Assessment of Glass Ceiling Barriers to the Career Advancement of Professional Women in Construction Industry

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Women in organisations experience a 'glass ceiling' that prevents them from reaching top management levels or executive status in the construction industry thus raising the question of gender equality in the workplace. This study investigates the glass ceiling barrier in the Nigerian construction industry organisations and how this is perceived by the professional women. A cross-sectional questionnaire survey of professional women (Architecture, Building, Quantity Surveying and Engineering) who have practiced in the construction industry was adopted. Mean, percentages, independent T-test and ANOVA statistics were utilised for data analysis. The study found that women face high prejudice where they are perceived to be less than men and also there is an unconscious bias due to cultural, tribal and ethnic differences in decision making by top Management. The women who have attained the Fellows cadre in their professional organisations are also treated with respect and are more likely to break through the glass ceiling barrier at an average level. The study concludes that professional women face glass ceiling barriers in their workplaces within the construction industry at an average level. Thus, it is recommended that professionals within construction should have lesser prejudices against women and see them as professionals with same abilities in carrying out task just like their male counterparts.
Keywords: Construction, Glass ceiling, Organisation, Professionals, Women

INTRODUCTION

There are more women working in the labour workplace in Nigeria and this changing demographics in the workplace has led to a shift in work and relationship dynamics, however there are still barriers in organisations that prevent certain groups, especially women, from continuing their professional careers and accessing management positions (Flippin, 2017). Society today seeks for a different and better work environment thus leading to the exploration of a different and diverse workforce. Women have entered the workforce and due to demands and pressures from many influencers over the years, women are now accepted in roles that once upon a time were considered to be for men only. This is as a result of overcoming different barriers. One of the barrier types which exists in the corporate world is the 'glass ceiling type barrier' which has been aptly described as a situation where women in the workplace get to where they can 'see' the higher attainable positions in their career path, but they are unable to move beyond where they are on that ladder (Federal Glass Ceiling Commission, 1995). The workplace is designed with clear paths of growth for all irrespective of gender but due to the nature of the roles that women take on in addition to their careers, they are often disadvantaged and have to work twice as hard to get the recognition that their male colleagues attain with ease (Jones, 2019). Different workplaces have their culture, climate and practices and this is why the study of glass ceiling is conducted within specific workplaces with such similar environments.

The barriers faced by women's participation in the construction industry include underrepresentation of women in the field, biases based on gender stereotypes, company cultures supporting unfriendly work environments for people who are part of minority groups, such as women, culture, religious seclusion and social norms (Adeyemi *et al.,* 2006; Amaratunga *et al.,* 2006; Kehinde & Okoli, 2004; Kolawole & Boison, 1999; Ling &Poh, 2004; Madikizela & Haupt, 2010, Maina, 2022; Shanmugan *et al.*, 2007; Umar & Ribah, 2020). Other barriers include pregnancy, maternity, child rearing, emotional stress, sexual advances from senior male officers, a negative social attitude, the low enrolment of female students in primary to tertiary institutions, labour market discrimination, traditional and cultural beliefs ('constructivism'), and others have been named as barriers to the career advancement of women in the Nigerian construction industry by Kehinde and Okoli (2004) and Kolawole and Boison (1999). For the majority of women, commitment to marital demand acts as a powerful restraint. Kehinde and Okoli (2003) surmised that part of the problem was *women's own perception* of their employment potential and traditional perceptions of women's role and career outside the home.

Dimovski (2010) asserted that globally gender differences exist in promotions to senior management in corporate organisations and owing to

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the 'glass ceiling,' the poor representation of women at senior management levels continues. This situation was found to be true for the hospitality industry (Mwando *et al.,* 2014), higher education (Jackson and O'Callaghan, 2009), women entrepreneurs (Weiler & Bernasek, 2001), a Federal Government cabinet (Powell and Butterfield, 1994), private sector organisations (Bombuwela & De Alwis, 2013), mix of public and private sector (Saleem *et al.,* 2017), cross-cultural and across nations (Bennington, Wagman, & Stallone, 2005). Similarly, the topic of the glass ceiling continues to be relevant in today's literature for responding to women's lack of passive or active representation in the upper ranks of non-traditional occupations (Yu, 2020). Specifically, Rivera *et al.* (2021) found the presence and constancy of glass ceilings throughout the professional development of women in the construction industry. The glass ceiling was also found to differ in the career stages of female architects (Aydın & Erbil, 2022). However, these are several sectors and categories of women working in the construction industry, this necessitates the need to study these sectors/categories separately due to the difference in working conditions. Thus, this study assessed the perception of professional women on the glass ceiling barriers in their organisations.

