Cracking the Ceiling: Empowering Women in Educational Leadership Roles

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Abstract: **"Glass ceiling"** an invisible yet pervasive barrier prevents women's progression into senior leadership positions, regardless of demonstrated qualifications and achievements. This study investigates the presence of the glass ceiling within the education sector, where women constitute a majority of the workforce but remain underrepresented in leadership roles at institutional and university levels. Though there is substantial progress in gender equality and gender diversity, several women still face a number of challenges in their careers due to a deep-rooted cultural norms, organizational practices and biases. Utilizing a 21-item questionnaire alongside demographic variables, data were collected from 164 women employed in higher education institutions across Karnataka to examine the impact of the glass ceiling on career advancement. The results indicate a prevailing perception of gender equality and equitable career advancement opportunities, reflecting institutional support for women's leadership aspirations. However, the regression analysis revealed a potential structural disparity in career advancement, underscoring a need for mentorship and advocacy from senior women leaders to overcome the challenges of **"Queen Bee syndrome"**. Furthermore, the study shows that there is a tendency for women to occupy administrative roles, while male counterparts assume leadership positions, thereby constraining women's ability to fully exercise leadership potential—a phenomenon associated with **benevolent sexism**. It is also seen that institutional cultures fostering mutual respect correspond with reduced perceptions of gender disparity. The model exhibited statistical significance and explains a substantial proportion of the variance in women's perception of career advancement. This necessitates a need for strategic and targeted interventions to dismantle entrenched gender-based barriers and foster equitable representation of women in leadership positions within the education sector.

Keywords: Glass ceiling, Education sector, gender equality, gender stereotype, gender diversity

1. Introduction

"Glass ceiling" is a metaphor for the invisible, systemic barriers that prevent women from rising beyond a certain level in hierarchical structures. Inspite of forming a growing segment of the educated workforce, Indian women remain severely underrepresented in leadership roles. The International Labour Organization (ILO, 2015)[1] reported that women hold less than 5% of top executive positions in India. In an effort to address this disparity, the Companies Act, 2013, Section 149(1)[2], mandated the appointment of at least one-woman director on the boards of certain listed and certain classes of public companies. While this legal provision has increased numeric representation, many of these appointments remain largely symbolic and lack real decision-making power (KPMG, 2020)[3].

Traditional gender roles and societal expectations continue to pose significant barriers to women's advancement. Many women face cultural and familial pressure to prioritize domestic responsibilities over career ambitions, often resulting in mid-career attrition. Even in the public sector—where job security and benefits are comparatively better, gender-based challenges persist. Education sector also witness glass ceiling though there is perception of education as a progressive and egalitarian field. While women constitute a substantial portion of the teaching workforce, their presence sharply declines in senior leadership and decision-making roles. This vertical segregation reflects the enduring influence of the glass ceiling.

Research by **Mukherjee and Choudhury** (2019)[4] highlights the prevalence of a gendered hierarchy in Indian academia, where women are underrepresented in tenure-track, managerial, and administrative positions. These disparities are reinforced by institutional biases, gender-insensitive policies, and the lack of mentorship opportunities for aspiring women leaders. Furthermore, the burden of balancing professional duties with societal expectations of caregiving disproportionately affects women, often forcing them to opt out of leadership tracks. The symbolic inclusion of women in committees or advisory roles, without real authority or decision-making power, further illustrates how the glass ceiling manifests in subtle yet pervasive ways. Even when women ascend to leadership positions, they may encounter resistance, tokenism, and limited influence—conditions that undermine both personal advancement and institutional change. Addressing the glass ceiling in the education sector requires systemic reforms, including transparent promotion criteria, supportive workplace policies (such as flexible schedules and parental leave), active mentorship, and conscious efforts to challenge gender stereotypes. Only by dismantling these structural barriers can educational institutions become truly inclusive and equitable spaces for leadership development.

2. Review of Literature

The research also presents an integrated conceptual framework that identifies the causes and consequences of the glass ceiling effect, based on a comprehensive literature review. This framework highlights the interplay of four key categories of factors—**societal and cultural**, **individual**, **organizational**, and **policy-related**—in shaping systemic barriers that hinder women's advancement. These interconnected factors collectively contribute to the formation of a glass ceiling, which adversely affects both women employees and the organizations in which they work.

