

Is Glass Ceiling a Myth or Reality? A Systematic Review in Healthcare Sector

Navneet KAUR*, Ella MITTAL**

Received: April 28, 2022.

Revised: October 21, 2022.

Accepted: November 16, 2022.

Abstract

As females are actively participating in every sector, the obstacles faced by them in their careers attracted the attention of researchers. The main purpose of this study was to systematically review the literature about the glass ceiling in the healthcare sector, published between the years 2000 to 2019, with no geographical limitations. Additionally, the barriers resulting from the glass ceiling were also explored. For this purpose, literature was searched from various databases, and grey literature was also used for the review. After applying all the steps of inclusion and exclusion criteria, a total of 32 studies were evaluated for this paper. Results were obtained by mainly focusing on the existence of a glass ceiling in healthcare and the barriers/factors of the glass ceiling. The findings showed that although the number of females is increasing in the healthcare sector, there is still an underrepresentation of females in senior positions. The existence of a glass ceiling is the main reason for this. The main barriers to the glass ceiling in the healthcare sector that are obstructing the way of females are organizational, societal, and personal. There is a long way to go for females in the healthcare sector.

Keywords: Barriers, Females, Glass Ceiling, Healthcare, Systematic literature review

JEL Classification Codes: I1, I14, J16

UDC: 331.104

DOI: <https://doi.org/10.17015/ejbe.2022.030.01>

* Research Scholar. University School of Applied Management, Punjabi University, India. E-mail: kaurn400@gmail.com

** Assistant Professor, School of Management Studies, Punjabi University, India. E-mail: ellamittal12@gmail.com

1. Introduction

In the modern global economy era, there is a high demand for human resource talent. Both qualified males and females are needed for the growth of the economy. However, the pipeline that supplies an educated workforce is chock full of women at the entry-level, but when it comes to filling the leadership positions, that same pipeline is stocked with men. They are equally capable and have potential human resources as males. However, they get low wages, underrepresentation in top positions, gender stereotypes, unfavorable social status, fewer opportunities for growth, and many more obstacles even after having the same abilities and capabilities as males (Bahri, 2020). Women are underrepresented in top leadership positions; the presence of females at top positions is significantly less as compared to males in almost every sector and country (Baxter & Wright, 2000; Abraham, 2013; Parcheta et al., 2013; Purcell, 2013; Öztürk & Şimşek, 2019; Makarem & Wang, 2020; Carpenter et al., 2021; Mousa et al., 2021). There are gender disparities in workplaces. Although females are equal to or even more qualified and skilled than their male counterparts, they continue to be underrepresented in senior positions and overrepresented in lower positions and low-skilled jobs, with negative consequences for their physical and mental health and work-family conflict (Castaño et al., 2019). A study by Ford and Kiran (2008) found that biasness prevails among male and female leaders, as male leaders receive more favors than female leaders.

Females constitute almost half of the population in every society. The glass ceiling problem is not limited to poor or undeveloped countries; it affects people worldwide (WEF, 2021). Various global, regional, and country-level efforts are performed to promote women's empowerment and gender equality. However, still, the situation remains the same, and a very number of females attained senior positions (ILO, 2012). Women also possess equal specialization, so the management should pay great attention to gender equality not only because it is a human right but also to utilize their talent in an optimum way without any wastage of their talent due to gender discrimination (ILO, 2012). For this purpose, a workplace with gender equality along with social corporate responsibility, organizational ethics, and sustainability are required for the adequate growth of each employee regardless of gender (Di Fabio, 2017). But this kind of equal workplace environment has not been achieved yet where there is no discrimination based on gender for attaining senior-most positions for women. Females working in senior positions believe that they must do well in order to be acknowledged, but they are frightened that doing so would lead to failure, so they would rather keep their achievements to themselves (Kaur & Mahajan, 2021). Women are reluctant to voice their opinions since they make up a small portion of the board, and they don't appear to have had a say in any significant choices. It is clear that the principle of resource dependency is not applied. The scenario is the same in every sector; the healthcare sector is also not untouched by this gender discrimination.

Medical education institutions are full of female students, and females constitute a large proportion of the healthcare workforce (Hoss et al., 2011; Muraya, 2019). However, when it comes to senior positions in the healthcare sector, the number of females is drastically low as compared to their male counterparts, and females are underrepresented in top managerial positions and overrepresented in lower positions (WHO, 2008; Downs et al., 2014; Muraya, 2019). Females face unseen barriers that impede their career advancement. Glass Ceiling is an invisible barrier that keeps women from progressing in their careers (Carli & Eagly, 2001; Ridgeway, 2001; Powell & Butterfield, 2015; Sharma & Kaur, 2019). Although there is a large number of existing pieces of literature documenting these barriers faced by female leaders and aspiring leaders, hardly any evidence is related to the complete evaluation of these factors/barriers resulting in a glass ceiling in the healthcare sector. Therefore, the current study is to perform a systematic literature review of the existing body of literature regarding the glass ceiling in the healthcare sector to explore the barriers to attaining top positions, remedies, and signs of breaking the glass ceiling in the healthcare sector at the global level. The main objective of this study is to understand more clearly the situation and representation of females in healthcare and the difficulties in attaining managerial positions. For this purpose, literature published in reputed and peer-reviewed journals between 2000 and 2019 was taken.

2. Literature Review

The glass Ceiling is a term initially used in 1990 to explain the inability of females and other minority groups to attain senior positions irrespective of their qualifications and capabilities. It is an invisible barrier that keeps females away from reaching top managerial positions as well as their access to prestige and revenue. In other terms, the Glass ceiling is the barrier, namely personal barriers, organizational barriers, and societal barriers that stop women and minorities from getting promotions in the organizational hierarchy (Cotter et al., 2001; Acker, 2009; Choi & Park, 2014; Glass & Cook, 2016; Feng & Sumettikoon, 2022; Salahuddin et al., 2022). The glass ceiling stretches through every career field. The term Glass Ceiling was first defined by Carol Hymowitz and Timothy Schellhardt in their special report in the Wall Street Journal in March 1986. They defined that the glass ceiling was not something that could be seen in business meetings; instead, it was originally an invisible barrier that stopped women and minorities from reaching the upper level of the organization. In 1991 the U.S. Department of Labor also used the term Glass Ceiling in response to a study of nine fortune 500 organizations.

The investigation confirmed that women and minorities experienced significant glass-ceiling barriers in their professions. It is related to women's access to top hierarchical positions as well as their access to revenue and prestige. Implicit prejudice has been viewed as a significant component of hiring discrimination (Kleinberg & Raghavan, 2018; Espinosa & Gardeazabal, 2020). Since the prejudice in

question is inadvertent and unnoticed, it is unnecessary to explain how it might continue to exist in the labor market. This would also help to explain why there are glass ceilings if unconscious gender preconceptions are more prevalent at the top of business hierarchies. The glass ceiling effect may appear in management positions or lower positions in a workplace. Studying gender disparity in the workplace is very important to understand the situation of females and minorities.

