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Navigating the Path to Success: Insights for Aspiring Female Leaders in Academia

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Review

Navigating the Path to Success: Insights for Aspiring Female Leaders in Academia

Wafa Hozien

Blinded for peer-review

Abstract: The goal of this narrative review was to identify, synthesize and summarize research providing both institutional and personal recommendations for female leaders who aspire to hold leadership roles in academia. Existing evidence regarding factors that influence females acquiring leadership positions was first gathered and examined, noting recurring issues that have been identified as inimical to women assuming leadership roles. Recent research studies and statistical trends were then investigated, tracking and reporting on the increase in female leadership in academia that has occurred over recent years. Quantitative and qualitative literature focusing on successful strategies to support females aspiring to academic leadership positions were then elaborated upon, with specific factors identified in order to deepen understanding of shifts that may help to account for the rise of females in academic leadership roles. The recommendations resulting from the findings of this narrative review could be used to scaffold female success in the pursuit of academic leadership roles and offer insights for university executives and administrators on methods of more effectively supporting an increase in female leaders in academia.

Keywords: female; women; academia; higher education; leadership; gender equality; diversity

1. Introduction

Although there is an abundance of scholarly research outlining the various factors that impinge on women achieving leadership roles in academia, there are fewer studies exploring female trajectories that lead to successful outcomes. Recent studies indicate that rather than the dire situation reported in the early to mid 2000s that emphasized the incremental growth rates of female academics at executive management and leadership levels, there have been positive and noteworthy shifts in recent years [1].

At the time of writing (July 2023) four of the world's most highly ranked academic institutions have female leaders: Irene Tracey, who became vice-chancellor of the University of Oxford in January; Claudine Gay, president at Harvard University; Deborah Prentice, the vice-chancellor of the University of Cambridge and Sally Kornbluth, president of the Massachusetts Institute of Technology. A Times Higher Education dataset additionally recently found a 41 per cent rise in the number of female heads in the world's top 200 institutions over the past five years [2]. Forty-eight of the 200 most acclaimed global academic institutions now boast female presidents or vice chancellors. Similarly, 2022 data from the European University Association depicts some noteworthy changes: The proportion of female rectors has increased by 73% from 2014 to 2022 across European universities. According to the same dataset, women currently hold nearly 60% of senior management positions; 45% of heads of research, and more than 65% of the heads of international offices are women [3].

Such trends suggest that the visibility of women in academic leadership roles is rising and the trajectory toward achieving equitable gender representation is progressing, even if there is still a way to go. A prevailing negativity bias has seen an enduring focus on factors that inhibit women from rising through glass ceilings and soaring above glass cliffs. Comprehensive analyses of the diverse structural and agential factors that contribute to women failing to rise and assume academic leadership roles have been prevalent in recent years. These studies all provide valid, well-evidenced

and fruitful discussions of factors that have played a pivotal role in keeping women from academic leadership roles. However, the evidence that suggests women are becoming more prevalent in academic leadership positions merit a refreshed analysis.

The goal of this review; therefore; is to identify institutional and individual factors that may be contributing to this rise. An enhanced understanding of the experiences and circumstances that can propel women into leadership positions in academia may contribute to changing the leadership landscape and offer systemic and individual-level support that may enhance female academics' experiences in their trajectories towards assuming leadership roles.

Contemporary qualitative and quantitative studies that offer insights and strategies into females assuming academic leadership roles will be explored in depth in this integrative literature review. Factors such as mentorship, strategic networking, institutional changes, individual savvy and the visibility of role models will be explored as pivotal points that can contribute to increasing the presence of women provosts, presidents, vice-chancellors, and in academic executive managerial positions.

The following questions guided this search for relevant literature to comprehensively investigate this topic: 1) Which factors can help to propel women into academic leadership positions? 2) How do these factors increase the presence of women in academic leadership roles?