Studies suggest that women's underrepresentation in senior positions may stem from demographic characteristics such as age, educational background, and marital status, as well as personal factors like the burden of family responsibilities. Simultaneously, workplace-related challenges—such as exclusionary organizational cultures and limited access to professional development—further compound these barriers. Structural issues in recruitment, training, promotion, and selection processes often disadvantage women, limiting their upward mobility (**Ward, 2020**)[5].

A.   Individual/Person-centric Factors: This is most often person-centric obstacles that are self-imposed or internally cultivated constraints that affect women's career advancement. A core issue is limited access to education, which serves as a foundational barrier, influencing other psychological and behavioral factors. Women with inadequate educational opportunities may struggle with low self-confidence, diminished self-esteem, limited self-promotion, and constrained career aspirations (**Maheshwari & Lenka, 2022**)[6]. These internal barriers often

prevent women from actively seeking leadership roles or advocating for their own advancement, even when external opportunities exist.

B.   Organizational Factors: The corporate sector in India has witnessed a gradual rise in women's participation at the entry and mid-management levels. However, representation at the senior leadership level remains strikingly low. **Bhattacharya and Ghosh** (2018)[7] found that women account for only 4% of CEOs and managing directors in companies listed on the National Stock Exchange (NSE). This disparity is not merely structural but also deeply rooted in societal stereotypes that shape perceptions of leadership and gender roles. Two types of stereotypes—descriptive and prescriptive—serve as significant barriers to women's career advancement. Descriptive stereotypes refer to assumptions about how members of a group typically behave. In the case of women, these often include traits such as being nurturing, shy, and kind (**Eagly & Karau, 2002**)[8]. In contrast, prescriptive stereotypes dictate how women should behave, often reinforcing expectations that they remain gentle, cooperative, and emotionally supportive. These prescriptive norms penalize women who deviate from stereotypical behavior. Female employees who exhibit assertiveness, ambition, or a task-oriented leadership style are often viewed less favorably in performance evaluations, as their behavior conflicts with gendered expectations (**Rudman & Phelan, 2008**)[9]. This double bind not only hinders women's access to leadership roles but also discourages them from fully expressing the traits typically associated with effective leadership.

C.   Cultural Factors: Patriarchy is a deep-rooted practice that has made men the decision-makers, putting them in the place of agency within their personal and professional lives, while women are expected to focus on family and raising of kids as main concern over career choices. (**Chaudhuri & Ghosh, 2020**)[10] argue that in India, this barrier is not only organizational but also cultural, deeply entrenched in traditional gender roles. The typecast attitude towards women has actively put women in the supportive role while leadership and decision-making are left to the men. Indian society is predominantly patriarchal, and traditional gender roles often limit women's career aspirations and professional mobility.

D.   Policy Related Factors: Policy-related factors include hurdles in the form of poor implementation of gender equality legislation, inadequate publicizing of glass ceiling issues and infrastructural issues that make it more tough to breach the glass ceiling. Despite the fact that numerous nations have enacted legislation and instituted board quotas to improve the working conditions for female employees, it is challenging to guarantee that these rules are properly implemented since there is a lack of a robust enforcement mechanism and legal penalties for infractions (**Yukongdi, 2005**)[11]. Additionally, the implementation of these quotas has led to the "golden skirt" phenomenon, in which the same group of women get appointed to boards of many businesses (**Lee, 2014**)[12].

3. Objectives

➢   To identify and explain the presence of corporate glass ceiling in the education sector
➢   To examine the effect of glass ceiling on career growth among women in the education sector
➢   To understand the barriers contributing to glass ceiling in the education sector.
➢   To suggest effective strategies for overcoming glass ceiling in education sector.

4. Significance and Scope of the Study:

This study holds considerable significance as it seeks to explore and critically analyze the presence of the glass ceiling effect within the education sector—a field predominantly chosen by women. Despite the high participation of women in teaching and academic roles, their representation in senior administrative positions such as Principals, Deans, and Heads of Departments remains disproportionately low. This disparity highlights a pressing need to examine the structural and systemic barriers that hinder women's upward mobility within educational institutions. By identifying these impediments, the study aims to contribute to a deeper understanding of gender inequality in academia and to inform policy interventions that promote equitable leadership opportunities for women in the sector.

The scope of this study is confined to women employed in higher education institutions located in Karnataka, India. Specifically, the research focuses on institutions that are ranked below 200 in the National Institutional Ranking Framework (NIRF), ensuring a diverse yet relevant sample of academic environments. The study seeks to examine the existence and impact of the glass ceiling effect within this context.