LITERATURE REVIEW

Glass Ceiling Barriers to Women's Career Advancement

The Federal Glass Ceiling Commission (1995) describes glass ceiling as the "…artificial barriers blocking women and minorities from advancing up the corporate ladder to management and executive level positions". The glass ceiling is described as a 'well enshrined phenomenon supported by conclusive evidence,' (Simpson & Altman, 2003). According to Meyerson and Fletcher (2000), despite the increased numbers of women both participating in the workforce and achieving management positions, the 'glass ceiling' still exists; and continues to be relevant in today's literature (Yu, 2020). The question has been asked whether gender disadvantages are stronger at the top of organisational hierarchy? A study by Cohen *et al.* (2020) found that there are bias-driven effects (e.g., a bias against female promotions to the top level), structural effects (e.g., a lack of mentoring opportunities, networking opportunities, and high-profile job assignments), and cultural effects (e.g., a lack of social support from the male leaders within the organization) within the accounting profession. Similarly, Sharma and Kaur (2019) found that the women managers face glass ceiling in terms of organizational and societal barriers at an above-average level in banking, hospitality and information technology (IT) industries.

Glass ceiling is linked to gender more than any other social structures. Cotter *et al.* (2001) found that not all gender or racial inequalities can in fact be defined as 'glass ceiling but rather define glass ceiling as a specific type of gender or racial inequality that can be distinguished from other types of inequalities. Whether this glass ceiling occurs in the workplace or in politics is essentially a reflection of social and economic gender inequality (Wirth, 2001). The women's belief about glass ceiling in the workplace can lead them to giving up on any attempts to seek promotions; or accepting their 'lot' and remaining on the same level; they can choose to be resilient and forge ahead or they deny the existence of this barrier and consider as a myth (Kulik & Rae, 2019; Smith *et al.,* 2012). Dimovski and Hallberg (2002) investigated women in middle management in Singapore and found that glass ceiling exists and has the effect of inhibiting the promotion of women and affects the career development of women particularly where they lack support systems or family friendly workplaces.

In the US, women fill only about 3.9% of executive engineering billets and also that majority of construction companies lack gender diversity in leadership culture and mission statements (Hickey & Cui, 2020). This can be attributed to invisible (glass-ceiling) barriers that block women from the executive position such as failure to have their contribution recognized, not being taken seriously, isolated in their organization and seeing others promoted ahead of them (Shanmugam *et al.*, 2006). Similarly, women from South Africa in also experience glass ceilings as evident by extensive time required to get a deserved promotion into executive positions unlike their male counterparts (Mpemba, 2018). Mpemba also reported that black women who had effectively broken through the glass ceilings in the South African Built Environment, made use of legislation, strategic networking, mentorship and work-life balance.

Women in Construction Profession

The construction industry has a masculine culture and therefore women who participate within the industry face barriers which lead to underrepresentation and low participation (Shola & Abdulazeez, 2020; Madikizela & Haupt, 2010; Amaratunga *et al.*, 2006; Kehinde and Okoli, 2004). The masculine nature of the construction industry has proven to be difficult to change (Naismith, Robertson & Tookey, 2017). Thus, women continue to face barriers that lead to their underachievement. To improve the culture of the industry, leaders and employers must act upon the differences, disruptions and disparities that still remain embedded in the industry (Hegarty, 2020). Several studies identified tasks more suitable for women in construction such as: administration, estimating and tendering, design, teaching, research interior decorators and brain tasking areas of construction activities as against activities which require physical exertion (Adeyemi *et al*., 2006; Kehinde & Okoli, 2004).