1.1. Factors affecting female representation in academic leadership roles

In recent decades, significant contributions to the literature have highlighted the array of factors that can impinge upon female ability to assume academic leadership roles. These factors span both structural and institutional causes, as well as personal or individual factors, thus emphasizing the intersection of personal biography and wider social trends. At the micro, individual or subjective level, commonly cited factors in the literature include the gender gap in self esteem and confidence, and the prevalence of "impostor syndrome" among women. which is arguably a manifestation of low self-esteem and confidence [4–6].

According to analyses that cite these examples, males tend to report higher levels of self-esteem than women and tend to be more confident than women. In contrast, women tend to be inaccurate in their self-assessments or underestimate themselves despite being perceived as equally effective leaders. Many of these studies highlight the importance of emboldening and equipping women with techniques to believe in themselves more and doubt themselves less. Additionally, women more frequently attribute their success to luck or other transitory factors, while men more often attribute their advances to stable characteristics within themselves [7].

Beyond subjective self-perceptions, there is additionally a slew of structural factors that have been identified as limiting women from aspiring to or reaching academic leadership roles. Ysselfyk et al. (2019) refers to a leak in the academic pipeline that manifests as a range of inhibitory factors that see females siphoned away from academic leadership roles. The authors specifically cite the prevalence of glass ceilings (or barriers linked to gender that affect promotion or hire, such as being of childbearing age or having children); the glass cliff phenomenon where women are hired to assume leadership roles in situations or circumstances that structurally set them up for failure or an experience of precarity; gender pay inequity; sexism; reduced chances for promotion, and unconscious bias during the hiring process [5].

While the possibility of having children represents a consideration that underpins many of the reasons cited above, it is important to crystallize the effects of having young children on a woman's academic leadership role prospects. Goulden et al. (2011) reported that married women with young children were 35% less likely to get a tenure-track position than married men with young children, and 33% less likely to get a tenure-track role than single women without young children [8]. In more recent 2021 research, an extensive survey and analysis of longitudinal data found that the ubiquitous productivity gap between tenure-track men and women at research-intensive institutions was caused by the gendered effect of parenthood [9]. Among computer science faculty, for example, over the 10 years after the birth of their child, mothers published on average 17.6 fewer papers than fathers: a gap that would take roughly 5 years of work for mothers to close. With tenure-track positions largely

contingent upon paper production and research output, fewer women in tenure-track positions becomes comprehensible [9].

It is additionally relevant to briefly point out here that the phenomenon of Covid-19 significantly altered gender dynamics in academia, with a number of authors noting a decline in female academic productivity, and the implicit understanding that this could impact on female academic leadership roles. In short, beyond longstanding structural and individual factors that impinge upon female capacity to assume leadership roles, other random phenomena and global events such as Covid-19 additionally represent a factor [10].

1.2. Recent statistics and shifts on female representation in academic leadership roles

However, while an abundance of analyses regarding the factors that contribute to inequity in academic leadership roles abound, it is essential to recognize that recent years have seen the emergence of a rise in females occupying prominent academic leadership positions.

In February 2023, the *Times Higher Education* World University Rankings 2023 were released. According to the findings, women held the position of vice-chancellor or the equivalent at 48 of the world's top 200 universities, with four of the world's top five universities now chaired by women. According to the dataset, there are 12 per cent more women in these leadership positions than there were in 2022, and 41 per cent more than five years ago [2].

Increasing female leadership appointments in the US and Germany have contributed to the rise. Five leading German universities are headed by women, three of which broke centuries of male leadership. With three-quarters of these elite leadership roles assumed by men, there are still clearly advances to be made. However, the rise of 12 percent more women in such prestigious roles in one year, and indeed four of the five top universities now led by women, is noteworthy [2].

As emphasized in the literature, increasing the visibility of women in leadership roles plays a significant function in contributing to an ongoing culture that normalizes and increases the presence of women in such leadership roles. As Stead (2013) observes, surface level invisibility encompasses exclusion, absence, marginalization or being distinguished as different, thus contributing to deep-level conceptualisations that are maintained through said invisibility. Visibility, in contrast, challenges such deep-seated perceptions [11].

