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Breaking Barriers: Unraveling Glass Ceiling Perceptions and Resilience of Women IT Managers

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Abstract:

Objective: The present study mainly seeks to reveal the perception of glass ceiling of women managers in the work environment and its impact on job involvement and organisational citizenship behaviour (OCB).

Design/Methodology/Approach: 562 pre-tested questionnaires were distributed to women managers from various managerial levels of IT companies based in Bengaluru. The data thus obtained was subjected to various assumptions testing, then tested for the final model through path analysis.

Findings: This study reveals strong correlations between glass ceiling perception, work engagement, and perceived barriers like personal, organisational, social encountered by the women managers in India. Greater GCP is correlated with less work engagement and greater perceived barriers, whereas strong positive correlations are found between work engagement and organisational commitment. These findings identify the necessity of addressing glass ceiling perceptions and promoting work engagement to achieve organisational success.

Managerial implications: This study explores GCP in women managers in Indian IT industry, finding correlations with diminished work engagement and perceived barriers. Hence, to counter such perceptions and encourage employee engagement are through promoting openness and implementing inclusive policies that subsequently lead to employee well-being and organisational achievement through a positive workplace culture. In addition, in the present study, it was revealed that resilience greatly influences employee's reaction to feelings of the glass ceiling and organisational obstacles, ultimately translating to higher workplace challenge acceptance.

Originality/Value: The present research presents new findings on glass ceiling perceptions among Indian women IT managers and their complexities and implications for work engagement, resilience, and organisational commitment. By establishing the intermediary role of resilience (a mediator) and marital status interaction effect, the research presents useful recommendations to organisations interested in building inclusive workplace culture.

Keywords*:* Work Engagement, Glass Ceiling Perception, Resilience, Organisational Commitment, Inclusive workplace, Personal Barrier.

JEL Classification: M10, M15

I Introduction

The "glass ceiling" metaphorically indicates the obstacle in the path of women workers to climb organisational hierarchies, particularly in senior-level positions in organisations. The term "glass ceiling" was coined by Marilyn Loden, a consultant on the workplace, in 1978 during a panel discussion on professional career aspirations for women workers. However, an article by Carol Hymowitz, and Timothy D. Schellhardt (1986) in Wall Street Journal has played a crucial role in specifying its discourse (Loden 1985; Cotter et al., 2001; Sathyanarayana et al., 2018). Glass ceiling is a result of discriminatory treatment in organisations and organisational decision-makers and is usually a result of gender stereotypes organisational decision-makers possess. Glass ceiling syndrome manifests more severely in higher levels of organisation, although it occurs in different phases of the business career. Women encounter the syndrome more often than men. Key factors contributing to this include gender, age, marital status, promotion at work, being employed in the public sector or private sector, and extra income (Sever, H. (2016). Despite strides in gender equality initiatives and increased female representation in the corporate sector, this perception is a widespread issue experienced globally. The unequal distribution of leadership roles between men and women is a prevalent issue worldwide, with women often overrepresented in entry level and less influential job levels relative to men (Northouse, 2010). Women still face structural barriers and stereotypical attitudes that hinder their advancement into high-level leadership positions (Burke & Vinnicombe, 2005; McLeod, 2008). Several empirical studies for instance, Morrison et al., 1987; Powel & Graves, 2003; Eagly & Carli, 2007; Sathyanarayana et al., 2018 invariably demonstrate that women are regularly excluded from top management positions and face disproportionate chances of career advancement in comparison to men. The widening of this gap can be explained by profound prejudice and dominant organisational cultures that perpetuate disparities within

decision-making processes and leadership routes (Ly & Meyerson, 2000; Derks, van Laar, & Ellemers, 2016). Despite research interest, conceptual models have tried to address little in fully understanding the concept "glass ceiling" and its implication (Cohen et al., 2020). The term "glass ceiling" denotes the situation where a capable qualified women aiming to progress within their organisation's hierarchy encounters a barrier preventing them from climbing to higher levels, within organisations (Burke & Vinnicombe, 2005; McLeod, 2008; Kiaye & Singh, 2013). According to Jasielska, (2014), the concept of the glass ceiling highlights the systematic disadvantage women employees face in accessing career advancement opportunities (Kolade & Kehinde, 2013). This term "glass" denotes the transparency of the obstacles women encounter, while "ceiling" represents the barriers impeding their upward mobility (Hiau, 2008). The concept of the glass ceiling effect has become synonyms with the barriers hindering women's progression to senior leadership roles within organisations. Rai & Srivastava (2008) refute the notion of the glass ceiling in the corporate sector, women's lower salaries to mid-career transitions and shorter job tenures. They argue that in today's globalized business scenario, ample career advancement opportunities exist, highlighting women's potential for higher positions based on competence and diligence despite family responsibilities.

The Indian IT sector is witnessing a fast-paced rise in female employees, largely because of an immense cultural attitude shift in society. This change accepts that women can do professional work outside the family, thereby economically supporting their households and actively seeking careers. But, in this process, a long-standing barrier in the form of the glass ceiling barrier prevents the continued progress of women in organisations. As many women join the workforce, an intangible barrier that blocks their vertical mobility and movement into top jobs in the industry. Even in today's corporate environment, with women enjoying increased representation, reaching senior management status is not easy. Though there has been progress and policy reform supporting gender equality, much underrepresentation exists (Davidson & Burke, 2012).

Despite increasing global awareness of the glass ceiling phenomenon, there remains a significant lack of empirical research that controls specifically for its perception within the Indian IT industry. Furthermore, because the Indian IT industry is a major contributor to the overall Indian economy and has expanded exponentially in recent decades, it is necessary to examine the glass ceiling belief in this sector to develop proper interventions and policies to achieve gender equality among the leadership. Hence, there is research gap that comprehensively covers the perception of the glass ceiling and how it impacts women managers in the IT sector. Through exploring this research, we aim to make some deeper insights into the causes of the glass ceiling phenomenon and the possible effects on work dynamics in the Indian IT industry.

The remainder of the paper is organised as follows: Part II discusses about the literature available to place the research in the wider academic context. Part III responds to the research questions developed from the literature review, explains the methodology used, and sets out the sampling method used for the current research. In Part IV, data gathered was analysed and drew meaningful conclusions. Finally, in Part V, the researchers summarize the empirical findings, presenting an overall overview and managerial implications, thus developing the existing knowledge.

II. Literature Review And Development Of Hypothesis

The "glass ceiling" concept emphatically expresses the issue of sex discrimination vertically in organisations (Cotter et al., 2001), extensively studied in a range of study fields like management, finance, human resources, psychology, and entrepreneurial ventures (Bell et al., 2002; Albrecht et al., 2003; Blau & Khan, 2007; Rastogi, 2015; Fatoki, 2016; Singh, 2017). Even with the necessary qualifications, skills, and drive, women face barriers to shattering these coveted roles within the organisation (Morrison et al., 1987; Ryan & Haslam, 2005; Eagly & Carli, 2018). Powell & Butterfield (2003) state that the expression glass ceiling refers to a variety of barriers, personal, organisational, and societal, which tend to be hidden and rooted in culture and society. These barriers also exist in the form of psychological factors that resist women's progression to leadership positions in organisations, according to Jain & Mukherji, (2010). Morgon (2015) however classifies glass ceiling into two main categories: (i) natural barriers such as education levels and career breaks and (ii) artificial barriers which include personal, organisational, and societal, in contrast to which significantly impact women's career progression.