Indeed, females are equally qualified as males, but they cannot easily reach top managerial positions (Lyness & Thompson, 2000). Females are underrepresented in top senior positions (Powell, 2015). The glass ceiling stretches through every career field. Öztürk and Şimşek (2019) found that the main variables for the glass ceiling effect such as females' duties assigned by culture and society, twin responsibility of family roles and business life, organizational policies, and some other organizational factors that pose an obstacle in climbing the career ladder for females in academia. The barriers of the glass ceiling can be seen in the healthcare sector (Tracey, 2006). Females are working very hard to get equality and liberty. Females feel that the selection process is very subjective and there is a difference in getting growth opportunities. Presently a day we can see a move in social and cultural practices, particularly about discernment for women who work that is moving from traditional attitudes to modern thoughts.

According to Federal Glass Ceiling Commission USA, the glass ceiling is "*the unseen, yet unbreakable barrier that keeps minorities and females from rising to the upper steps of the corporate ladder, regardless of their qualifications or achievements.*"

2.1. Barriers to Glass Ceiling:

Some barriers block the path of women toward top positions (Madichie, 2009). These barriers are also known as factors of the Glass ceiling (Budhwar et. al., 2005; Bombuwela & Alwis, 2013; Tlaiss & Kauser, 2010; Choi & Park, 2014; Tharadevi, 2015; Rapp & Yoon, 2016; Maheshwari & Lenka, 2022)

2.1.1. Organizational Barriers

The organizational barrier exists in the organizational practices and keeps women away from top positions. The main reason for these barriers is biased recruitment and selection practices, lack of equal training opportunities for females, lack of support from top management, adverse working environment, lack of mentor or role models, lack of equal employment opportunities, biased methods of performance appraisal, etc. Due to these reasons, there is a fewer number of females in senior positions.

2.1.2. Social Barriers

Our society is male dominated. Males are considered primary bread earners, and females' earnings are considered secondary income. They are confined to household work and considered homemakers. After marriage, females have to perform twin

responsibilities. They are expected to work at home as well as at the office. As they have to concentrate on household tasks, it becomes difficult to concentrate on their career altogether. In this way, performing the twin responsibility simultaneously puts a huge burden on the shoulder of females. Factors like gender stereotypes/discrimination, male-dominated society, lack of family support, and twin responsibility are social barriers that affect the career advancement of females.

2.1.3. Personal Barriers

Sometimes females themselves become an obstacle in their career advancement. From early childhood days, females are taught some rules, like they are emotional, soft-hearted, and dependent on males, which makes their mindset a weaker section. Being too ambitious is still considered a male trait. In this way, females start discriminating against themselves. This leads to a lack of confidence and enthusiasm, a lack of initiative for taking challenging jobs, and a fear of administrative and leadership positions in the organization. These are the major contributing factors that hamper the career progression of females.

3. Women in Healthcare

3.1. Data collection and transformation

Women make up 75% of the healthcare workforce, but the number of women in top positions in healthcare is just 38%. When it comes to family healthcare needs, women are the primary caretakers, but even after having the specializations, they are still underrepresented when it comes to leadership in the healthcare industry (Lantz, 2008; Hoss et al., 2011; Hopkins et al., 2006; Bismark et al., 2015; Inam et al., 2020). An article documented that in 2014-15, 51% of women joined medical colleges for studies. But when it comes to the number of medical professionals, the ratio of women is significantly low compared to men. In hospitals, females are responsible for 70-80% of the care provided in hospitals. But females comprise only 25-35% when it comes to senior leadership and administrative positions (TOI, 2016). Yedidia and Bicke (2001) documented scarcity of women in leadership positions in academic medicine has persisted despite their increasing numbers in medical training. The study also found the existence of barriers to the advancement of women and proposed a spectrum of approaches to address them. Females face a lack of opportunities compared to their male counterparts, and it is perceived that males acquire leadership qualities and styles more than females (Muraya et al., 2019; Wolfert et al., 2019). According to a 2012 study by the American college of healthcare executives' women attained CEO positions at half the rate of men, and only about 26% of CEOs overseeing U.S. hospitals were women. In a survey conducted in 2011, females earned about 20% less than their male counterparts despite having nearly the same amount of experience and level of education. The American College of healthcare executives concurs: "it is not simply one barrier at the very top, but rather myriad obstacles at many junctures. To promote gender diversity and help ensure a

pool of qualified women candidates for the most senior positions, healthcare organizations need to look not only at policies affecting the promotion of women to the C-suite or the top leadership positions but also at policies affecting the development and retention of female executives at every level." Most women believe that being a female is disadvantageous to their career, and they have to act like a man for career growth. It is true that female doctors bring quality to their services and represent the great majority of the specialized workforce in the healthcare sector, but there is a need to further enhance and support their leadership needs (Newman, 2011; Fjeldsted, 2013).

Similarly, a review study by Inam et al. (2020) and Mousa et al. (2021) also found that females face discrimination in healthcare leadership. A study found that the number of females in top management positions has increased from 13% to 36% from 1993 to 2001; however, the representation of males in management positions is still more than females (ACHE, 2001). The recent report on women in healthcare leadership in 2019 documented that there is still a long way to go for women to achieve top positions equally compared to their male counterparts. In the healthcare sector, "Females in healthcare" is no longer an issue but a problem: "Females in healthcare leadership."

Table 1. Females in Healthcare Leadership

	Women	Men
Senior Leadership Positions	33%	67%
CEOs	13%	87%
COOs	29%	71%
CFOs/Chief Actuary	23%	77%

Source: Wyman (2019)

4. Research Questions

The main purpose of the study is to gather the published literature on the glass ceiling in the Healthcare sector at the global level; evaluate what factors/barriers are resulting in the emergence of the glass ceiling in healthcare. Following are the research questions expected to be answered within the scope of the current study:

- a) Is there still a glass ceiling that exists in the healthcare sector?
- b) What are the barriers affecting the perception of the glass ceiling in the healthcare sector?
- c) What do existing studies recommend breaking the glass ceiling in the healthcare sector?

5. Methodology

This is a systematic literature review based on published data from previous studies on the glass ceiling concept in the healthcare sector. A systematic review is a way of

collecting information from existing studies/published materials on a chosen topic. It can also be said that systematic review means “summarize the body of knowledge on a particular topic” (Aveyard, 2014). The review was performed by two authors independently by following the proper inclusion and exclusion criteria for selecting the literature to be reviewed.