The *Times Higher Education* rankings presents a preliminary form of evidence that a cultural and social shift may be taking place in higher education. This article thus uses this data as a departure point for a critical consideration of factors and theoretical perspectives that may contribute to elevating and advancing aspiring female leaders in academia, based on existing literature.

1.3. The benefits of increased female representation in academic leadership roles

Abundant research indicates that the presence of women leaders in organizations yields diverse positive outcomes. According to Chisholm-Burns et al. (2017), women leaders increase diversity that helps to elevate critical thinking and combat the homogeneity of ideas, complacency and overconfidence. Women in top leadership positions can additionally foster employee morale, motivation, and enhance performance [12].

A study exploring collective intelligence carried out by Caza et al. (2010) discovered that groups with more women members had greater collective intelligence than those with fewer women members [13]. The authors largely attributed this outcome to improved social sensitivity, awareness of social context and cues, which women tended to demonstrate more prominently than men. Finally, in a study of nine leadership behaviors that advantageously benefit organizational performance, women embodied five behaviors more frequently than men: people development, role modeling, inspiration, expectation and rewards, and participative decision-making [14].

2. Materials and Methods

Snyder (2019) notes that literature reviews represent a powerful method of offering a fresh overview of areas where the research is disparate and interdisciplinary, and to expose gaps where further studies are needed. However, Snyder (2019) additionally points out in some cases, a more creative approach is required when the purpose of the review is not to analyze all material ever published on the topic, but instead to combine perspectives to contribute towards new models and ways of perceiving a topic. [15]

In this case, an integrative literature review represents an appropriate methodological tool. Integrative reviews represent a semi-structured approach that holds the objective of assessing, critiquing, and synthesizing the literature on a research topic in a way that enables new conceptual models to emerge [16]. Integrative literature reviews are designed to address mature topics or new, emerging topics. Such an orientation benefits from a more flexible, unstructured collection of data, as the purpose is to combine perspectives and insights from different fields or research traditions in order to generate a new conceptual framework. In this case, exploring factors that may contribute to a rise in women assuming academic leadership roles both challenges the notion that females are doomed to experience ongoing bias, and an exploration of evidence that may support the recent rise of females in academic roles [15,16].

However, it is essential that literature reviews are undertaken systematically and thoroughly in order to create a valid contribution [17]. Although integrative reviews are not usually developed according to a specific standard or criteria, a research protocol of sorts must nonetheless still be applied. One fundamental element noted by Torraco (2005) is that transparency around documentation of how articles were selected for review [16].

As mentioned earlier, the following questions guided this integrative literature review 1) Which factors can help to propel women into academic leadership positions? 2) How do these factors increase the presence of women in academic leadership roles? Having decided upon these research questions, relevant search terms and databases were then identified. EBSCO, ProQuest Central and Google Scholar were selected as three prominent interdisciplinary platforms that encompass a diverse array of scholarly databases. Search limits restricted the results to quantitative, qualitative and mixed method research studies published in English between 2013 and 2023 highlighting interventions, surveys, experiences or reflections of females in academic leadership roles.

No restriction was placed on specific disciplines or fields within academia or higher education, however, the articles had to be focused on women and leadership roles within academia or higher education as opposed to general studies around successful policies and experiences of women in leadership roles. An initial pilot search across the three databases using the terms “academia” “academic” “leadership”, “roles” “women” and “females” yielded only a handful of results, so the search terms were extended to additionally include “higher education”.

All articles were scanned for relevance to the research question, with the final outcome yielding fifteen articles to be included in the integrative review. The articles were then read with key themes and trends noted with respect to insights or policies that supported women aspiring to leadership roles in academia or higher education. The identified themes and trends were then synthesized into the following overarching categories: mentorship, utilizing savvy, institutional proactivity, female role model visibility and strategic networks. These categories will be explored and unpacked in greater depth in the results section.