Personal barriers: These are factors at the individual level that restrict the progress of one in an organisation based on presumed beliefs, attitudes, or behaviours. Bombuwela & De Alwis (2013) state that personal factors of an individual's personality and attributes that might put the individual at a disadvantage over others. Such factors comprise levels of confidence, personal attributes, and the capability to successfully market oneself. Hence, these obstacles can include self-doubt, low self-confidence, imposter syndrome, and fear of failure (Eagly & Carli,

2018). Individual obstacles can also take the form of internalised stereotypes that undermine one's potential or drive (Derks et al., 2011; Ely & Haslam, 2005; Derks et al., 2011). In a classic paper by Clance & Imes, (1978) contend that the way highly successful women can feel inadequate and doubt themselves based on internalised attitudes and beliefs. In this research, it is proposed that internalised mechanisms have an important role to play in interpreting individuals' views of their competency and potentially in the expression of imposter syndrome. In addition, Elchardus & Smits, (2006) reiterated the above findings by highlighting the internalised sexism role in influencing people's views of themselves and their capacities. Accordingly, these elements have set obstacles for women in their quest for career progress. Secondly, based on physical characteristics, women are disadvantaged in relation to men. While it is usual for men to be viewed as tough and masculine, women tend to be viewed as seeming softer, which points to a physical gap between the two sexes (Weyer, 2007; Goodman, 2007). Hence, women experience difficulties in promoting their careers, being frequently judged for seeming emotional reactions to pressure in the workplace (Bombuwela & De Alwis, 2013). Balancing dual jobs can be a factor in creating such an impression, resulting in gender bias against the hiring of women because men are assumed to be suitable for handling pressure and difficult situations. Hewlett (2008) contends that business obligations with family responsibilities can be difficulties faced by women, causing them to give importance to family matters at the expense of professional growth. In addition to personal, some people may have unconscious fears of the responsibilities and expectations that come with career growth and thus resist career promotion. Perfectionism makes women take on unrealistic expectations such that they are afraid or avoid challenges for fear of failure. This bias tends to make men more likely to be hired since they are seen as performing better under pressure compared to women who are regarded as more likely to react emotionally. These sources offer insight into the manner in which internalised attitude, behaviour, and belief, including self-doubt, low confidence, and imposter syndrome, operate as stand-alone barriers limiting individuals' organisational advancement. We present below hypothesis for testing based on the above:

H1: There is a correlation between individual barriers and the glass ceiling belief among women managers.

Organisational barriers: organisational conditions play a very significant part in the barriers that restrict women's career development in institutions. Numerous studies indicate that organisations themselves are actively involved in maintaining gender inequalities, gendered differences, power disparities, and the male-dominated gender order in paid and unpaid labour. (e.g., Ragins & Cotton, 1999; Heilman et al., 2004; Acker, 2012; Ibarra et al., 2013; Kellerman & Rhode, 2014; Risman 2018). Some organisational obstacles create structural barriers that hinder the career advancement of women and shape the perception of the glass ceiling, such as discriminatory recruitment and promotion practices, denial of access to mentorship, gender stereotypes, and discriminatory organisational cultures (Eagly & Carli, 2007; Ely & Meyerson, 2000). Women are often discriminated against when it comes to the process of recruitment and promotion, hence fewer career opportunities, according to Heilman et al., (2004). In addition, Ragins & Cotton, (1999) contended that sponsorship and mentorship are of very important significance in career development, particularly for female workers. Nevertheless, women might face difficulties in gaining access to substantial mentorship and sponsorship networks, which tend to be very crucial in navigating organisational levels as well as breaking barriers.

Martin, (2018) believed organisational cultures rooted in gender discrimination and stereotypes reinforce the glass ceiling by excluding women and perpetuating unjust practices (van Vianen & Fischer, 2002; Broadbridge & Hearn, 2008; Koenig et al., 2011). Stereotypical views of the capabilities of women and their ability to lead cause women to be excluded from decision-making and contribute to the limitation of opportunities for career advancement. In addition, gender stereotypes of women have undesirable consequences on how they are rated and viewed (Lyness & Thomson, 1997; van Vianen & Fischer, 2002). As a result, women managers in the early part of their careers get varying work assignments from their male counterparts. Management tends to believe that women place more emphasis on their family commitment than on their job according to Ansari (2016). Hoobler et al., (2008) concurred. Managers tend to think that women have more work-life conflict than men, according to them. This belief carries a great deal of weight as it might reduce the perception of the competence of women in the workplace, thus lowering the prospects of being promoted (Rudman & Phelan, 2008). Also, they are of the view that women lack availability for additional working hours because of their parental responsibilities. In addition, Sahoo & Lenka (2016) identified that women managers are often assigned less prioritized tasks and are relegated to operational activities instead of being offered opportunities in administrative duties. This practice can restrict women's exposure to leadership development opportunities and prevent them from advancing their careers within the organization. In another research, Keohane, (2014) highlights the importance of more focused mentoring. Moreover, Ely et al., (2011) suggested there should be a distinct women's leadership development program. Hence, facilitating women's subjective career success is extremely critical for organisational performance improvement. For instance, Sharif (2015) stated that content employees are productive than unhappy

ones. Accordingly, demystifying women's glass ceiling perceptions has the potential to allow them to see subjective career achievements, eventually affecting organisational success (Helgesen, 2017). Women's career interruptions for domestic purposes slow them down and drain the firm's talent pool, raising costs related to attrition (Sharma, 2016). Accordingly, based on the above findings, we hypothesise that:

H2: organisational barriers significantly affect women managers' glass ceiling perception.

Social Barriers: In societies that are dominated by a patriarchal family system, like the one in India, there are generally negative attitudes towards gender equality. In this setup, men traditionally hold commanding positions, including the post of authority and top management positions, and these mirrors deeply embedded societal expectations (Fernandes, 2014). This deeply seated social setup reinforces the role expectation of men holding leadership and decision-making positions. Therefore, members of these societies tend to have serious reservations with women being placed in positions of power since it defies the traditional gender roles and societal expectations (Kamberidou 2020).

Socialisation also plays a role in shaping individuals' perception and belief, Boys and girls from early childhood are exposed to various socialisation processes that reinforce gender stereotypes. These stereotypes portray men as being more capable, self-confident, and better fitted for leadership roles, while women are portrayed as being caring, compassionate, and less fitted for those roles that need dominance and decision-making power (Eagly & Karau, 2002). Initial descriptions of these stereotypes influence women's concept of self-assessment and affect their view of blockades to promotion (Rudman & Phelan, 2008).

There have been various studies revealing how such gender stereotypes influence women's perceptions of the glass ceiling. For instance, Davidson & Burke, (2000); Heilman, (2001); Biernat & Fuegen, (2001); Cornell et al., (2007). Rudman & Phelan (2008) illustrated that gender stereotypes from the media and society in general affect women's perceptions of their leadership capabilities and professional ambitions. Equally, Hoyt & Simon (2011) established that women internalising traditional gender roles were more likely to experience impediments to their progression in the work environment. In addition, research shows that male-dominated workplaces tend to have implicit stereotypes and biases that discriminate against women workers (Heilman, 2001). These biases are reflected in such forms as hiring, promotion, exclusion from casual networks, and decision-making forums (Kalev et al., 2006; Blau & Khan, 2007). Also, intersectionality theory identifies the interconnectedness of social categories such as gender, race, age, ethnicity, and social economic status, and the compound effect they have on individuals' experiences and opportunities (Crenshaw, 1989; Mavin & Grandy, 2016). Thomos & Gabarro's (1999) study brought to light how intersectional identities influence women manager's understandings of the glass ceiling, with women of colour having more barriers and discrimination than their white counterparts. In addition, research has indicated that LGBTQ+ women frequently face special challenges in dealing with workplace dynamics and gaining access to opportunities for career advancement (Ragins & Cornwell, 2001; Mavin & Grandy, 2012). As such, we advance the following hypothesis for exploration:

H3: There is a correlation between social barriers and glass ceiling perception among women managers.