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Women in construction industry face barriers such as sexist attitudes which may vary depending on the organizational structure within the industry (Çivici & Yemişçioğlu, 2021). Other barriers as identified by Vijayaragunathan and Rasanthi (2019) include, physical demands of construction work, male construction worker behavior and social stereotyping of construction as a male occupation. Specifically, female Architects face glass ceiling barriers according to their career stages (Aydın & Erbil, 2022). These barriers lead a non-traditional career path and follows a zig-zag pattern when compared to a relatively steady path for men (Naoum *et al.*, 2020). Nevertheless, these barriers can be overcome thereby leading to career advancement (Cheng & Yang, 2021).

RESEARCH METHODOLOGY

A cross-sectional electronic questionnaire survey of professional women (Architecture, Building, Quantity Surveying and Engineering) who have practiced in the construction industry was adopted. Purposive and convenience sampling was used to collect data by sharing the link on the various platforms of women construction professionals. Data was analysed by means of descriptive analysis such as mean, percentages and Inferential statistics such as the independent T-test and ANOVA. The results were presented using tables and the mean were interpreted based on Ruikar *et al.* (2006) classification of average means scores as follows;

i. 0 - 2.49 : Low
ii. 2.50 - 3.49 : Average
iii. 3.50 - 5.00 : High

RESULTS

The questionnaire survey was conducted to investigate various perceptions on women breaking the glass ceiling as professionals working in the Construction industry and academia. Table 1 gives the demography of the 120 responses received and used in the analysis. The respondents are professionals in the industry and this is reflected in their qualifications with 64% having at least one postgraduate degree though this may be explained by the large proportion of the respondents who are in academia (39.2%). Quantity Surveyors had the highest response rate of 55% and only 7.5% were Engineers however the majority of the` respondents 79.2% were members and/or fellows in their respective professional bodies.

Table 1: Demographics of the Respondents

Demographics		Frequency	Per cent
Sector	Academia	47	39.2
	Consultancy	22	18.3
	Contracting	16	13.3
	Others	4	3.3
	Public Organisation	31	25.8
Marital Status	Divorced/Separated	8	6.7
	Married	80	66.7
	Single	28	23.3
	Widowed	4	3.3
Profession	Architect	28	23.3
	Builder	17	14.2
	Engineer	9	7.5
	Quantity Surveyor	66	55.0
Professional Membership	Fellow	15	12.5
	Member	80	66.7
	Probationer Member	14	11.7
	None	11	9.2
	Total	**120**	**100.0**

The results as shown in Table 2 revealed that of the 15 indicators of GCB, only two (2) had an average score of 3.50 and above meaning that only the first two ranked indicators (women in the workplace face high prejudice where they are perceived to be less than men and there is an unconscious bias due to cultural, tribal and ethnic differences in decision making by top Management) are considered to be high GCB barriers for women in the construction industry. While all the other indicators are considered average GCB with the exception of the 15th ranked indicator which can be said to be low ant therefore means that women professionals in construction have opportunity for obtaining higher

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qualification, training and career advancement. The mean value for all the indicators shows that the GCB for professional women in construction is at an average level.

Table 2: Assessment of Glass Ceiling Barriers in Organisation

	Glass Ceiling Barriers	Mean	Std. Deviation	Rank
i.	Women face high prejudice where they are perceived to be less than men	3.68	1.10888	1st
ii.	There is an unconscious bias due to cultural, tribal and ethnic differences in decision making by top Management	3.50	1.16677	2nd
iii.	The men feel threatened by the presence of women in the workplace	3.28	1.09208	3rd
iv.	There is deliberate effort by management in the recruitment of females into the organisation	3.23	.92829	4th
v.	There is a covert stereotyping of women in the workplace	3.19	1.06176	5th
vi.	There are often counterproductive behaviour and harassment by male colleagues which does not allow women to advance	3.14	1.07238	6th
vii.	There is a perceived covert religious preference by Management	3.14	1.13978	7th
viii.	There is a perceived lack of respect for women as professionals by their male counterparts	3.08	1.17812	8th
ix.	The differing communication styles and acceptable behaviour between men and women causes women not to be taken seriously	3.08	1.03032	9th
x.	Women are not able to conform to the male dominated climate and this excludes them out of advancement opportunities	2.89	1.12589	10th
xi.	Women lack mentorship from their senior male colleagues	2.88	1.06560	11th
xii.	The initial placement and clustering for women is often in relatively dead-end staff jobs (i.e., under-utilization)	2.75	.94223	12th
xiii.	The initial placement and clustering for women in highly technical professional jobs (for which they may not have competence to deliver)	2.67	.82726	13th
xiv.	Female employees have little or no access to critical developmental assignments, including service on highly visible task forces and committees	2.55	1.00632	14th
xv.	Female employees lack opportunity for obtaining higher qualification, training and career advancement	2.36	.97190	15th
	Average	**3.03**		