3. Results

The analysis and synthesis of the integrative literature review revealed five central, recurring themes that consistently surfaced throughout the majority of the studies. Mentorship, utilizing savvy, institutional proactivity, the visibility of female role models and strategic networks spoke to behaviors, actions and perceptions that women could adopt to successfully support their aspirations in moving towards leadership roles in academia. However, one theme, institutional proactivity, additionally explored strategies universities could actively adopt to reduce gender bias and support women aspiring to leadership roles. Each theme is discussed at length below.

3.1. Mentorship

One of the most prominent themes that arose following the analysis of the literature review was the myriad ways in which mentors helped to advance, support, and promote female leaders or females aspiring to leadership roles in academia. Six of the reviewed studies dedicated large portions of analysis to the significance of mentorship. While the concept of mentoring once referred to a relationship between a younger adult and a more experienced adult helping the younger individual navigate the adult world and work, mentoring nowadays can encompass a range of behaviors and interactions including reciprocity between mentors and protégés, a relationship based on developmental benefits, and consistent interaction over a period of time [18]. The benefits of mentoring have been identified in three primary areas: personal growth, career advancement, and psychosocial support [19].

However, it is critical to point out that many of the studies explored the benefits of mentorship in nuanced ways. Some emphasized the need for diverse expressions of mentorship that were uniquely tailored to individual needs; others explored models of mentorship that transcended the perceived hierarchical dyad, and others still examined mentorship that came from non-traditional or more expansive networks and the role of sponsorship, which was viewed as a more interactive form of support than traditional mentoring.

Hill and Wheat (2017)'s investigation of mentorship on university women leader's career paths towards university presidency found that among those who had mentors, the mentor played a critical role in facilitating their advancement and contributing to their general career success [20]. The authors' respondents described mentors who reviewed texts and documents, shared opportunities and placed the individual in strategic jobs or positions. Hill and Wheat (2017) additionally underscored the diverse nature of what constituted mentorship: for some of the married female academics, non-traditional figures such as spouses and partners functioned as informal mentors who provided support and encouragement when formal or traditional career mentors were lacking. The study's findings pointed out that for aspirational female academic leaders, women could benefit from finding other women to provide sponsorship, advice, and support with respect to work and life issues. Women in existing leadership roles could share their experiences with other women seeking leadership opportunities, providing benefits beyond the microcosm of the interpersonal relationship to additionally contribute to a wider feminist redistribution of power and social capital. The authors explored the benefits of cultivating multiple types of mentorship opportunities spanning their careers, both traditional and non-traditional [20].

In their 2015 exploration of the leadership development of African American women in higher education, Davis and Maldonado elaborate on the role of sponsorship [21]. Sponsors significantly contributed to their informants' career advancement by connecting them with opportunities, rendering the women in question visible to leaders in positions to make hires, and seeing them "to the threshold of power". In many of the cases, African American women informants received sponsorship from white men able to influence decision-making processes or in networks of power. Sponsors were differentiated from mentors through their proactive stance in advocacy: mentors provided advice and support, sponsors gave career promotion, created positions, and advocated for those they sponsored thus assisting with upward career mobility [21].

Dunn et al. (2014) additionally emphasized that male mentorship was common among the female informants in their study, simply because there was a lack of female mentors and role models for aspirational academic women leaders [22]. In some cases, these male mentors provided highly specific support that empowered and equipped the female to excel in their given area of administrations. Cross-gender mentoring and mentee relationships can have a number of positive benefits for women learning to be more assertive, expect crises, and recover from crises [20]. Nonetheless, the generation of female leaders that Dunn et al. interviewed shared that they were uniquely poised to serve as effective mentors for future female leaders by focusing on gender-specific advice, particularly with respect to providing support on striking work and life balance [22].

A systematic review carried out by Farkas et al. (2019) explores the mentorship of women in academic medicine, offering potent insights into the nature and efficacy of mentorship among

aspirational female leaders in general [23]. One key observation is that despite diverse mentorship programs, mid and senior-career faculty lacked access to such initiatives. Mentorship must therefore be implemented across the career spectrum. Another critical observation was that aspirational female leaders in academic medicine could benefit from individualized mentorship programs that conform to the mentee's goals, or non-traditional mentorship settings such as peer-mentorship groups, in addition to dyads. Overall, the review found that mentorship in general was met with high rates of satisfaction and mentor relationships were effective in improving the promotion and retention of women faculty members [23].