GLASS CEILING PERCEPTION AND WORK ENGAGEMENT

This feeling of being unjustly restrained in professional growth can result in frustration, disappointment, and low motivation in women employees. Thereafter, their job commitment may decrease, affecting organisational performance, sense of belongingness, and efficiency. Previous research had confirmed that there is a strong correlation the perception of the glass ceiling and employee job engagement, surprising that women employees receive diverse treatment at work, these confirmed that work engagement is influenced greatly by their perception of gender discrimination (Kossek & Zonia 1993; Messarra, 2014; Kim, 2015; Sia et al., 2015; Shockley et al., 2017). The above findings indicate that the glass ceiling impacts women manager's job involvement in a negative manner. According to Shockley et al., (2016) female employees who feel that they are constrained from progressing in their careers have lower job satisfaction, decreased organisational commitment, and heightened levels of stress and burnout. Such a low level of engagement may result in decreased productivity and morale within the firm (Kossek & Zonia, 1993; Shellenbarger, 2013). Kossek & Zonia (1993) contended that the perception of the glass ceiling among women workers has profound effects on organisational performance. If women workers perceive they are unable to progress because of glass ceilings, it can have an impact on talent retention, innovation reduction, and a less diverse working environment. In addition, in research by Balasubramanian & Lathabhavan, (2017) investigated the effect of various types beliefs surrounding the perception of the glass ceiling such as rejection, resilience, resignation, and acceptance on the job engagement of women managers. Their findings revealed that measures like rejection and resilience were found to have a

significant correlation with job engagement. However, beliefs that were marked by resignation and acceptance of the glass ceiling had a negative correlation with work engagement. In addition, the psychological cost of working through the glass ceiling phenomenon can deplete women's emotional resources and result in burnout and withdrawal (Kossek & Zonia, 1993). O'Leary-Kelly et al., 2000 research shows that women perceiving greater discrimination and inequality were more likely to have decreased job satisfaction and commitment. Conversely, organisations that proactively deal with and reduce the impact of the glass ceiling perception create more employee job engagement among their women employees (Catalyst, 2004; 2007). According to Fassinger, (1990), the use of diversity and inclusion strategies, mentorship training, and full equal opportunity in career progression can help break down the glass ceiling perception and increase women employee's work engagement. Therefore, we raise the following hypothesis to be researched:

H4: The perceived glass ceiling has a strong negative correlation with job engagement.

WORK ENGAGEMENT AND ORGANISATIONAL COMMITMENT

Byrd & Chavous' (2011) research has revealed that work engagement is lower in those who experience barriers to career development based on gender or race. This may be caused by frustration, demotivation, and the perception of futility in attempting to climb the corporate career ladder. It is defined by Bakker et al., (2008) as the degree to which employees are affectively engaged, enthusiastic, and concentrated in their job duties. Thus, it entails a positive state of mind characterised by vigour, dedication, commitment, and full absorption in one's work (Schaufeli, 2012; Bakker & Demerouti, 2008). By contrast, organisational commitment refers to the intensity of employees' commitment and involvement that employees are committed to and involved with their organisational values, goals, and objectives (Allen & Meyer, 1990). It is a gauge of the extent to which employees are committed and loyal to the workplace and how cooperative they are to enable the workplace to thrive (Allen & Meyer, 1993). Studies have shown that work engagement is related to desirable work outcomes, including increased commitment (Bakker & Demerouti, 2008; Buitendach, 2011). Empirical research indicates that employees' perception of the glass ceiling can adversely affect their work engagement (Byrd et al., 2011). Also, the same affects organisational commitment. Staff who feel there are barriers to progress will be devalued and excluded from the organisation and hence experience reduced commitment (Konrad et al., 2000; Yap & Konrad 2009). This is in accord with studies showing that those people who experience discrimination tend to have higher thoughts of leaving their organisation (Ng & Sears, 2010). Furthermore, research has proved that job engagement can act as a mediator or intermediary within the relationship between glass ceiling perception and commitment (Lyness & Thompson, 2000). This implies that those who are more engaged to the tasks assigned are likely to have greater levels of commitment despite the existence of obstacles to promotion. Consequently, we suggest the following hypothesis for study: H5: There exists a positive relationship between organisational commitment and job engagement.

MARITAL STATUS AS MODERATOR

Marital status might affect workers' perceptions and experiences in the workplace. It can be argued that married people might have different work priorities, support networks, and work-life balance than their unmarried counterparts (Frone, 2003; Mattingly & Bianchi, 2003; Sharma & Kaur, 2019). Marital status can influence the relationship between work engagement and glass ceiling perception. For instance, married persons might give greater importance to family obligations compared to professional growth, which might absorb the adverse impacts of glass ceiling perception and job commitment (Greenhaus & Beutell, 1985; Shockley et al., 2017). Shockley et al., (2012) have studied the interaction between marital status and discrimination perception on job satisfaction. They determined that married workers were less impacted by self-perceived discrimination than unmarried workers, implying a possible buffering effect of marital status on employment-related outcomes. The same results have been reported in the research studies of Sharma and Kaur, (2019). Marital status can also influence the coping mechanism people employ when faced with the perceived glass ceiling. Married employees could have stronger support networks, like emotional support from their spouse, which help them cope with workplace issues more effectively. They could also leverage their marital relationships to handle stress and frustration caused by glass-ceiling perceptions, sustaining even higher work engagement levels despite the presence of obstacles. Upon the above arguments the researchers are making hypotheses that:

H6: Martial status moderates the relationship between the glass ceiling perception of work engagement.

Indian IT industry studies have not researched the complexity of the glass ceiling phenomenon, especially social, individual, and organizational ones, systematically. Although gender equality has improved considerably, gender stereotypes and widespread social norms still deter women from seeking managerial jobs and their career development prospects. Individual-level obstacles such as self-constraining belief systems and ineffectual

mentoring are also comparatively under-examined and influential barriers to professional growth. Organizational-level barriers like discriminatory recruitment and promotion practices also persist and are comparatively less studied in such situations. The place of such sophisticated barriers in influencing work engagement and organizational commitment is central to establishing evidence-based intervention strategies towards inclusivity and gender equality, particularly for India's IT sector. Addressing this research gap can offer valuable implications to guide the implementation of effective diversity and inclusion initiatives. It can serve as organizational success attainment.

III. Research Design

Thereafter, a comprehensive search of existing literature on the subject proposed, the researchers have developed the following research questions to be answered for the study:

1. How do IT sector women employees perceive glass ceiling obstacles, such as societal, personal, and organisational obstacles, and what are the generic factors influencing these perceptions?

2. What is the relationship between glass ceiling perception and work engagement of employees in the Indian IT industry, and to what degree does this perception affect their job satisfaction and commitment to the organisation?

These two research questions intend to advance further the intricacies of glass ceiling perceptions, their effects on employees' attitudes and behaviours, and the mediating and moderating variables that affect such relationships in the specific context of the IT industry.