The target population includes senior women professionals with a minimum of 10 years of service in the education sector. To ensure a comprehensive and holistic perspective, the study will include respondents holding key academic and administrative positions such as Principals, Deans, and Professors. By concentrating on experienced women in leadership or near-leadership roles, the research aims to generate meaningful insights into the barriers to advancement and the gender dynamics that shape leadership trajectories in higher education institutions.

5. Variables identified for the study:

The key variables considered for the study included both dependent and independent variables. An extensive review of literature led to the following independent and dependent variables.

5.1 Independent Variables:
➢ Individual Barriers
➢ Organizational barriers
➢ Societal barriers
➢ Policy-related Barriers

5.2 Dependent Variable:
➢ Glass ceiling limiting women's advancement to upper management

6. Research Methodology:

The study is both descriptive and exploratory in nature. The descriptive research study intended to identify the existing patterns with respect to women and career advancement. Meanwhile exploratory research helped in investigating the causes and perceptions of glass ceiling among women.

6.1 Research Instrument for Data collection
A structured questionnaire was employed for primary data collection. To refine the questionnaire, a focused discussion was conducted with senior academicians. Additionally, review of literature was carried out to generate a potential pool of relevant scale items for the

study. These items were further developed through exploratory research. The reliability of the questionnaire was assessed using Cronbach's Alpha.

• Data collection was facilitated using the Fillout form builder, which also captured the geographical coordinates (latitude and longitude) of the respondents' locations. The questionnaire gathered information on various aspects, including demographics, individual perceptions of the glass ceiling, career progression, opportunities for advancement, institutional policies, and related factors.

6.2 Population and sample for the study:

• **Population: Higher education institutions** were identified based on the National Institutional Ranking Framework (NIRF) 2024**,** with only those institutions ranked within the top 200 in Karnataka were included in the sample.

The respondents for the study were women educators and administrators at middle and senior levels from these institutes.

Sampling Technique: Stratified sampling was employed to ensure adequate representation across different hierarchical levels and institutions. Additionally, purposive sampling was used to select participants—specifically women in mid to senior-level positions—who could provide valuable insights relevant to the study.

Sample Size: The questionnaire was sent to 250 women employees. After a thorough follow up and data cleaning, usable sample was 164. With the response rate being more than 65% further statistical analysis was carried out with 164 respondents

6.3 Statistical tools used for analysis:

Data was collected using Google Forms and Fillout, with geotagging employed to ensure authenticity. Python was adopted for inferential statistical analyses. Regression analysis was conducted to examine the influence of the independent variables on dependent variable

7. Results and Discussions:

7.1 The demographic details of the respondents are presented below:

Table no: 7.1 – Demographic details of the respondents

Measures	Item	count	Percentage %
Total Count	Women employees	164	
Age	31-40	47	28.66
	41-50	96	58.54
	51-60	18	10.98
	60>	3	1.83
Marital Status	Married	158	96.34
	Single	3	1.83
	Divorced	8	1.83
	live in	-	-
Designation Level	Senior level Management	23	14.02
	Mid-level Management	10	6.1

	Operations Level management - HODs	131	79.88
Total Year of experience	10-15	26	15.9
	15-20	87	53
	20-30	41	25
	30>	10	6.1
Annual CTC	<10	31	18.9
	10-15	82	50
	15-20	36	21.95
	>20	15	9.15
Size of the organization	< 100	35	21.3
	101 - 500	87	53
	501 >	42	25.6

From Table 7.1 it is evident that the majority of respondents fall within the 41-50 age group, indicating they are in their mid-career to senior-level stages. Over 95% of these individuals are married and benefit from an adequate support system. Notably, around 80% of the participants hold positions as Heads of Departments (HODs), representing professors who occupy key decision-making roles within their institutions. Most respondents have significant professional experience, with over 15 years in their respective fields. The annual compensation for the majority ranges between ₹10 to 15 lakhs. Additionally, 53% of the respondents are affiliated with educational institutions employing between 101 and 500 staff members, suggesting that the study's findings are drawn from well-established and premier organizations with a longstanding presence in the industry.