Chang, Longman and Franco's (2014) exploration of leadership development through mentoring in higher education investigates the role of mentorship from an intersectional perspective that considers both gender and color [24]. In this study, informants shared insights that challenged traditional concepts of mentorship, with the concept of "developmental relationships" emerging as an alternative. While not all participants identified that they had experienced mentorship, all did acknowledge that they had experienced some form of developmental relationship or learning partnership that had assisted them, and in some cases, was seen as a more desirable alternative. Similar to Hill and Wheat's study, in some cases these figures were non-traditional and included family, friends and church congregation members, providing them with psychosocial support, practical advice or even positioning them for opportunities [20]. Chang, Longman and Franco (2014) additionally emphasized that for their participants, non-hierarchical interactions were favored among individuals who espoused values of self-reliance and celebrated lateral relationships [24]. Women typically prefer to work in "flatter" relational work environments, where "the feminine iteration of power is expressed alongside or through others, rather than over them[24]. Such a view was commonly expressed by established female leaders in the study who upheld attributes of self-reliance, autonomy and egalitarianism and expressed discomfort with the traditional mold of mentoring. A commitment to self-reliance runs contrary to seeking out a mentor in the traditional sense, with these individuals instead favoring figures such as teammates for lateral, functional relationships that would nonetheless still be significant and influential. As the authors noted, the more established leaders among their participants did not appear to pursue long-term professional developmental relationships; rather, they found short-term, task-specific, and lateral relationships that better suited their professional needs and commitment to self-reliance. Similar to other authors in the field, Chang Longman and Franco (2014) additionally noted that mentoring opportunities were particularly limited for those who held the highest position in their field [24]. Hannum et al. (2015) additionally articulated that their research findings indicate that the higher a woman ascends the academic ladder, the fewer female colleagues and role models and the more difficult it becomes to find a mentor, thus again underscoring the importance of mid to senior leadership mentorship roles in diverse formats [25].

3.2. Utilizing savvy

A smaller, but nonetheless significant theme that emerged across three seminal articles was the concept of women utilizing savvy in creative ways to promote access to leadership roles. Ideas such as "learning how to play the game", playing up or challenging notions of femininity, exploiting difference as a positive force or to one's advantage to challenge norms and invoke transformation were all identified as methods that female academics could increase their access to leadership roles.

Davis and Maldonado (2015), for example, focused in particular on the unique experience of black women aspiring to leadership [21]. The authors posited that marginality could provide a unique vantage point from which to challenge hegemony, and use their understanding of the "rules" of the game to leverage the playing field to their advantage. By way of example, African American women could identify how the internal functioning of politics operated and develop strategies to decipher the bureaucracy, thus becoming politically savvy around potential organizational landmines. The authors took care to stress that African American female leaders that adopted such an approach did so while not lowering their standards, maintaining integrity and upholding their ethics. As the authors observed: the participants expressed that the playing field was not level; however, they

needed to sit and remain at the table in order to make their presence known." In addition, they noted that African American women in particular who aspired to become academic leaders must be willing to step outside their comfort zones to connect a network of people and establish strategic relationships in order to gain access to higher-level promotions and career opportunities, with some of their informants resisting normative assumptions of femininity in order to participate as academic leaders in the midst of discriminatory practices. Such an approach coheres with Madden's (2011) concept that women first fit in and then work to transform and disrupt the existing culture to suit themselves, other women and minorities. [26].