Further analysis was required to better draw inferences between the respondents' perceptions of glass ceiling barriers their organisations and the demographics of the respondents, thus two-way ANOVA was carried out and the result is presented in Table 3. The result revealed some significant difference in the responses of only two (2) of the barriers and demographics, Marital Status and Professional Status. The glass ceiling barrier "There is a perceived lack of respect for women as professionals by their male counterparts" has significant difference based on marital status with a p-value of .024. Similarly, the glass ceiling barrier 'The men feel threatened by the presence of women in the workplace' has significant difference based.
on professional status with a p-value of .013. However, there was no significant difference in the rest of the responses.

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Table 3: Summary of ANOVA between assessment of Glass Ceiling Barriers in respondents' organisation and all demographics

Attribute	Profession	Employment Sector	Marital Status	Professional Status
There is deliberate effort by management in the recruitment of females into the organisation	.107	.562	.630	.972
Female employees lack opportunity for obtaining higher qualification, training and career advancement	.348	.389	.091	.300
Female employees have little or no access to critical developmental assignments, including service on highly visible task forces and committees	.998	.443	.295	.507
The initial placement and clustering for women is often in relatively dead-end staff jobs (i.e., under-utilisation)	.526	.779	.243	.689
The initial placement and clustering for women in highly technical professional jobs (for which they may not have competence to deliver)	.137	.097	.445	.233
There is a covert stereotyping of women in the workplace	.366	.689	.997	.919
Women face high prejudice where they are perceived to be less than men	.470	.840	.790	.128
There is a perceived lack of respect for women as professionals by their male counterparts	.055	.623	**.024**	.201
Women lack mentorship from their senior male colleagues	.681	.342	.101	.983
The men feel threatened by the presence of women in the workplace	.615	.921	.907	**.013**
There is an unconscious bias due to cultural, tribal and ethnic differences in decision making by top Management	.272	.314	.059	.662
There is a perceived covert religious preference by Management	.460	.201	.377	.907
The differing communication styles and acceptable behaviour between men and women causes women not to be taken seriously	.538	.588	.948	.680
Women are not able to conform to the male dominated climate and this excludes them out of advancement opportunities	.290	.616	.365	.569
There are often counterproductive behaviour and harassment by male colleagues which does not allow women to advance	.767	.719	.732	.794

*. The mean difference is significant at the 0.05 level

The significant differences necessitate a further analysis, thus Tukey's HSD Post- hoc test was further carried out and the results presented in Tables 4 and 5.

The results shows that the mean value is significantly different between the responses of Singles and Married Professionals with p = [.041], 95% C.I. = [.03, 2.43] on the reason "There is a perceived lack of respect for women as professionals by their male counterparts. However, there was no statistically significant difference between the other groups for marital status. This implies that the mean response for Singles is greater than those of the Married Professional holders as indicated by the value of the mean difference suggesting that there may be difference in the way female are treated based on their marital status.

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Table 4: Tukey's Post-hoc Test for factors on assessment of Glass Ceiling Barriers in respondents' organisation and their Marital Status

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
There is a perceived lack of respect for women as professionals by their male counterparts	Single	Married	**1.232***	**.459**	**.041**	**.03**	**2.43**
		Divorced/Separated	.620	.252	.071	-.04	1.28
		Widowed	.857	.612	.502	-.74	2.45
	Married	Single	**-1.232***	**.459**	**.041**	**-2.43**	**-.030**
		Divorced/Separated	-.613	.425	.476	-1.72	.50
		Widowed	-.375	.702	.950	-2.20	1.45
	Divorced/ Separated	Single	-.620	.252	.071	-1.28	.04
		Married	.613	.425	.476	-.50	1.72
		Widowed	.238	.587	.978	-1.29	1.77
	Widowed	Single	-.857	.612	.502	-2.45	.74
		Married	.375	.702	.950	-1.45	2.20
		Divorced/Separated	-.238	.587	.978	-1.77	1.29

*. The mean difference is significant at the 0.05 level.