Table No: 7.2-Mean values for each item and Regression analysis to ascertain the glass ceiling effect

Dependent Variable: Glass Ceiling Limiting Women's Advancement to Upper Management						
Sl No	Question	Mean	Estimate	Std Error	t Value	p Value
1	**Women and men are respected equally in my institution**	**4.5**	**0.271895**	**0.134347**	**2.024**	**0.044878**
2	In my institution, there are equal career development opportunities for men and women	4.4	-0.143027	0.132071	-1.083	0.280677
3	There is complete gender equality during selection and recruitment of faculty in my institute	4.3	-0.024901	0.101689	-0.245	0.806911
4	**Teaching is considered to be predominantly, a woman's profession but the higher posts are mostly occupied by men**	**2.5**	**0.19435**	**0.082211**	**2.364**	**0.01944**
5	Gender has impacted my growth in the current institution	2.18	0.011167	0.114792	0.097	0.922644
6	In my institution, women have to perform better than their male	2.15	-0.192752	0.101586	-1.897	0.059816

Dependent Variable: Glass Ceiling Limiting Women's Advancement to Upper Management
Sl No	Question	Mean	Estimate	Std Error	t Value	p Value
	counterparts to be promoted to the same position					
7	Women limit themselves to non-operational/ administration roles as it helps maintaining work-life balance	2.38	0.154969	0.10449	1.483	0.140281
8	Assertive and competitive women are viewed negatively in my institution	2.28	0.122003	0.10217	1.194	0.234439
9	Women should not be in a position of authority over men (Men do not appreciate reporting to a woman in authority)	2.09	0.120522	0.084335	1.429	0.155189
10	**Queen Bee Syndrome is prevalent in our institution where women in higher positions do not support women aspiring to grow**	**2.17**	**0.397986**	**0.106369**	**3.742**	**0.000265**
11	Provide them with greater breadth / variety of work experiences	3.13	-0.036987	0.098439	-0.376	0.707678
12	Flexitime work schedules for all employees	3.83	0.061693	0.094291	0.654	0.513997
13	Parental leave facilities for both parents	4.07	-0.088952	0.085452	-1.041	0.299674
14	Men do not prefer their spouses at a higher career level than them	2.21	0.022797	0.096746	0.236	0.814059
15	There are instances where a male peer is chosen over me for a particular assignment, despite my credentials being more suitable for the job	2.16	0.043851	0.115059	0.381	0.703686
16	**There exists a benevolent sexism in the institute wherein high amount of support and admin work is given to women**	**2.20**	**0.243726**	**0.098493**	**2.475**	**0.014526**
17	Sufficient opportunities exist in my institution for women to advance into senior management positions	4.15	-0.133874	0.096432	-1.388	0.167242
18	Women tend to get complacent after a point in their careers and do not wish to grow to the next professional level	2.26	-0.006218	0.10507	-0.059	0.952889

Dependent Variable: Glass Ceiling Limiting Women's Advancement to Upper Management						
Sl No	Question	Mean	Estimate	Std Error	t Value	p Value
19	Women's family responsibilities hinder their commitment to the institution	2.46	0.061625	0.079978	0.771	0.442278
20	Assist them in taking risks (for ex, taking up the post of a COE, registrar, etc,)	2.9	-0.041466	0.098907	-0.419	0.675676
21	Assist them in taking risks (for ex, taking up the post of a COE, registrar, etc,)	2.5	-0.041466	0.098907	-0.419	0.675676
22	Senior employees irrespective of the gender of the juniors help them on the job and ensure that the progress of the juniors is tracked	2.25	-0.095537	0.082286	-1.161	0.247586
			0.376081	0.88835	0.423	0.672686
	Significant (<0.05)					

From the table 7.2 above the regression output with significance level <0.05, the study revealed a largely positive perception of gender equality within the education sector. The **mean score of 4.5** indicates that most respondents view gender equality favorably, although a small portion of the workforce may still harbor differing opinions. A **mean of 2.5** indicates mixed views on whether teaching roles are predominantly held by women while leadership roles are male-dominated. Further the **Queen Bee Syndrome** with a **mean of 2.17** indicates that most respondents do not observe senior women obstructing other women's progress, though a small group still perceives this behavior. On the issue of **benevolent sexism**, the **mean score of 2.2** implies that while most respondents don't experience gender bias in role assignments, some still perceive traditional gender expectations influencing workplace decisions.