Hill and Wheat (2017) additionally underscored the importance of "savvy", framing it in a slightly different way. When women develop an understanding of organizational culture, or gain access to an insider of that culture such as a male mentor or sponsor, it can be particularly advantageous. To advance into new roles, women must understand the skills of the new position, in addition to the norms, rules and regulations of conduct. [20]

Finally, Hernandez, Ngunjiri and Chang's (2015) reflection of exploiting the margins in higher education leadership roles again underscores the importance of leveraging one's unique position (especially as a woman of color) in navigating the academy and learning how to thrive [27]. Rather than marginalization being tied to victimization, these women chose to cultivate a deliberate political standpoint for their exploitative ends. Positionality was used to their advantage, and to the advantage of those for whom they advocated. The authors described how rather than challenge normative assumptions of femininity, they "played" with their femininity, assuming a more socially acceptable feminine role of soft-spokenness and humility to effect change as leaders at their institutions. The reconfiguration of gender identity helped, in their cases, to promote success [27].

3.3. Institutional proactivity and transformation

Another trend that surfaced multiple times in the literature was the importance of institutional initiatives or interventions that supported females aspiring to academic leadership positions. Examples of successful, helpful initiatives that paved the way to opening up career opportunities for women included gender bias interventions, policies based on non-linear career advancement, and even job sharing. Girod et al. (2016) undertook an educational intervention designed to reduce implicit gender leadership bias in academic medicine [28]. The twenty-minute intervention had a small but significant positive effect on reducing implicit biases surrounding women and leadership, with the authors concluding that the results demonstrated that institutions that provide educational interventions can serve as transformative measures in reducing gender bias and helping promote women to higher ranks [28]. Similarly, a randomized, controlled trial staged by Carnes et al. (2015) underscored that a gender-bias habit-reducing intervention could promote a shift in personal awareness, increased perceptions of benefits, elevate self-efficacy and foster internal motivation to contribute to equity-promoting behaviors [29]. The study's authors additionally found that positive outcome expectations helped to promote behavioral change, and self-reports of gender-equity promoting actions increased significantly after three months. The outcome of the study suggested that the department climate for both male and female faculty was improved in the medicine, science and engineering departments where the intervention had taken place [29].

In other research carried out by Moodly and Toni (2017), the authors offered insights into the benefits of higher education institutions adopting policy frameworks that support women's professional development [30]. Their central hypothesis hinges on the centrality of recognizing that women's career trajectories do not necessarily follow linear or age-related chronologies due to factors such as child-rearing, and that women's style of service leadership differs from that of men. Given these facts, the potential career cycle trajectories of women have different needs at different stages and may appear recursive and spiraling. For women to advance in higher education leadership, policies should reflect a life-career advancement continuum that is particular to women and adaptable to the individual's growth path in order to support work/life balance [30].

Finally, a UK research carried out by Watton, Stables and Kempster (2019) used a case study to explore how job sharing could help women achieve more senior leadership roles in higher education

institutions. [31] Job sharing can be defined as the voluntary sharing, between two or more people, of a full-time position. Job sharing thus represents a way of enabling women to be retained or recruited into senior management roles when they need to additionally work flexibly. In this case study, two women job-shared a senior role in the university they both worked at. While the HR team were initially reluctant to accept the proposal, the women persisted and clarified the terms of their contract, with the dean of the faculty approving the second application. The job share lasted for three years, with significant benefits for both the employees and employer: the women enjoyed a senior role with flexibility; and the university enjoyed higher productivity and greater skill sets from two individuals sharing the position. Walton, Stables and Kempster (2019) explained that most academic posts are suitable for job sharing and should be advertised thus, as this would very likely positively impact the female leadership pipeline and achieve gender equality by retaining talented women in senior ranks over time [31].

3.4. Visibility of female role models

The visibility of female role models was another prominent theme that surfaced. Studies that mentioned female role models highlighted their capacity to model leadership behavior, normalize the presence of women in positions of academic seniority, and other associated benefits such as teaching females in academia how to take credit, get comfortable using authority, and becoming excited about the potentials associated with assuming an academic leadership position.

Hill and Wheat (2017) write that role models are distinctive from mentors for women aspiring to academic leadership positions although their significance has been under-investigated in the research [20]. They provide a definition of role models as individuals whose behavior in a given role can be imitated by others, and that women need role models they view as being similar to themselves in order to legitimize themselves in professional roles. Their research suggests that a lack of female role models during the early stages of a career may explain why many of their participants did not aspire to university leadership earlier in their trajectory. Female role models can help to increase self-confidence in the quest to advance to a more senior role; to engage in different types of activities to broaden experience, and to challenge gendered assumptions of leadership [20].