5.1. Research Strategy

The main keywords used for searching the articles were "glass ceiling," "barriers," and "healthcare." The articles were searched from online databases, including Google Scholar, Scopus, PubMed/Medline, and Cochrane Library. The journals were also searched through Emerald, Wiley, JSTOR, Research Gate, Science Direct, and SAGE search engines. Grey literature was also used in this study that was found from the references and citations. The scope for searching the literature was kept broad, not setting any geographical limits in the databases to be comprehensive as possible in retrieving the literature on the glass ceiling in the healthcare sector at the global level.

5.2. Article Selection Criteria

In systematic literature review-type studies, the reliability and validity of the study are based on the quality of articles selected for the review. The search strategy identified 553 articles from databases and 65 from grey literature. In the first phase, all the duplicated articles were excluded. After this, all the selected articles were initially assessed based on their title and abstract. Finally, both reviewers evaluated the articles that passed this stage independently. The reviewer applied the inclusion and exclusion criteria to full-text articles. The articles that did not discuss the glass ceiling and its barriers in the healthcare sector were excluded. After this process, 32 research articles were selected from this systematic literature review study. The process of inclusion and exclusion is shown in the PRISMA flow chart in Figure 1.

The articles for this study were selected on the following criteria that ensure the quality of the systematic review. The inclusion Criteria and Exclusion Criteria are as follows:

1. The study included only those studies based on the glass ceiling and its barriers in the healthcare sector. The articles that did not discuss the glass ceiling and its barriers in the healthcare sector were excluded.
2. The study only included peer-reviewed articles from recognized journals discarding books and dissertations.
3. All studies were considered, i.e., research and review-based studies.
4. The selection was limited to research articles published from 2000 to 2019.
5. Only articles published in English were taken for the study.

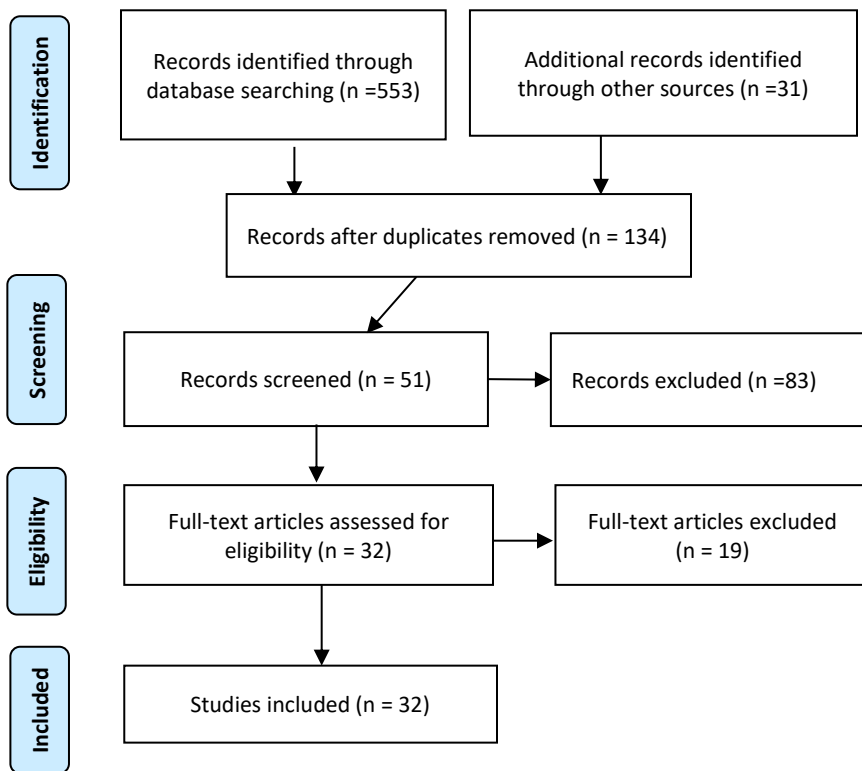


Figure 1. PRISMA flow diagram indicating articles' selection for a systematic review of Glass Ceiling in the Healthcare Sector

6. Results

6.1. Glass Ceiling in Healthcare Sector

The existing literature clearly shows a glass ceiling in the healthcare sector, as shown in Table 2. These studies were based on both primary and secondary data. Primary data were collected through questionnaire surveys and interviews, and secondary data were collected from databases and previous studies. The glass ceiling acts as an invisible barrier that impedes the career advancement of females. The studies state the increase in the number of females in medical colleges and the healthcare workforce, but there is still an underrepresentation of females in senior positions (Bismark et al., 2015; Abelson et al., 2016). Women constitute almost 75% of the healthcare workforce; however, they hold only 12% of chief executive officer positions in US hospitals (Hoss et al., 2011). Bismark et al. (2015) clearly stated that males dominate senior management positions in the healthcare sector.

Table 2. Main Focusing Studies on Glass Ceiling in Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
McManus & Sproston (2000)	Women in hospital medicine in the United Kingdom: glass ceiling, preference, prejudice or cohort effect?	To assess from official statistics whether there is evidence that the careers of women doctors in hospitals do not progress in the same way as men.	Data from various sources	There is little evidence of a “glass ceiling” for women doctors in hospital careers, and the current paucity of women consultants primarily reflects historical trends in the numbers of women entering medical school; there is evidence in some cases of disproportionate promotion that is best interpreted as direct or indirect discrimination.
Reed and Buddeberg-Fischer (2001)	Career obstacles for women in medicine: an overview	The study described the position of females in the medical field.	Previous studies	The study found that females are under-represented in top positions and the main reasons for this situation are domestic responsibilities, rigidity in career structures, and discrimination.
Hoss (2006)	Women in Hospital Chief Executive Officer Positions: Fact or Fiction	The study analyzed the representation of females in hospital CEO positions.	Questionnaire	The female gender in the healthcare systems across the country is proving its capabilities daily, and everyone is taking notice. This research contributes to the advancement of women to senior executive positions.
Tracey (2006)	The glass ceiling in Irish healthcare: a nursing perspective	This study explored the perspectives of top-level nurses holding the formal position of director of nursing in the Irish healthcare system.	Semi-structured interviews	The results showed that the organizational Structure in healthcare is changing, but the power base remains the same. There is no change in the submissive behavior of female nursing and the dominance of general management over top management.