The research focused on women managers working in the Indian IT industry in Bengaluru, which is a hub of IT in India. 954 women managers were randomly chosen to participate in the survey using a multistage random sampling method, and responses were collected through structured questionnaires. A pre-tested tool was administered to 954 respondents. Only 612 filled questionnaires were received, giving a response rate of 64.15%. From these 562 responses only were found appropriate to be used in the final analysis, while the rest were omitted for a variety of reasons. The survey employed a Five-point Likert Scale, where respondents marked their degree of agreement with the given indicators, using 1 (where agreement was least) to 5 (where agreement was most). The measures employed in assessing glass ceiling barriers, like individual barriers, were drawn from the research of; Jain & Mukherji, 2010; Cizel 7 Cizel, 2012; Kiaye & Singh, 2013. Scales from the research of Kiaye & Singh were used for organisational barrier construct. Hunton et al., 1996; Dimovski et al., 2010. Scales for societal barrier construct were drawn from Afza & Newaz (2008) and Zafarullah (2000). Glass ceiling perception scales were taken from the Jain & Mukherji, 2010; Subramaniam et al., 2014 literature. The work engagement items were taken from the Schaufeli & Bakker (2004) research.

Lastly, scales for resilience and acceptance constructs were taken from the academic work of Smith et al., 2012. The data collected were subjected to testing of different assumptions of regression and reliability statistics, such as the calculation of Cronbach's Alpha to check the internal consistency of the research tool. Thereafter, the model was tested for validity with CFA. In the final stage, path analysis was executed to test the hypothesized set of hypotheses. In this research, the researchers mitigated common method bias (CMB) by conducting Harman's single-factor test (Harman, 1960)). Harman (1960) suggests that it consists of forming a single construct from all the measured variables and then performing an exploratory factor analysis to estimate the proportion of variance explained by a single factor. Thus, to understand the variables used for the "current" sample, one of the researchers "current" runs an EFA on the composite set of all the selected variables. The findings revealed that a single factor explained only 31% of the variance. "Any one factor explaining a high percentage of the variance in responses (e.g., "current" above 50%) would be an indication of possible "current" presence of CMB." On the other hand, if less than 50% of total variance is explained by the single factor, then this indicates that CMB might not be an issue in the dataset (Podsakoff et al., 2003). Thus, for the present research the CMB might not be a serious issue in the data set since most of the variance would be due to other factors and not method effects.

IV. Data Analysis

TABLE 1: TABLE SHOWING THE DEMOGRAPHIC PROFILE

Variable	Category	Frequency	Percent
Age	< 30	352	62.6
	31-40	60	10.7
	41-50	100	17.8

	> 50	50	8.9
Income	>Rs. 50000	100	17.8
	Rs.50001-Rs.100000	50	8.9
	Rs.>100000	368	65.5
Marital status	Married	346	61.6
	Unmarried	206	36.7
	Divorcee/Separated	10	1.8
No of Children	1	135	24
	2	122	21.7
	3 or > 3	15	2.7
Academic Details	Degree	168	29.9
	Masters	193	34.3
	Diploma	55	9.8
	Professional Courses	90	16
	Others	56	10

Analysis: From the above table 1, it is evident that the largest proportion of respondents (62.6%) are below 30 years of age, and the age groups of 31-40, 41-50, and over 50 years are covered by 10.7%, 17.8%, and 8.9% respectively. A huge number of respondents (65.5%) claimed an income of less than Rs. 50,000. 21% are in the income range of Rs.50001-Rs.1,00,000, and 13.5% reported an income of more than Rs. 1,00,000. Most of the respondents (61.6%) are married. 36.7% of the sample is unmarried, and only 1.8% is divorcee/ separated. Half of the respondents (51.6%) were married. Most of the respondents with children have the distribution of rather similar proportions: 24% of one child, 21.7% of two children, and merely 2.7% of three or more children. The majority of the respondents (34.3%) had Master's. 29.9% said they have a Bachelor's degree, 9.8% have a Diploma, and 16% have professional courses. A very small percentage (10%) said they have other academic qualifications.

Following EFA to examine the underlying data structure, CFA is most often used to further confirm the suggested measurement model. CFA is a vital part of SEM, confirming the hypothesized relationship between observed variables and latent constructs obtained from EFA. By explicitly testing predetermined factor structures, CFA increases the rigor of measurement validation, yielding information on validity of the model.

TABLE 2: TABLE SHOWING CONFIRMATORY FACTOR ANALYSIS

Items	Cronbach's Alpha	Estimate	AVE	CR		SqrtAVE
PB1	0.704	0.886	0.613	0.915	0.886***	0.783
PB2		0.711			0.711***	
PB3		0.715			0.715***	
PB4		0.757			0.757***	
PB5		0.735			0.735***	
PB6		0.875			0.875***	
OB1	0.884	0.894	0.64	0.883	0.894***	0.8
OB3		0.713			0.713***	
OB4		0.668			0.668***	
OB5		0.834			0.834***	
OB6		0.843			0.843***	
OB7		0.823			0.823***	
SB1	0.754	0.821	0.699	0.903	0.821***	0.836
SB2		0.827			0.827***	
SB3		0.888			0.888***	

SB4		0.841			0.841***	
SB5		0.851			0.851***	
SB6		0.783			0.783***	
GCP1	0.867	0.702	0.712	0.932	0.702***	0.844
GCP2		0.831			0.831***	
GCP3		0.847			0.847***	
GCP4		0.889			0.889***	
GCP5		0.931			0.931***	
AC1	0.715	0.883	0.802	0.849	0.883***	0.895
AC2		0.846			0.846***	
AC5		0.854			0.854***	
WE1		0.991			0.991***	
WE2	0.737	0.882	0.659	0.867	0.882***	0.812
WE3		0.842			0.842***	
WE4		0.742			0.742***	
WE6		0.773			0.773***	
R2	0.869	0.814	0.653	0.907	0.814***	0.808
R3		0.875			0.875***	
R4		0.872			0.872***	
R5		0.719			0.719***	
R6		0.748			0.748***	

PB: Personal barrier; OB: Organisational barrier; SB: Societal barriers; GCP: Glass ceiling perception R: Resilience; AC: Acceptance; WE: Work engagement and OC: Organisational commitment; R: Resilience.
χ^2=3650.752, DF=873; P=0.000 (<0.01); χ^2/df =4.18; RMSEA=0.026, RMR =0.04; GFI=0.963, PGFI=0.971, NFI=0.943, RFI=0.974, TLI=0.989, CFI=0.953.

Analysis: The following table revealed the CFA results. The fit of CFA model was tested using different fit indices to verify its fitness in representing the observed data. The findings showed that the chi-square statistic (χ^2 = 3650.752, df = 873, p < .001). However, looking at the relative chi-square (χ^2/df = 4.18), which was less than the suggested value of 5, the model showed a good fit. Also, other fit indices corroborated the model's fit, such as the RMSEA =0.026, GFI =0.963, and CFI=0.953, all of which were above their respective cutting points for good fit. Also, the PGFI = 0.971 and TLI = 0.989 referred to good to excellent fit, also in support of the validity of the model. Despite some variation, the overall indices of fit together suggested that the model achieved a reasonable to satisfactory fit to the data observed (Sathyanarayana & Mohanasundaram, 2024).