The results show the mean value to be significantly different between Member and a Fellow with p = [.039], 95% C.I. = [-1.58, -.03] on the reason "The men feel threatened by the presence of women in the workplace". However, there is no statistically significant difference between the other groups for Professional status. This implies that the mean response for corporate members is lesser than that of the Fellows. This suggests that men may feel threatened by women that have broken through the glass ceiling.

Table 5 Tukey's Post-hoc Test for factors on assessment of Glass Ceiling Barriers in respondents' organisation and their Professional Status

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound		Upper Bound
The men feel threatened by the presence of women in the workplace	None	Probationer	-.422	.425	.754	-1.53		.69
		Member	.301	.340	.812	-.58		1.19
		Fellow	-.503	.419	.628	-1.60		.59
	Probationer	None	.422	.425	.754	-.69		1.53
		Member	.723	.306	.090	-.07		1.52
		Fellow	-.081	.392	.997	-1.10		.94
	Member	None	-.301	.340	.812	-1.19		.58
		Probationer	-.723	.306	.090	-1.52		.07
		Fellow	**-.804***	**.297**	**.039**	**-1.58**		**-.03**
	Fellow	None	.503	.419	.628	-.59		1.60
		Probationer	.081	.392	.997	-.94		1.10
		Member	**.804***	**.297**	**.039**	**.03**		**1.58**

*. The mean difference is significant at the 0.05 level.

DISCUSSION

Some of the barriers prevalent in the organisations of the respondents are that 'women face high prejudice where they are perceived to be less than men; there is an unconscious bias due to cultural, tribal and ethnic differences in decision making by top management and the men feel threatened by the presence of women in the workplace.' This finding supports the findings of Çivici and Yemişçioğlu (2021) which found that women in construction industry face barriers such as sexist attitudes which may vary depending on the organisational structure within the industry. Also, internal organisational culture has been found to be one of the factors which exacerbate the glass ceiling phenomenon in the workplace (Cohen *et al.,* 2020; Al- Manasra, 2013).

The ANOVA assessment of the GCB in the workplace showed that only two (2) variables stand out i.e., that professional women are treated based on their marital status with married women being accorded more respect. This is similar to the study of Cohen *et al.* (2020) which revealed that single

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women are more likely to report the existence of a glass ceiling than married women, suggesting that single women are more likely to perceive that they are mistreated and disenfranchised. Also, the study found that women who have attained the Fellows cadre in their professional organisations are treated with respect and are more likely to break through the glass ceiling barrier. This finding also corroborates with that of Cohen *et al.* (2020) where they found that higher-ranking female accounting professionals (i.e., partners and senior executives) are less likely to report the existence of a glass ceiling within their firms than lower-ranking female accounting professionals. In addition, this supports the findings of Aydın and Erbil (2022) that female Architects face glass ceiling barriers according to their career stages.

CONCLUSION AND RECOMMENDATION

The study therefore concludes that female professionals in construction industry face glass ceiling barriers at an average level, however women professionals perceive that there is a high level of prejudice where they are seen to be less than men as well as a high level of unconscious bias due to cultural, tribal and ethnic differences in decision making by top management. Nevertheless, female professionals in construction industry have opportunity for obtaining higher qualification, training and career advancement thus lack of opportunity in obtaining higher degree, training as well as career advancement is not a GCB for women in the construction industry. Furthermore, the study revealed differences in the perception based on marital and professional status of the women. This adds to the literature of women studies by asserting the view of previous studies on the existence of glass ceiling barriers of women in construction.

The study therefore recommends that professionals within the construction industry should have lesser prejudices against women and see them as professionals with same abilities in carrying out task just like their male counterparts.

Limitation

This study gives the perception of women on the glass ceiling barriers in the advancement of their career in the construction industry using a questionnaire survey as such reasons for their responses was not captured.

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