Table 2 (Cont.) Main Focusing Studies on Glass Ceiling in Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
Carnes et al. (2008)	Women's Health and Women's Leadership in Academic Medicine: Hitting the Same Glass Ceiling?	The study investigated the link between women's health with the advancement in leadership positions and their slow progression toward senior positions.	Previous studies	The study found that the main reason for slow and less progression toward senior leadership positions in academic medicine was the glass ceiling.
Hoss et al. (2011)	How gender disparities drive imbalances in healthcare leadership	This study documented gender inequality in professional development and the rationale for gender differences in healthcare.	Previous studies	Women constitute almost 75% of the healthcare workforce; however, they hold only 12% of chief executive officer positions in US hospitals.
LaPierre and Zimmerman (2012)	Career advancement and gender equity in healthcare management	This study examined the conditions for career advancement and barriers hindering the way of gender equality.	Database of 2006 survey by ACHE	Women are less likely to attain top senior positions even after having all the required characteristics. Fewer males support females in increasing their representation at the top level.
Bismark et al. (2015)	Reasons and remedies for the underrepresentation of women in medical leadership roles: a qualitative study from Australia	This study addressed the views of medical leaders on the underrepresentation of females in medical leadership roles and remedies for it.	Semi-structured interviews	The number of females in medicine is increasing. However, gender disparities impede women's abilities to climb the career advancement ladder. There still exists male dominance in medical leadership roles.

Table 2 (Cont.) Main Focusing Studies on Glass Ceiling in Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
Abelson et al. (2016)	The Climb to Break the Glass Ceiling in Surgery: Trends in Women Progressing from Medical School to Surgical Training and Academic Leadership from 1994 to 2015	The study examined the underrepresentation of females in academic leadership in healthcare.	Database of AAMC, FACTS, FAMOUS and GME	The results showed an increase in female entrants in medical schools despite an underrepresentation of females in senior leadership positions.
Millath et al. (2017)	Impact of glass ceiling on women employees in hospitals	This research aimed to examine the effect of the glass ceiling on female employees in hospitals.	Questionnaire and scheduled interview	This study is evidence of the existence of a glass ceiling and its effect on organizational performance. Even after having the required abilities and experience, women are unable to reach top positions.
Ellwood et al. (2019)	The shattered glass ceiling and a narrowing gender pay gap in NHS foundation trusts: Gender and salaries of chief executive	The study aimed to examine the glass ceiling and whether there are changes in the gender pay gap in the healthcare sector over the period from 2012 to 2018.	Database of NHS From 2012 to 2018	The glass ceiling still exists in the NHS, but the gender pay gap has narrowed. However, there is still a gap, i.e., statistically insignificant but significant in monetary terms.
Wolfert et al. (2019)	Female neurosurgeons in Europe: On a prevailing glass ceiling	This study was performed to understand the current situation of females in the male-dominated field of neurosurgery	Questionnaire	The study found that a gender gap exists in this sector. Female neurosurgeons face various obstacles in attaining leadership positions.

Table 3. Main Focusing Studies on Barriers to Glass Ceiling in the Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
Weil and Mattis (2003)	To shatter the glass ceiling in healthcare management: who supports affirmative action and why?	The study examined the evidence of a national survey of healthcare executives that showed 90% of women but only 53% of men favored efforts to increase the proportion of women in senior positions.	Questionnaire	Female healthcare executives are much more supportive than males. Three major barriers: 1. Gender stereotyping and male dominance 2. Exclusion of women from informal networks of communication Senior leadership positions fail to the advancement of women.
Hoss (2006)	Women in Hospital Chief Executive Officer Positions: Fact or Fiction	The study analyzed the representation of females in hospital CEO positions.	Questionnaire	The study found that the main barriers to career advancement for females are perceived male stereotypes and preconceptions of females' roles and abilities by others.
Eiser & Morahan (2006)	Fixing the system: Breaking the glass ceiling in health care	The study examined the major barriers impeding females' advancement to higher positions in healthcare	Previous studies	The study found five major barriers: 1. Organizational culture norms and values that favor men over women 2. Gender stereotyping 3. Exclusion from informal networks 4. A lack of effective mentors The challenges of work-life balance
Zhuge et al. (2011)	Is There Still a Glass Ceiling for Women in Academic Surgery	This study documented the existence of a glass ceiling and some barriers impeding the career advancement of females in academic surgery.	Previous studies	Despite the increased entry of females in male-dominated fields of the healthcare sector, their underrepresentation in senior leadership positions remains the same. Traditional gender stereotype roles, gender discrimination in healthcare, and lack of mentors are the main barriers to the glass ceiling in healthcare.

Table 3 (Cont.) Main Focusing Studies on Barriers to Glass Ceiling in the Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
LaPierre and Zimmerman (2012)	Career advancement and gender equity in healthcare management	This study examined the conditions for career advancement and barriers hindering the way of gender equality.	Database of 2006 survey by ACHE	According to the results of the study, female healthcare managers reported that they perceive gender discrimination, and a very less number of male healthcare managers showed their support in increasing the proportion of females in top management positions. Moreover, the females who were not yet promoted were less likely to climb the higher ladder due to personal/individual, family, or organizational obstacles.
Johns (2013)	Breaking the Glass Ceiling: Structural, Cultural, and Organizational Barriers Preventing Women from Achieving Senior and Executive Positions	This study examined the barriers preventing women from attaining senior leadership positions and remedies to break the glass ceiling.	Previous studies	The study found the following barriers: <ol style="list-style-type: none"> 1. Lack of flexible work arrangements 2. Discriminatory wage practices 3. Lack of confidence and career ambition in females 4. Gender stereotypes 5. Lack of a mentor
Spina and Vicarelli (2016)	Are Young Female Doctors Breaking Through the Glass Ceiling in Italy?	The study addressed the positive changes taking place in favor of the women's healthcare workforce over time.	Questionnaire	Gender discrimination exists in healthcare. But the high level of confidence in female doctors for attaining senior leadership positions, handling dual responsibilities of work and family, and breaking traditional barriers is confirming the signs of changing the scenario.

Table 3 (Cont.) Main Focusing Studies on Barriers to Glass Ceiling in the Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
Chisholm-Burns et al. (2017)	Women in leadership and the bewildering glass ceiling	The study addressed the glass ceiling in healthcare leadership	Previous studies	<p>The study found the existence of a glass ceiling due to the following barriers:</p> <ol style="list-style-type: none"> 1. Conscious and unconscious biases 2. Lack of mentality to pursue leadership 3. Lack of mentors, role models, and sponsors 4. Lack of policies that support work-life balance 5. Work-life integration challenges 6. "Lean-out" phenomenon 7. Lack of internal and external networks, recognitions, opportunities, or resources
Bots et al. (2018)	Women in Translational Medicine: Tools to Break the Glass Ceiling	The purpose of the study was to find ways to break the glass ceiling	Previous studies	<p>The study addressed some approaches to breaking the glass ceiling in medicine:</p> <ol style="list-style-type: none"> 1. Unbiased selection 2. Proper coaching and training 3. Integration 4. Gender equity
Gilavand (2018)	Investigation of the barriers of the promotion to managerial positions of female faculty members of Ahvaz Jundishapur University of medical sciences, in southwest Iran	The study investigated the main barriers to promotion to managerial positions.	Questionnaire	The results found that organizational structure, personal factors, social factors, and organizational culture are the major barriers impeding the career advancement of female faculty members.