In addition, the primary purpose of performing CFA is measure the validity and the reliability of the model put forward across different constructs in the study. Scales like Personal Barrier (PB1), Organisational Barrier (OB1), Societal Barrier (SB1), Glass Ceiling Perception (GCP1), and Acceptance (AC1) proved to be of good reliability and validity. The construct personal barrier had Cronbach's Alpha of 0.704, which is higher than the recommended value of 0.7 (Nunnally, 1978), AVE for PB was 0.613, surpassing the recommended value of 0.5, showing sufficient convergent validity, while its Composite Reliability (CR) of 0.915 went beyond the recommended threshold of 0.7 (Bagozzi & Yi, 1988). In the same vein, construct organisational barrier exhibited an adequate Cronbach's Alpha of 0.884 and AVE of 0.640, which met the recommended limit of 0.5 (Hair et al., 2010). Nonetheless, construct's CR value of 0.883 surpassed the ideal layer of 0.7. For the third construct societal barrier displayed an adequate Cronbach's Alpha value of 0.754, Further, AVE for SB was 0.699 and CR (Composite Reliability) value of 0.903, also greater than the desirable cut-off level of 0.7, again confirming the reliability of the construct. The fourth construct of the study glass ceiling perception displays a good Cronbach's Alpha of 0.867, suggesting very high internal consistency among the items. Further, the AVE for GCP is 0.712, well above the 0.5 and acceptable value. The CR value of 0.932 is well above the 0.7 desired value. The fifth construct in the study was acceptance (AC) has Cronbach's Alpha value of 0.715, AVE value of 0.802, and Composite Reliability (CR) of 0.849, all above the threshold value and supporting acceptable convergent validity. Work engagement has a strong relationship between the observed and the latent variable with a Cronbach's Alpha of 0.737, the AVE was 0.659, the Composite Reliability (CR) for WE is 0.867, which is far above the ideal level of 0.7, further attesting

to the reliability of the construct. Last but not least, the construct resilience presents a satisfactory Cronbach's Alpha 0.869 illustrating a high internal consistency among the items. In addition, the Average Variance Extracted (AVE) value for R is 0.653. The Composite Reliability value of 0.907 is greater than the target value of 0.7.

Table No. 3: TABLE SHOWING DISCRIMINANT VALIDITY OF THE CONSTRUCTS

	PBT	OBT	SBT	GCPT	RT	ACT	WET	OCT	Mean	SD
PBT	**0.78**	.353**	.401**	.154**	-.240**	-.099*	-.472**	-.437**	3.94	0.91
OBT		**0.8**	.170**	.274**	0.049	-0.046	-0.001	-0.04	3.96	0.87
SBT			**0.836**	-0.068	-.199**	.218**	-.131**	-0.013	4.01	0.83
GCPT				**0.844**	.185**	.176**	0.012	-.116**	3.54	0.90
RT					**0.895**	.410**	.451**	.400**	3.52	0.80
ACT						**0.812**	.445**	.437**	3.96	0.74
WET							**0.808**	.760**	3.81	0.83
OCT								**0.824**	4.11	0.74

Off diagonal values are Pearson correlation coefficients among the constructs.
Highlighted diagonal values are the square root of AVE which are extracted from confirmatory factor analysis.
PB: Personal barrier; OB: Organisational barrier; SB: Societal barriers; GCP: Glass ceiling perception R: Resilience; AC: Acceptance; WE: Work engagement and OC: Organisational commitment

Table 3 reports discriminant validity analysis between the constructs with Pearson correlation coefficients as well as square roots of AVE. The off-diagonal values are correlation coefficients, whereas the diagonal values are square roots of AVE obtained from confirmatory factor analysis. The discriminant validity test was conducted to examine the uniqueness of constructs in the measurement model. The off-diagonal values are being compared with the diagonal values, which stand for the AVE for every latent variable (Hair et al., 2017; Henseler et al., 2015). Overall, the off-diagonal values are always lower than the diagonal values for each of the constructs, thus showing acceptable discriminant validity. These results imply that the measurement model discriminates well among constructs, as indicated by the minimal overlap among them. Consequently, the constructs measure unique variance and meet the discriminant validity criteria in SEM.

PATH DIAGRAM OF THE FINAL MODEL

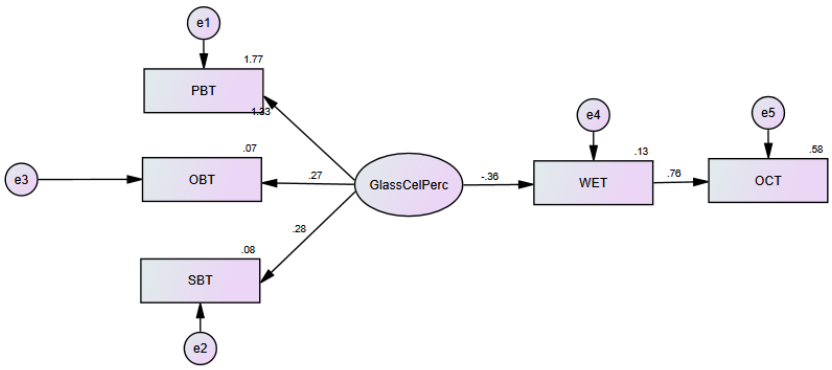

TABLE No. 4

TABLE SHOWING STANDARDISED AND UNSTANDARDISED COEFFICIENTS

Path	Un Coeff	Std Coeff	s.e.	C.R.	p	Sup/Rej
GCP →WET	-0.262	-0.364	0.063	-4.187	***	Supported
GCP → PBT	1.33	0.961	0.082	16.14	***	Supported
GCP → OBT	0.18	0.271	0.046	3.877	***	Supported
GCP → CP	0.202	0.285	0.055	3.65	***	Supported
WET → OCT	0.657	0.76	0.024	27.663	***	Supported

WE: Work engagement; PB: Personal barrier; OB: Organisational barrier; SB: Societal barriers; OC: Organisational commitment; GCP: Glass ceiling perception
CMIN=27.46, DF=5, P=0.000 (<0.01), χ^2/df =5.492, RMSEA=0.023, GFI=0.969, NFI=0.943, RFI=0.909, TLI=0.901, CFI= 0.951.

The fit indices report the structural equation model as having a good fit to the data overall. The findings revealed that the chi-square statistic (χ^2 = 27.46, df = 5, p < .001). The ratio of chi-square to degrees of freedom (χ2/df) is 5.492, which indicates an adequate fit for the target model (Kline, 2016). Besides, other indices of fit to the model were also in support of the model's fitness, such as the RMSEA =0.023, GFI =0.969, and NFI=0.943, which all surpassed their respective thresholds for satisfactory fitness levels as suggested by Brown & Cudeck, (1993). Additionally, RFI = 0.909, TLI = 0.901, and CFI=0.951 (above the threshold values as suggested by Hu & Bentler, 1999; Bentler & Bonett, 1980), were indicative of good to excellent fitness further in support of the model's validity. In spite of some variations, the fit indices generally suggested that the model represented an acceptable to good fit for the observed data. All the fit indices exceed or closely approximate the desired thresholds (Bentler & Bonett, 1980). Overall, the outcomes indicate that the modelled relationship among the observed variables is appropriately represented by the specified model (Sathyanarayana & Mohanasundaram, 2024).