7.3 Key findings from Regression analysis:
Multiple regression analysis was utilised to examine the relationship between all the items indicated in Table no 7.2 as independent variables and "Glass Ceiling Limiting Women's Advancement to Upper Management" as a dependent variable. The results of the same along with the significant values for each item have been indicated in Table No.7.2. Hence it can be inferred that 4 items have shown a considerable effect on Glass ceiling which can be represented as given below:

Glass Ceiling Effect = 0.376 + 0.2719 (P1) + 0.1944(P2) +0.3980 (P3) + 0.2437(P4)
Where:
- **0.376 = constant**
- **P1= Equal Respect** indicating "Women and men are respected equally in my institution"
- **P2= Gendered Roles** indicating "Teaching is seen as a woman's profession, but top posts are held by men"
- **P3= Queen Bee Syndrome** meaning "Women leaders do not support other women"
- **P4= Benevolent Sexism** meaning" Women are often assigned support/admin work"

7.3.1 Women and Men Are Respected Equally in the Institution:
Estimate (0.27), t-value (0.42), p = 0.0448:
This variable has a significant positive impact, indicating that perceptions of equal respect for women and men strongly correlate with overall views on gender equality in the workplace. Institutions fostering mutual respect appear to reduce perceptions of gender disparities.

7.3.2 Teaching Dominated by Women, Higher Posts by Men:
Estimate (0.19), t-value (2.36), p = 0.0194:
This variable has a positive and statistically significant impact, indicating that perceptions of gender dominance in teaching roles versus leadership positions are highly influential in shaping views on gender equality. This highlights a potential structural disparity in career advancement opportunities.

7.3.3. Queen Bee Syndrome: Lack of Support from Senior Women Leaders:
Estimate (0.39), t-value (3.74), p = 0.0002:
This variable is highly significant, indicating that a lack of support from senior women leaders contributes substantially to the perception of gender inequality in the education sector. It emphasizes the need for mentorship and leadership support to address these challenges.

7.3.4. Benevolent sexism in the Institute: High amount of support and admin work is given to women.
Estimate (0.24), t-value (2.47), p =0.0145:
A significant predictor highlights that benevolent sexism though at the surface level looks positive but ultimately reinforces the traditional gender roles and inequalities. Women often take administrative role as their male counter parts taking leadership role would be limited in exhibiting their leadership abilities.

Table 7.3- ANOVA Summary Table

Source	DF	Sum Sq	Mean Sq	F Value	p-value
Regression	21	54.46	2.593	9.859	< 2.2e-16
Residual	142	45.54	0.321		
Total	163	100			

Table 7.3 indicates the influence of various factors on the perception that the **glass ceiling limits women's advancement in upper management within the Education sector.** The model explains **54.46% of the variability** in the dependent variable, as indicated by the **R-squared value of 0.5446**, suggesting that the independent variables provide a strong explanatory power for the outcome. The **F-value of 9.859** and an overall **p-value <2.2e-16 (< 0.005**) confirm that the model is statistically significant, meaning that the predictors collectively have a meaningful impact on the dependent variable.

The results highlight that structural and cultural issues, such as gender-dominated roles, perceptions of assertiveness in women, and the lack of support from senior women, are critical factors influencing perceptions of gender equality in the education sector. While the overall model is significant and explains a substantial proportion of the variance, the findings emphasize the need for targeted interventions, including:
● Leadership development programs for women.
● Mentorship initiatives to foster support from senior women leaders.

● Creating an inclusive environment where people are treated equally and empowered to contribute fully.

By addressing these factors, organizations in the education sector can make strides toward greater gender equality and more equitable career advancement opportunities.

8. Conclusion

The above study indicates that though the education sector is perceived as a progressive and a gender inclusive field, glass ceiling effect significantly limits women's advancement into senior leadership positions. It is quite evident that there are not many women in leadership positions like Principals, Deans and other decision-making roles. Inspite of women dominating the teaching workforce, their representation at the top level is not very prominent. This gap is due to different factors such institutional bias, gender stereotypes, lack of mentorship opportunities and work life balance challenges. Regression analysis clearly indicates that cultural and organisational factors -such as the perception of teaching as a female dominated, but leadership male dominated, existence of benevolent sexism and the Queen Bee syndrome. Though most of the respondents in the above study indicate a general sense of gender equality in their institutions, yet there are powerful barriers like administrative pigeonholing of women, lack of mentorship from senior female leaders, and persistent gender stereotypes continue to reinforce the glass ceiling. There is need to address these challenges with gender parity policies. It calls for an institutional transformation with a deliberate effort towards leadership development programs, developing mentorship networks and robust inclusive policies that can challenge traditional gender norms. Additionally, a fostering workplace culture where both men and women are equally respected and empowered is essential to break the glass ceiling and enable an equitable career progression. Though step towards gender, diversity and equity in the education sector are underway, glass ceiling persists as a complex and deeply rooted issue. Overcoming it demands for both cultural change and reforms to ensure that leadership opportunities are accessible to all, regardless of gender, race, or background.

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