Table 3 (Cont.) Main Focusing Studies on Barriers to Glass Ceiling in the Healthcare Sector

Author (Year)	Title	Theme	Method	Findings
Muraya et al. (2019)	Gender is not even a side issue...it's a non-issue': career trajectories and experiences from the perspective of male and female healthcare managers in Kenya.	This study was performed to elicit female healthcare leaders' views on career advancement in the healthcare sector.	Interview	Gendered factors play an important role in the underrepresentation of females in top positions. Women's twin responsibility between family and career and gendered societal expectations impedes their way to career advancement.
Wolfert et al. (2019)	Female neurosurgeons in Europe: On a prevailing glass ceiling	This study was performed to understand the current situation of females in the male-dominated field of neurosurgery	Questionnaire	The study found various obstacles to attaining leadership positions: <ol style="list-style-type: none"> 1. Lack of opportunities 2. Lack of Mentor 3. Lack of support from management 5. Twin Responsibility

Females are achieving CEO positions with their capabilities and hard work in the healthcare sector, but there is still a long way to go (Hoss et al., 2006). LaPierre and Zimmerman (2012) analyzed the situation of females for career advancement in the healthcare sector. The study revealed that females face the situation of a glass ceiling. Male employees get promotions easily, and females face obstacles in the promotion to senior management even after having the same qualifications and characteristics. Over time, the organizational structure of the healthcare sector has changed. However, the power is still in the hands of males (Tracey, 2006). Glass ceiling is the reason for the slow career progression for females in healthcare (Reed and Buddeberg-Fischer, 2001; Andrew, 2007; Carnes et al., 2008; Millath et al., 2017). They face hurdles to attain senior positions. Ellwood et al. (2019) conducted a study to examine the existence of a glass ceiling in NHS. For this purpose, the NHS data related to remuneration of senior-most positions were taken from 2012 to 2018. The results showed that gender disparity still exists in NHS, but the gender pay gap has narrowed in the analyzed five-year period.

Similarly, Wolfert et al. (2019) examined the glass ceiling for female neurosurgeons in Europe. It was stated that several female neurosurgeons are almost one-half of practicing physicians, but males dominate the field regarding entry into neurosurgery. There are inequitable promotions of females even after having the same capabilities as their male counterparts (Reed and Buddeberg-Fischer, 2001).

6.2. Barriers or Factors of Glass Ceiling in Healthcare

Various international research found barriers or factors that impede women's career advancement in climbing the leadership ladder. These barriers are organizational, interpersonal, cultural, and societal. The studies showing the barriers of the glass ceiling are given in Table 3.

In this systematic review, the authors found various barriers hampering women's career advancement in the healthcare sector. Organizational barriers included: lack of equal training and development, lack of opportunities, lack of role models or mentors for women, lack of support from seniors/colleagues, Exclusion from informal networks, Lack of internal and external networks, recognitions, opportunities, or resources (Weil and Mattis, 2003; Eiser & Morahan, 2006; Hoss et al., 2006; Longo & Straehley, 2008; Johns 2013; Spina & Vicarelli, 2016; Bismark et al., 2015; Chisholm-Burns et al., 2017; Millath et al., 2017; Bots et al., 2018; Wolfert et al., 2019). Interpersonal barriers blocking the way to career advancement are a Lack of self-confidence in women, self-doubts for not being able to handle senior leadership positions (Eiser & Morahan, 2006; Johns, 2013; Spina and Vicarelli, 2015; Bismark et al., 2015; Chisholm-Burns et al., 2017; Millath et al., 2017). When talking about societal or cultural barriers, the studies found that gender stereotypes, a male-dominated society, societal expectations from women to perform twin responsibilities between family and career, and females considered as less able and suitable to perform leadership roles are also the main hurdles in the career

progression for females in the healthcare industry (Eiser & Morahan, 2006; Hoss et al., 2006; Longo & Straehley, 2008; Johns 2013; Spina & Vicarelli, 2016; Bismark et al., 2015; Chisholm-Burns et al., 2017; Millath et al., 2017; Muraya et al., 2019; Wolfert et al., 2019).

Table 4. The Major Barriers to Glass Ceiling in the Healthcare Sector

Organizational barrier	Interpersonal barrier	Societal/cultural barrier
Lack of equal training and development	Self-doubts	Gender stereotype
Lack of opportunities or resources	Lack of self-confidence	Male-dominated society,
Lack of role models or mentor	Low career aspiration	Twin responsibility
Lack of support from seniors/colleagues	Lack of mentality to pursue leadership	Misconceptions about women’s ability
Failure of Seniors to Assume Accountability for Women’s Advancement		Work-life integration challenges
Exclusion from informal networks		Gendered societal expectations
Conscious and unconscious biases		
Lack of internal and external networks, recognition		

Source: Literature Reviewed

6.3. Recommendations for Breaking the Glass Ceiling

The literature revealed that females are still underrepresented in senior positions in the healthcare sector. Females are working hard to achieve top positions. Existing studies have recommended various suggestions to break the glass ceiling. Reed and Buddeberg-Fischer (2001), Zhuge et al. (2011), and Wolfert et al. (2019) stated that there should be equitable practices for males and females. Females should be provided with mentoring and development programs. Along with these females, they need to raise their social capital by developing support networks and seeking mentors and sponsors at the workplace (Bots, 2018). There is a need to make a committee that can address the issues of females and provides them equal opportunities.

The Healthcare sector needs to change outdated cultural norms and gender stereotyping. They should encourage females’ enhanced leadership development and greater effectiveness (Eiser & Morahan, 2006). It is required to design leadership development approaches to help females identify their strengths, increase their confidence, and develop leadership skills. Millath et al. (2017) suggested that the hospital sector should continuously motivate and train its employees. Attention

must be paid to preparing females for senior positions by providing the required training, work experience, and networking within organizations and with governing boards for female hospital CEO successors (Hoss, 2006; Zhuge et al., 2011). Muraya et al. (2019) suggest that there is a need to provide social support to females to fulfill their responsibilities in a better way and advance their careers. This will boost their confidence to perform more efficiently in career advancement. Similarly, Inam et al. (2020) recommend that policymakers and the government pay attention to this issue and take necessary steps to overcome cultural barriers to equal growth of male and female surgeons.