The initial hypothetical hypothesis of the study was between Glass Ceiling Perception (GCP) and personal barriers. The findings validate that GCP significantly predicts PBT (β=0.961, s.e. =0.082, CR=16.14, p=0.000 (<0.001). This indicates a strong connection between the perception of a glass ceiling and the perception of personal barriers, indicating that those who perceive barriers to promotion are likely to face personal barriers. The second research hypotheses of the study were between Glass Ceiling Perception (GCP) and Organisational Barriers (OBT). The findings point towards GCP to positively predict OBT (β=0.271, s.e. =0.046, CR=3.877, p=0.000 (<0.001). This provides insight that the people who experience the glass ceiling are likely to be facing organisational barriers, which proves the existence of perceived barriers in organisational settings. The third hypotheses of the study were between GCP and Societal Barriers (SBT). The findings reveal that GCP significantly predicts Societal Barriers SBT (β=0.285, s.e. =0.055, CR=3.65, p=0.000 (<0.001). This indicates that those who perceive a glass ceiling are likely to perceive societal barriers, reflecting the impact of glass ceiling perceptions on general societal perceptions. The standardized path coefficient from GCP to WET was statistically significant (β=-0.364, s.e. =0.063, CR=-4.187, p=0.000 (<0.001) and represented a negative correlation between GCP and WET. To be exact, as GCP grows, WET diminishes. Finally, the variables were WET and OCT (β=0.76, s.e. =0.024, CR=27.663, p=0.000 (<0.001). This notable outcome shows that higher work engagement in connected to high level of organisational commitment, highlighting the importance of developing engagement to enhance commitment in the organisation.

The results showed that the R^2 value was 0.132 for the glass ceiling perception and work engagement indicate that approximately 13.2 percent of the work engagement variance is explained by the glass ceiling perception. This reflects a moderate amount of variance explained, it means that glass ceiling perception explains work engagement to some degree. Furthermore, the R^2 value of 0.577 for work engagement and organisational commitment is explained by work engagement. This indicated a strong relationship between these factors, and work engagement was a significant predictor for organisational commitment.

Table 5
MEDIATION EFFECT OF RESILIENCE ON GLASS CEILING PERCEPTION AND ACCEPTANCE

Path	Un Estimate	Std. Estimate	s.e	C.R.	P	Lable
GCP → Resil	0.578	0.581	0.046	12.565	0.000	Supported
Resil → Acc	0.817	0.802	0.082	9.963	0.000	Supported
GCP → Acc	-0.001	-0.001	0.081	-0.009	0.993	Rejected
GCP → Resil → Acc	0.471	0.465	0.068	6.926	0.001	Supported

GCP: Glass ceiling perception, Resil: Resilience; Acc: Acceptance
CMIN=31.2, DF=4; P=0.000, CMIN/DF=7.8, RMSEA=0.05, RMR =0.04, GFI= 0.651, PGFI=0.911, NFI=0.931, RFI=0.901, TLI=0.913, CFI= 0.913.

Analysis: The model fit was assessed with different indices of fit to check whether it was adequate enough to reflect the observed data or not. The findings established that the chi-square statistic (χ^2 = 31.2, df = 4, p < .001). Nonetheless, based on the relative goodness of fit (χ^2/df = 7.8), which suggests a satisfactory fit for the hypothesized model (Kline, 2016), Moreover, the model's goodness was also evidenced by other influential fit

indices such as the RMSEA =0.05, RMR=0.04, GFI =0.951, NFI=0.931, RFI=0.901, which were all above their respective fit thresholds. Furthermore, PGFI = 0.911 and TLI = 0.913, all of which are above or close to the acceptable values (Bentler & Bonett, 1980), reflected good to excellent fit, further indicating the validity of the model. Overall fit indices as a whole collectively suggested that the model had a reasonable to good fit to the observed data (Sathyanarayana & Mohanasundaram, 2024).

Statistical correlation between Glass Ceiling Perception (GCP) and Resilience (Resil) was large $\beta = 0.578$, SE = 0.046, $t = 12.565$, $p < 0.001$. Positive sign of the coefficient ($\beta = 0.578$) tells us that there is a significant and positive correlation between re glass ceiling perception and resilience. It implies that those perceiving that there is a glass ceiling will tend to demonstrate higher levels of resilience. The second pathway was Resilience (Resil) to Acceptance (Acc) ($\beta = 0.817$, SE = 0.082, $t = 9.963$, $p < 0.001$) (Sathyanarayana & Mohanasundaram, 2025). The positive sign reflects that there is a direct positive correlation between Resilience and Acceptance. It indicates that more resilient women managers have more acceptance in their workplaces. Direct line from Glass Ceiling Perception (GCP) to Acceptance (Acc) is $\beta = -0.001$, SE = 0.081, $t = -0.009$, $p = 0.993$. The estimated coefficient ($\beta = -0.001$) suggests a statistically non-significant and insignificant relationship between Glass Ceiling Perception (GCP) and Acceptance. In the case of mediation path (GCP → Resil → Acc). The estimated coefficient for the indirect effect from Glass Ceiling Perception (GCP) to Acceptance (Acc) through Resilience (Resil) is $\beta = 0.471$, SE = 0.068, $t = 6.926$, $p = 0.001$. The positive coefficient $\beta = 0.471$ (0.578*0.817) shows a significant strong indirect link between Glass Ceiling Perception and Acceptance through Resilience.

This implies that Glass Ceiling Perception Influences Acceptance indirectly through its impact on Resilience. Thus, mediation path is confirmed. This finding means that Resilience mediates the hypothesized relationship between Glass Ceiling Perception (GCP) and Acceptance in organizations. Developing individuals' resilience can be a good solution for improving acceptance, particularly in organizations where there are high glass ceiling perceptions. As the direct route from GCP to Acceptance wasn't significant whereas the indirect route via Resilience was significant, it implies full mediation. That is, the impact of Glass Ceiling Perception on Acceptance is completely accounted for by its effect on Resilience. It points to the need for evaluating the implementation of resilience-enhancing interventions to prevent the adverse impact of glass ceiling perception on acceptance in the workplace. Thus, recognizing and responding to the place of resilience in alleviating the effect of glass ceiling perception can add a more inclusive perspective and accepting space. The R^2 value of 0.54 for resilience 0.65 for acceptance, suggest that mediators in the mediation model explain a considerable amount of the variance in these variables, reflecting their significant their significant influence on resilience and acceptance. The fact that the R^2 value for acceptance is high shows that a significant percentage of acceptance is accounted for by the interaction between glass ceiling perception and resilience. Thus, the findings of the study imply that resilience is a significant mediator of the relationship between Glass Ceiling Perception and Acceptance.

MODERATION EFFECT: MARITAL STATUS ON GLASS CEILING PERCEPTION AND WORK ENGAGEMENT

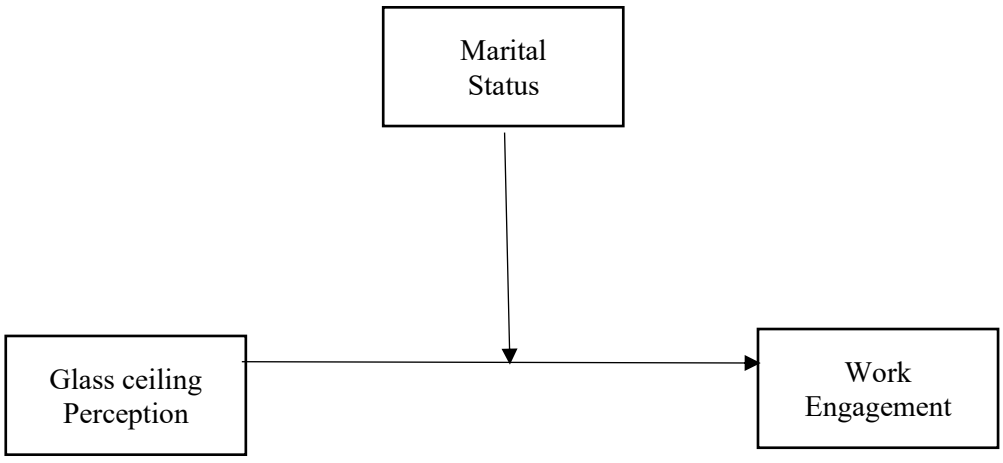

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TABLE 6
TABLE SHOWING MODERATION EFFECT OF MARITAL STATUS

R	R-sq	MSE	F	df1	df2	p
0.306	0.0936	10.6095	19.2144	3	558	0.0000

	Coeff	s.e.	t	p	LLCI	ULCI
C	40.7404	3.011	13.5304	0.0000	34.8261	46.6547
GCPT	-0.9625	0.1802	-5.3423	0.0000	-1.3164	-0.6086
MStat	-12.0857	1.8002	-6.7136	0.0000	-15.6217	-8.5497
Int_1	0.6326	0.1047	6.0404	0.0000	0.4269	0.8383

