between perfectionism and impostor syndrome—opposite of what many past studies report.
2. Self-esteem does not mediate the relationship between perfectionism and impostor syndrome.
3. No age-related variation in mediation strength—suggesting developmental consistency in these psychological patterns.

7. Limitations

1. The study does not focus on types of perfectionism, divulging the comparison of study from the existing literature

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2. The sample has a gender imbalance, which can also be considered as an influencing factor for the kind of results achieved
3. The study does not focus on factors related to life roles that could affect all the three variables, leaving the gate open for any sort of generalization that can be made.

8. Recommendations

1. The scope of the study is ample in Indian context, as none of the variables have been widely tested in the demographic.
2. A gender wise analysis can also be conducted to understand if there is a significant disparity amongst the variables across gender.

8.1 *Future Implications*

1. The mental health providers can use this work as a reference to understand the impact of perfectionism on the self-esteem of a middle-aged individual.
2. This study can be used as the base for more research work on the interplay of these variables in Indian context and reduce the research gap in that focus aspect of the study.

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