7. Implications

7.1. Theoretical Implications

This systematic review examined the existence of a glass ceiling in the healthcare sector at the global level and the major barriers of the glass ceiling that impede the career progression of females in the healthcare sector. The study found the existence of a glass ceiling in the healthcare sector as given in existing literature that has been reviewed. While scanning the literature, in this context, the situation of females in the healthcare sector is similar at the global level. It was found that the number of female students in medical colleges is increasing. Even the number of females in the healthcare workforce is also increasing, but males still dominate senior positions. Glass ceiling is the reason for the slow career progression for females in healthcare (Reed & Buddeberg-Fischer, 2001; Andrew, 2007; Carnes et al., 2008; Millath et al., 2017). Weil and Mattis (2003) stated that males are less likely to support females by providing them special efforts to increase their proportion in senior management positions. Almost all studies have found similar barriers to the glass ceiling that are obstructing the way of females in their career advancement. The study explores three main barriers: organizational barriers, societal/social barriers, and personal barriers (Weil and Mattis, 2003; Eiser & Morahan, 2006; Hoss et al., 2006; Longo & Strahley, 2008; Johns, 2013; Spina & Vicarelli, 2016; Bismark et al., 2015; Chisholm-Burns et al., 2017; Millath et al., 2017; Muraya et al., 2019; Wolfert et al., 2019).

7.2. Implications for Practice

To break the glass ceiling, existing studies gave some recommendations to eliminate the barriers of the glass ceiling. The healthcare sector has to take action to change these stereotypes and put emphasis on gender equality. The Healthcare sector needs to fully utilize its human resources, but females are underrepresented in senior positions. According to human resource professionals, organizational and societal issues are involved in the lower proportion of women entering the workforce (Saraswathy, 2019). Organizations should take initiatives for gender equality at top positions and provide equal opportunities to females compared to their male counterparts.

Similarly, there is a need to change societal norms, break the old masculine and patriarchal culture, and consider both genders equivalent. Besides, females need to have more confidence in themselves and an optimistic belief in breaking the glass ceiling. They have to be mentally and emotionally strong. With time, the organizational structure of the healthcare sector is changing; however, the power base is still in the hands of males. Females face various invisible barriers at the workplace, like lack of support from top management and male colleagues, unequal advancement opportunities, Exclusion from informal networks, and Lack of internal and external networks, recognitions, opportunities, or resources.

Further, it was found that the selection and promotion process for leadership positions was also influenced by gender discrimination. Males are considered to possess more leadership qualities and styles than females. There are many social/societal barriers like gender stereotyping, male dominance, twin responsibility, etc., and interpersonal barriers to females that stop them from climbing the career ladder. These barriers have been continuing for the past decades till now. The study found that gendered factors play a great role in the under-representation of females. Females are expected to play a dual role between family and career; their role as child bearer, domestic responsibilities, and other gendered societal and organizational factors influence their abilities and impede their way to attain senior leadership positions (Eiser & Morahan, 2006; Longo & Straehley, 2008; Spina and Vicarelli, 2016; Bismark et al., 2015; Chisholm-Burns et al., 2017; Muraya et al., 2019). Therefore, the study's findings answer this study's research questions.

8. Conclusion

The study is a systematic literature review exploring the existence of a glass ceiling in the healthcare sector. The findings of the study show the existence of a glass ceiling by reviewing the existing published literature from the year 2000-2020. Glass ceiling is an invisible barrier that keeps females away from senior positions. Barriers resulting from the glass ceiling are organizational barriers, societal/social barriers, and personal barriers. These barriers or factors of the glass ceiling are obstructing females' career advancement. The study found that even with time, situations are still the same for females as before. The number of females in senior positions is increasing steadily; however, the power is still in the hands of males. Males dominate the top management positions in the healthcare sector. Although the organizations are doing a lot for the upliftment of women, the implementation of these policies needs observation. There is a long way to go for females to attain equality in top management.

References

Abelson, J. S., Chartrand, G., Moo, T. A., Moore, M., & Yeo, H. (2016). The climb to break the glass ceiling in surgery: trends in women progressing from medical school to surgical training

- and academic leadership from 1994 to 2015. *The American Journal of Surgery*, 212(4), 566-572. <https://doi.org/10.1016/j.amjsurg.2016.06.012>
- Abraham, M. (2013). *Does having women in positions of power reduce gender inequality in organizations? A direct test* (Doctoral unpublished dissertation). MIT Sloan School of Management.
- Acker, J. (2009). From the glass ceiling to inequality regimes, *Sociologie du Travail*, 5(1), 199-217. <https://doi.org/10.4000/sdt.16407>
- Andrews, N. C. (2007). Climbing through medicine's glass ceiling. *New England Journal of Medicine*, 357(19), 1887-1889. <https://doi.org/10.1056/NEJMp078198>
- Aveyard, H. (2014). *Doing a literature review in health and social care: A practical guide*. London: Open University Press
- Bahri, B. (2020, September 25). Smashing the Glass ceiling. *Times of India*. <https://timesofindia.indiatimes.com/readersblog/theshecorner/smashing-the-glass-ceiling-26464/>
- Baxter, J., & Wright, E. O. (2000). The glass ceiling hypothesis: A comparative study of the United States, Sweden, and Australia. *Gender & Society*, 14(2), 275-294. <https://doi.org/10.1177/089124300014002004>
- Bismark, M., Morris, J., Thomas, L., Loh, E., Phelps, G., & Dickinson, H. (2015). Reasons and remedies for under-representation of women in medical leadership roles: a qualitative study from Australia. *BMJ Open*, 5(11), 1-9. <https://doi.org/10.1136/bmjopen-2015-009384>
- Bombuwela, P., & Alwis, A. A. (2013). Effects of glass ceiling on women career development in private sector organizations-case of Sri Lanka. *Journal of Competitiveness*, 5(2), 3-19. <https://doi.org/10.7441/joc.2013.02.01>
- Bots, S. H., Zuidegeest, M. G., Gohar, A., Eikendal, A. L., Petrelli, A., van Os-Medendorp, H., ... & den Ruijter, H. M. (2018). Women in translational medicine: tools to break the glass ceiling. *Frontiers in Medicine*, 5, 330. <https://doi.org/10.3389/fmed.2018.00330>
- Budhwar, P. S., Saini, D. S., & Bhatnagar, J. (2005). Women in management in the new economic environment: The case of India. *Asia Pacific Business Review*, 11(2), 179-193. <https://doi.org/10.1080/1360238042000291199>
- Carli, L. L. & Eagly, A. H. (2001). Sex, hierarchy, and leadership: an introduction, *Journal of Social Issues*, 57(4), 629-636. <https://doi.org/10.1111/0022-4537.00232>
- Carnes, M., Morrissey, C., & Geller, S. E. (2008). Women's health and women's leadership in academic medicine: hitting the same glass ceiling?. *Journal of Women's Health*, 17(9), 1453-1462. <https://doi.org/10.1089/jwh.2007.0688>
- Carpenter, K., Scullen, T., Mathkour, M., Dumont, A. S., Biro, E., & Kahn, L. (2021). Social Perception and Academic Trends on Women in the Field of Neurosurgery: A Bibliometric Analysis. *World Neurosurgery*, 152, 154-161. <https://doi.org/10.1016/j.wneu.2021.04.056>
- Castaño, A. M., Fontanil, Y. & García-Izquierdo, A. L. (2019). "Why Can't I Become a Manager?" - A Systematic Review of Gender Stereotypes and Organizational Discrimination. *International Journal of Environmental Research and Public Health*, 16 (10), 1-29. <https://doi.org/10.3390/ijerph16101813>
- Chisholm-Burns, M. A., Spivey, C. A., Hagemann, T., & Josephson, M. A. (2017). Women in leadership and the bewildering glass ceiling. *American Journal of Health-System Pharmacy*, 74(5), 312-324. <https://doi.org/10.2146/ajhp160930>