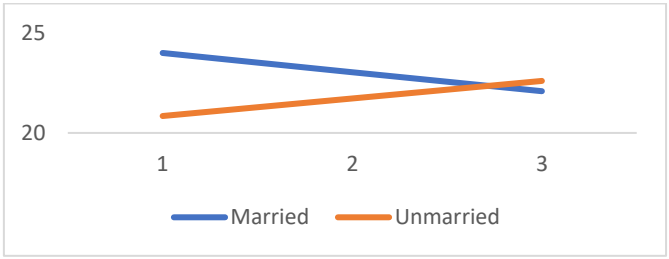
	R2-chag	F	df1	df2	p
X*W	0.0593	36.4868	1	558	0.0000

M Status	Effect	se	t	p	LLCI	ULCI
1	-0.3299	0.0846	-3.898	0.0001	-0.4962	-0.1637
2	0.3026	0.0617	4.9079	0.0000	0.1815	0.4237

We carried-out moderation analysis through process macro investigated the effect of Glass Ceiling Perception (GCPT), Marital Status (MStat), and their interaction (Int_1) on Work Engagement. Results revealed a statistically significant model ($F(3, 558) = 19.2144$, $p < 0.001$) with an R2 of 0.0936, suggesting that the predictors explain about 9.36% variation in Work Engagement. Adjusting for the interaction term and Marital Status, higher Glass Ceiling Perception was associated with lower Work Engagement (β=-0.9625, t=-5.3423, $p < 0.001$, 95% CI [-1.3164, -0.6086]), confirming a negative relationship. Moreover, Marital Status had a significant main effect on Work Engagement (β = -12.0857, t=-6.7136, $p < 0.001$, 95% CI [-15.6217, -8.5497]), signifying lower levels of engagement in some marital statuses than others (Sathyanarayana & Mohanasundaram, 2025).

Moreover, Marital Status had a strong influence on Work Engagement. To be more precise, higher Glass Ceiling Perception married individuals can have varying degrees of Work Engagement compared to single individuals. In other words, married (coded as 1) reported less Work Engagement than unmarried (coded as 2). β = -0.3299, t=-3.898, s.e= 0.0846, $p = 0.0001$, 95% CI [-0.4962, -0.1637] for being married; β = 0.3026, s.e= 0.0617, t=4.9079, $p < 0.001$, 95% CI [0.1815, 0.4237] for being unmarried, which shows that marital status has a different impact on Work Engagement in the way that married individuals have lower levels of Work Engagement compared to unmarried ones. In addition, the Interaction term between Glass Ceiling Perception and Marital Status was significant (β = 0.6326, s.e=0.1047, 6.0404, $p < 0.001$, 95% CI [0.4269, 0.8383]), indicating the relationship between Work Engagement and Glass Ceiling Perception varies with respondents' Marital Status. The interaction term X*W made a substantial contribution to the model ($F(1, 558) = 36.4868$, $p < 0.001$), explaining an additional 5.93 percent of the variance in work engagement. The results highlight the complex interplay between Glass Ceiling Perception (GCPT), Marital Status (MStat), their interaction (X*W), and Work Engagement, underlining the need for multiple factors to be taken into account when understanding workplace dynamics.

GRAPH SHOWING INTERACTION EFFECT BETWEEN GLASS CEILING PERCEPTION (X) AND WORK ENGAGEMENT (Y) FOR MARITAL STATUS (W)



V. Discussion And Conclusion

The present findings here show a significant negative association between perception of glass ceiling and work engagement such that the greater the perception of glass ceiling barriers by employees, the lower their work engagement. Additionally, the positive correlation between glass ceiling perception and organisational, social, and personal barriers shows that the higher one perceives the glass ceiling, the higher their personal, organisational, and social barriers respectively. These results identify the complex nature of glass ceiling perceptions and their effects on employees' workplace experience. Further, the significant levels of positive correlation among work engagement and organisational commitment suggest that increasing levels of work engagement are related to increased levels of organisational commitment, perhaps mediating the significant influence of glass ceiling perceptions on employees' organisational commitment. In addition, the high positive relationship between WE and OC infers that higher levels of work engagement correspond to superior organisational commitment, possibly mediating the effect of perceptions of glass ceiling on employees' organisational commitment. Consistent with empirical evidence from other research like Bihagen & Ohls; Yap & Konard, (2009) our study reveals that a considerable promotion disadvantage is faced by women at organisational levels compared to men. Additionally, findings from the current study indicate that women experienced personal, organisational, as well as social barriers. Such findings are in consistency with earlier studies, supporting the fact that women experience similar challenges as reported in earlier research (Hussain et al., (2021); Babic & Hansez (2021)).

At a management level, these observations call attention to the necessity of shattering perceptions of glass ceiling and barriers, creating work engagement, and strengthening organisational commitment at work. Some of the strategies would include calling for transparency and justice, equity in opportunity to acquire skills and independence, and legislation to eliminate barriers and promote inclusivity. By addressing such concerns adequately, organisations can build an enabling and inclusive organisational climate that enhances employee well-being, motivation, and commitment, and organisational performance. Support systems and monitoring must be sustained to achieve long-term benefits in a workplace culture of diversity, equity, and inclusion. The same results were reported in research by Bandura (1999), Seaton and Yip, (2009); Benner & Graham (2011); Jessica et al., (2016). All these results have confirmed that equity is a central factor in fostering an inclusive atmosphere. The discovery of wherein resilience completely mediates the glass ceiling perception and acceptance relationship, has important inference and managerial implications.

The findings recognize the central role that resilience plays in terms of shaping how employees react to perceived glass ceiling impacts within the workplace. Higher resilient employees are more capable of overcoming and moving beyond such challenges, leading to a greater level of acceptance in terms of managing workplace challenges. Conceptualizing resilience as a mediating variable provides critical information regarding the psychological processes that govern employee reactions to organisational challenges. From the managerial perspective, these findings can be used in an attempt to design interventions for implementing a more tolerant and diverse workplace. One of the potential means of doing that is through the introduction of resilience programs that provide workers with resources to build stress management and adaptability to adversity skills. A second route is through facilitating a culture for diversity, equity, and inclusion to promote the development of an acceptance- and resilience-enhancing climate. Leadership growth should also be focused on empathy and developing equitable opportunity for growth. Identifying and acting on resilience as an intervening variable enables organisations to develop a workforce not only resilient to adversity but thriving within it, enhancing employee well-being as well as organisational performance.