- Choi, S., & Park, C. (2014). Glass Ceiling in Korean Civil Service: Analyzing Barriers to Women's Career Advancement in the Korean Government. *Public Personnel Management*, 43(1), 118-139. <https://doi.org/10.1177/0091026013516933>
- Cotter, D. A., Hermsen, J. M., Ovadia, S., & Vanneman, R. (2001). The glass ceiling effect. *Social Forces*, 80(2), 655-681. <https://doi.org/10.1353/sof.2001.0091>
- Di Fabio, A. (2017). Positive Healthy Organizations: Promoting well-being, meaningfulness, and sustainability in organizations. *Frontiers in Psychology*, 8, 1938. <https://doi.org/10.3389/fpsyg.2017.01938>
- Downs, J. A., Reif, M. L. K., Hokororo, A., & Fitzgerald, D. W. (2014). Increasing women in leadership in global health. *Academic Medicine: Journal of the Association of American Medical Colleges*, 89(8), 1103-1107. <https://doi.org/10.1097/ACM.0000000000000369>
- Eiser, B. J., & Morahan, P. (2006). Fixing the system: Breaking the glass ceiling in health care. *Leadership in Action*, 26(4), 8-13. <https://doi.org/10.1002/lia.1171>
- Ellwood, S., Garcia-Lacalle, J., & Royo, S. (2019). The shattered glass ceiling and a narrowing gender pay gap in NHS foundation Trusts: Gender and salaries of chief executives. *Public Money & Management*, 40(1), 31-41. <https://doi.org/10.1080/09540962.2019.1621052>
- Espinosa, M. P., & Gardeazabal, J. (2020). The gender-bias effect of test scoring and framing: A concern for personnel selection and college admission. *The BE Journal of Economic Analysis & Policy*, 20(3). <https://doi.org/10.1515/bejeap-2019-0316>
- Feng, L., & Sumettikoon, P. (2022). A Promotion of Female Entrepreneurship Education Ecosystem to Empower Girls and Women. *Eurasian Journal of Educational Research*, 98(98), 284-301. <https://ejer.info/index.php/journal/article/view/744>
- Fjeldsted, K. (2013). Female Leadership in Health Care. Leadership in Health Care Organizations. Standing Committee of European Doctors. <http://www.cpme.eu>
- Ford, D. L., & Kiran, M. I. (2008). Perceived leader effectiveness across organizational roles: Exploratory evidence from Central Eurasia. *Eurasian Journal of Business and Economics*, 1(2), 131-156.
- Gilavand, A., & Mohammadzadeh, S. (2018). Investigation of the Barriers of the Promotion to Managerial Positions of Female Faculty Members of Ahvaz Jundishapur University of Medical Sciences, in Southwest Iran. *Journal of Research in Medical and Dental Science*, 6(5), 296-301.
- Glass, C., & Cook, A. (2016). Leading at the top: Understanding women's challenges above the glass ceiling. *The Leadership Quarterly*, 2(7), 51-63. <https://doi.org/10.1016/j.leaqua.2015.09.003>
- Hoss, M. A. K. (2006). Women in Hospital Chief Executive Officer Positions: Fact or Fiction. *Advancing Women in Leadership Journal*, 21 (Summer). <http://awinstitute.advancingwomen.com/awl/summer2006/Hoss.html>
- Hoss, M. A. K., Bobrowski, P., McDonagh, K. J., & Paris, N. M. (2011). How gender disparities drive imbalances in health care leadership. *Journal of Healthcare Leadership*, 3, 59-68. <https://doi.org/10.2147/JHL.S16315>
- Hopkins, M. M., O'Neil, D. A., & Bilimoria, D. (2006). Effective leadership and successful career advancement: perspectives from women in health care. *Equal Opportunities International*, 25(4), 251-271. <https://doi.org/10.1108/02610150610706249>
- Inam, H., Janjua, M., Martins, R. S., Zahid, N., Khan, S., Sattar, A. K., ... & Malik, M. A. (2020). Cultural barriers for women in surgery: how thick is the glass ceiling? An analysis from a low

middle-income country. *World Journal of Surgery*, 44(9), 2870-2878. <https://doi.org/10.1007/s00268-020-05544-9>

International Labour Organization (ILO) (2012). *Global Employment Trends for Women 2009*. Geneva: International Labour Organization.

Johns, M. L. (2013). Breaking the glass ceiling: Structural, cultural, and organizational barriers preventing women from achieving senior and executive positions. *Perspectives in Health Information Management*, 10(Winter), 1e.

Kaur, P., & Mahajan, P. (2021). Does Gender Heterogeneity Matters: The Moderating Role of Women Directors' Independence in the Indian Corporate Sector. *Eurasian Journal of Business and Economics*, 14(28), 87-105. <https://doi.org/10.17015/ejbe.2021.028.05>

Kleinberg, J., & Raghavan, M. (2018). Selection problems in the presence of implicit bias. *arXiv preprint arXiv:1801.03533*. <https://doi.org/10.48550/arXiv.1801.03533>

Lantz, P. M. (2008). Gender and leadership in healthcare administration: 21st century progress and challenges. *Journal of Healthcare Management*, 53(5), 291-301.

LaPierre, T. A., & Zimmerman, M. K. (2012). Career advancement and gender equity in healthcare management. *Gender in Management: An International Journal*, 27(2), 100-118. <https://doi.org/10.1108/17542411211214158>

Longo, P., & Straehley, C. J. (2008). Whack! I've hit the glass ceiling! Women's efforts to gain status in surgery. *Gender Medicine*, 5(1), 88-100. [https://doi.org/10.1016/S1550-8579\(08\)80011-3](https://doi.org/10.1016/S1550-8579(08)80011-3)

Lyness, K. S. & Thompson, D.E. (2000). Climbing the corporate ladder: Do female and male executives follow the same route? *Journal of Applied Psychology*, 85(1), 86-101. <https://doi.org/10.1037/0021-9010.85.1.86>

Madichie, N. O. (2009). Breaking the glass ceiling in Nigeria: A review of women's entrepreneurship. *Journal of African Business*, 10(1), 51-66. <https://doi.org/10.1080/15228910802701361>

Maheshwari, M., & Lenka, U. (2022). An integrated conceptual framework of the glass ceiling effect. *Journal of Organizational Effectiveness: People and Performance*, 9(3), 372-400. <https://doi.org/10.1108/JOEPP-06-2020-0098>

Makarem, Y., & Wang, J. (2020). Career experiences of women in science, technology, engineering, and mathematics fields: A systematic literature review. *Human Resource Development Quarterly*, 31(1), 91-111. <https://doi.org/10.1002/hrdq.21380>

McManus, I. C., & Sproston, K. A. (2000). Women in hospital medicine in the United Kingdom: glass ceiling, preference, prejudice or cohort effect?. *Journal of Epidemiology & Community Health*, 54(1), 10-16. <https://doi.org/10.1136/jech.54.1.10>

Millath, M. A., Saraladevi, E., & Thowseaf, S. (2017). Impact of Glass Ceiling on Women Employees in Hospitals. *Researchers World*, 8(4), 11-18. <https://doi.org/10.18843/rwjasc/v8i4/02>

Mousa, M., Boyle, J., Skouteris, H., Mullins, A. K., Currie, G., Riach, K., & Teede, H. J. (2021). Advancing women in healthcare leadership: A systematic review and meta-synthesis of multi-sector evidence on organisational interventions. *EclinicalMedicine*, 39, 101084. <https://doi.org/10.1016/j.eclinm.2021.101084>

Muraya, K. W., Govender, V., Mbachu, C., Uguru, N. P., & Molyneux, S. (2019). 'Gender is not even a side issue... it's a non-issue': career trajectories and experiences from the perspective

- of male and female healthcare managers in Kenya. *Health Policy and Planning*, 34(4), 249-256. <https://doi.org/10.1093/heapol/czz019>
- Newman, P. (2011). *Releasing Potential: Women Doctors and Clinical Leadership*. London National Health Service.
- Öztürk, İ., & Şimşek, A. H. (2019). Systematic review of glass ceiling effect in academia: The case of Turkey. *OPUS International Journal of Society Researches*, 13(19), 481-499.
- Parcheta, N., Kaifi, B. A., & Khanfar, N. M. (2013). Gender inequality in the workforce: A human resource management quandary. *Journal of Business Studies Quarterly*, 4(3), 240-248.
- Powell, G. N., & Butterfield, D. A. (2015). The glass ceiling: what have we learned 20 years on? *Journal of Organizational Effectiveness: People and Performance*, 2(4), 306-326. <https://doi.org/10.1108/JOEPP-09-2015-0032>
- Purcell, D. (2013). Baseball, beer, and Bulgari: Examining cultural capital and gender inequality in a retail fashion corporation. *Journal of Contemporary Ethnography*, 42(3), 291-319. <https://doi.org/10.1177/0891241612466108>
- Rapp, K., & Yoon, J. (2016). What are Organizational and Cultural Barriers in the Workplace to Women Advancing to the C-Suite?. Cornell University, ILR School. <https://ecommons.cornell.edu/handle/1813/74472>
- Reed, V., & Buddeberg-Fischer, B. (2001). Career obstacles for women in medicine: an overview. *Medical Education*, 35(2), 139-147. <https://doi.org/10.1111/j.1365-2923.2001.00837.x>
- Ridgeway, C. L. (2001). Gender, status, and leadership. *Journal of Social Issues*, 57(4), 637-655. <https://doi.org/10.1111/0022-4537.00233>
- Salahuddin, A., Mahmood, Q. K., & Ahmad, A. (2022). Breaking second glass ceiling: lived experiences of women entrepreneurs in Pakistan. *Quality & Quantity*, 56(1), 61-72. <https://doi.org/10.1007/s11135-021-01119-5>
- Saraswathy, M. (2019, March 8). Women's Day 2019: Labour Force Participation of Females is Still Achilles Heel for India. *Money Control*. <https://www.moneycontrol.com/news/business/economy/womens-day-2019-labour-force-participation-offemales-is-still-an-achilles-heel-for-india-3623061.html>
- Sharma, S., & Kaur, R. (2019). Glass ceiling for women and its impact on women's career progression in the Indian service sector: the moderating role of family structure. *International Journal of Indian Culture and Business Management*, 18(2), 235-250. <https://doi.org/10.1504/IJICBM.2019.098025>
- Spina, E., & Vicarelli, G. (2016). Are Young Female Doctors Breaking Through the Glass Ceiling in Italy?. *Cambio: Rivista Sulle Trasformazioni Sociali*, 5(9), 121-134. <https://doi.org/10.13128/cambio-19193>
- Tharadevi, K. (2015). *Women executives and corporate glass ceiling a case study of selected Indian Companies*. A thesis submitted to BN Bahadur Institute of Management Sciences, University of Mysore.
- ACHE (2001). *A comparison of the career attainments of men and women healthcare executives*. Chicago: The Foundation of the American College of Healthcare Executives. <https://www.ache.org/learning-center/research/about-the-workplace/gender-studies/a-comparison-of-the-career-attainments-of-men-and-women-healthcare-executives>

- Tlaiss, H., & Kauser, S. (2010). Perceived organizational barriers to women's career advancement in Lebanon. *Gender in Management: An International Journal*, 25(6), 462-496. <https://doi.org/10.1108/17542411011069882>
- Tracey, C. (2006). The glass ceiling in Irish healthcare: a nursing perspective. *Journal of Health Organization and Management*, 20(6), 502-511. <https://doi.org/10.1108/14777260610702253>
- Weil, P. A., & Mattis, M. C. (2003). To shatter the glass ceiling in healthcare management: who supports affirmative action and why?. *Health Services Management Research*, 16(4), 224-233. <https://doi.org/10.1258/095148403322488928>
- Wolfert, C., Rohde, V., Mielke, D., & Hernández-Durán, S. (2019). Female neurosurgeons in Europe-on a prevailing glass ceiling. *World Neurosurgery*, 129, 460-466. <https://doi.org/10.1016/j.wneu.2019.05.137>
- World Economic Forum (2021). Global gender gap report 2021. <https://www.weforum.org/reports/global-gender-gap-report-2021/>
- WHO (2008). *Gender and health workforce*. World Health Organization. www.who.int/hrh/statistics/en
- Yedidia, M. J., & Bickel, J. (2001). Why aren't there more women leaders in academic medicine? The views of clinical department chairs. *Academic Medicine*, 76(5), 453-465. <https://doi.org/10.1097/00001888-200105000-00017>
- Zhuge, Y., Kaufman, J., Simeone, D. M., Chen, H., & Velazquez, O. C. (2011). Is there still a glass ceiling for women in academic surgery?. *Annals of Surgery*, 253(4), 637-643. <https://doi.org/10.1097/SLA.0b013e3182111120>