Also, the research indicates strong association between marital status, their interaction, glass ceiling perception, and work engagement. More glass ceiling perception has strong relationship with less work engagement levels, showing that workers who notice barriers to career progress might be less engaged at work. Moreover, marital status is a good predictor of work engagement, as married people are less engaged compared to unmarried people. This indicates that personal factors, including marital status, affect employee engagement. In addition, the interaction effect that exists between glass ceiling perception on work engagement differs depending on the marital status of an individual. Thus, our results appear to be in alignment with the results of Buddhapriya, (2009); Jordan & Zitek, (2012); Sever, (2016); Sharma & Kaur, (2019). Organisations should take these results into consideration when creating engagement programs and support programs. Interventions to counteract perceptions of glass ceilings, like open promotion process and mentoring schemes, can increase the level of engagement. Support that is marital status-specific, for example, flexible work participation by married employees and careers development opportunities, can also enhance employee well-being and productivity. Through resolving these variables and ensuring an inclusive work environment, organisations are able to build higher levels of employee engagement and promote overall organisational performance.

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MANAGERIAL IMPLICATIONS

The findings of the present study on glass ceiling attitudes among female IT managers brought out the complexity in the nature of hindrances faced or experienced in the workplace. The negative correlation between the glass ceiling perceptions and work engagement reflects the negative impact of perceived obstacles on the levels of employee engagement, whereas the positive correlation between glass ceiling perceptions and personal barrier, organisational barrier, and societal barriers reveals that individuals having greater glass ceiling perceptions also have greater personal, organisational, and societal barriers respectively. These findings highlight the multi-dimensional aspect of glass ceiling perceptions and their consequences for the experiences of employees in the workplace. In addition, the high positive correlation between work engagement and organisational commitment indicates that stronger work engagement is linked to higher organisational commitment, possibly acting as a mediator in the effect of glass ceiling perception on the commitment of employees to their organisations. Furthermore, the strong positive coefficient between WE and OC suggests that higher levels of work engagement are associated with greater levels of organisational commitment organisational commitment, potentially mediating the impact of glass ceiling perceptions on employees' commitment to their organisation. In line with findings from other studies such as Bihagen & Ohls; Yap & Konard, (2009) our research indicates that women encounter a significant promotional disadvantage at organisational levels when compared to men. The current study reveal that women faced personal, organisational, and social barriers. These results align with previous studies, corroborating the notion that women encounter similar challenges as documented in prior research (Hussain et al., (2021); Babic & Hansez (2021)). Managerially, these findings indicate the importance of intervening in addressing the perceptions and challenges of the glass ceiling, promoting work engagement, and organisational commitment within the workplace. Interventions may include fostering justice and openness, room for growth, autonomy and policy execution in a manner that diminishes obstructions and builds inclusivity. By working actively with these determinants, organisations have the capacity to construct a heterogeneous and inclusive organisation that encourages employees' wellbeing, commitment and participation and consequently organisational performance. There should be continued monitoring and support structures to deal with these in a continued fashion along with ensuring continued improvement in establishing a workplace culture that encourages diversity, equity, and inclusion. Findings were also outlined in research studies carried out by Bandura (1999), Seaton and Yip, (2009); Benner & Graham (2011); Jessica et al., (2016). These results have confirmed that equity is extremely crucial in establishing an inclusive setting. The discovery of full mediation, where resilience wholly mediates the role of glass ceiling perception and acceptance, has important implications for both inference and managerial decision-making. The results highlight the central position of resilience in organizing a person's reactions to glass ceiling perception within the workplace. Staff with higher resilience levels are more able to cope with and transcend perceived obstacles, and thus are more likely to accept workplace difficulties more fully. Additionally, having resilience as a mediator to identify gives important inputs into the involved psychological processes occurring, informing employees' reactions to organisational obstacles. Managerially, organisations can use these results to support interventions with focused measures to develop a more accepting and inclusive work environment. This may involve resilience exercise spending to ensure staff members are empowered with better coping strategies and stress management skills. Second, promoting an inclusive culture through diversity, equity, and inclusion initiatives can cultivate a supportive environment for acceptance and resilience to grow. Efforts at leadership development should also address fostering empathy and enhance opportunities for advancement. Finally, by appreciating and understanding the mediating role of resilience, organisations may be able to develop a workforce that not only survives, but also flourishes in the context of organisational adversity, and in the process improve employee well-being and organisational success. Additionally, the study identifies strong association between perception of glass ceiling, marital status, their interaction, and work engagement. Increased glass ceiling perception is highly correlated with reduced levels of work engagement, which suggests that workers who perceive career stoppages may have lower job engagement. Work engagement is also a critical predictor, with married employees showing lower levels of engagement compared to unmarried employees. This suggests that individual factors, such as marital status, play a role in impacting the engagement of employees. Additionally, the interaction effect that is between glass ceiling perception for work engagement differs depending on one's marital status. Thus, our conclusions appear to concur with the conclusions of Buddhapriya, (2009); Jordan & Zitek, (2012); Sever, (2016); Sharma & Kaur, (2019). Organisations need to take these conclusions into consideration when creating engagement programmes and support packages. Interventions to counteract glass ceiling perceptions, like open promotion process and mentorship, can increase engagement levels. Marital status-specific support, with flexibility in work engagement for married staff and career advancement possibilities, can also improve employee health and efficiency. With these factors addressed and an inclusive work environment promoted, organisations can grow increased levels of employee engagement and make direct contributions to organisational success.

RESEARCH LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Like many other studies in the area, the present study of the perception of glass ceiling among women workers in the Indian IT sector has faced several limitations. These limitations deserve attention to place the findings in proper context and direct future research. The results of the study can be generalizable to an extent because it is confined to Bengaluru managers alone, and it might not reflect the comprehensive experiences of different women managers from all segments of the industry. To enhance the external validity of future studies, experiments should also involve participants across organisational levels and geographies of the Indian IT sector. Cross-regional or cross-industry comparisons might also be helpful to gain insights into women managers' special problems in the workplace. Later research, through adhering to such recommendations, is likely to have clearer observations regarding gender relations in India's IT sector and assist in informing the formulation of certain interventions that will contribute towards promoting gender equality as well as inclusion within the workplace. By acting upon these proposals, future research can move towards a greater explanation of gender dynamics in India's IT sector and its implications for the development of effective interventions to promote gender equality and workplace inclusion. Moreover, the present study's sample size of 562 responses can be considered quite low, which may constrain the statistical power and generalisability of the results. In order to overcome this shortcoming in future studies, attempts should be made to raise the sample size by widening the recruitment drive or getting multi-organisational collaboration from the Indian IT industry sector. Whereas the present research was mostly based on quantitative methods in studying the dynamics that affect women's career advancement and attitudes towards the glass ceiling, a limitation exists in the possible dearth of comprehensiveness in the analysis of the nuances experiences and views of women working in the Indian IT industry. In order to remediate this gap and give more richness to our knowledge, future research should attempt to complement quantitative information with qualitative methods, such as interviews or focus groups. Qualitative research can permit the better inquiry into contextual variables that inform women's career choices and views about overcoming obstacles, to obtain a more enriched understanding of the complex dynamics in play. By embracing qualitative methods in subsequent studies, scholars can examine in detail the everyday life of IT sector women workers to gain valuable insight that can inform organisational practice and interventions more sensitive to gender equality and women's career advancement. Researchers may also conduct comparative analysis within organisational settings or sectors to test generalisability of effects from interventions and pinpoint contextual success determinants. Multidisciplinary work or multi-organisational collaborations can also facilitate roll-out of huge interventions and enhance statistical power of research findings. Through the implementation of such new research directions, follow-up studies can overcome the limitations of partitioning intervention effects and give insightful information about the strategies to promote women's career advancement in work environments.

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