Peterson's (2014) study explored elements of women pioneers as changemakers in higher education roles [32]. One of the author's informants emphasized the importance of having a woman vice chancellor superseded by another female in order to help render a female in such a role of power more normal. Another informant underscored how women in senior management positions should promote other women in their capacity as a role model, leaving responsibilities for other women, delegating to them, and congratulating and acknowledging them when they achieve successes [32].

Dunn, Gerlach and Hyle's (2014) article similarly expresses that female academic leaders often omit to publicize their roles or accomplishments, instead deriving internal satisfaction and a sense of accomplishment from supporting the efforts of others [33]. However, this dynamic of women not taking credit for achievements means that women are sometimes overlooked for leadership roles because their contributions are not adequately recognized. The article additionally explored how for one informant, the absence of female role models in senior academic positions resulted in a lack of administrative aspirations. [33].

Watton, Stables and Kempster's (2019) article underscored how job sharing positions at a senior academic level could provide women with a peer role model [31]. The authors emphasized that for women who undertake a job share there is an opportunity to explore leadership, build self-confidence, and uplift a peer in a unique setting. As the authors emphasize, having a role model in a job-share situation represents a helpful mechanism to enhance confidence for women and develop a shared, trusted relationship in a natural way, bolstered by day-to-day interactions. Furthermore, in this case study, the job enabled the women to model behavior that helped the other—for example, each would promote each other's strengths to stakeholders and speak up for one another, thus addressing the self-promotion deficiency often noted in women. The authors additionally stressed that observational and reflective learning in a job share context could help stimulate leadership

development in ways that were more natural (and less costly) than formal women's development programs[31].

Finally, Hannum et al. (2015) outline in their research study that aspirational female academic leaders in higher education benefit from having role models who are comfortable having and using authority [25]. The visibility of such role models would provide women with ways of successfully navigating leadership roles. In addition, they point out that female role models can help to engender excitement about leadership roles by providing insights into all the intellectual challenges and rewards associated with such positions [25].

3.5. Strategic networking

Finally, strategic networking represented the final major theme that emerged as a result of the integrative literature review analysis. This concept encompassed ideas such as intentional networking practices, accepting sponsorship and guidance from unexpected sources, and pooling resources with others.

Van Helden et al. (2021) express that networks fulfill diverse functions for academics [34]. They allow academics to obtain and exchange resources from various stakeholders and influential insiders. The authors explore the significance of different networks with respect to women, elaborating that due to an absence or lack of access to networks within an institution, women are more likely to rely on kin networks, which can nonetheless form a positive synergy with the work domain. Mentorship networks were found to be a significant source of social support for women advancing in an academic work environment, and self-selected female developmental networks (such as Hernandez, Ngunjiri and Chang's, discussed above) were found to positively contribute to achieving career goals by increasing confidence and building with new coping skills [27,34]. Hill and Wheat (2017) additionally emphasize that when female academics create multiple networks from diverse sources (male and female mentors, role models, colleagues, friends, family members) this web can positively influence them in their quest for elite university leadership [20].

Network building was emphasized by Dunn, Gerlach and Hyle (2014) as critical to facilitating one's success as a leader [22]. One of the authors' informants even described her "personal networking ability" as an accomplishment. Another stressed the importance of building administrative networks beyond the campus and earning the trust of others as a critical way to effectively build such networks. Networking can inspire shared visions and collaborative accomplishments. Women administrators are often excluded from male networks, thus actively building networks represents a method of addressing this exclusion [22].

Hernandez, Ngunjiri and Chang (2015) additionally emphasize networking from a slightly different perspective, framing the importance of maintaining cross-disciplinary connections to collaborate on different projects, workshops, provide support, and apply for grants [27]. The authors write that the sense of community they found among each other sustained them, provided them with a safe place to embrace their authentic selves, advance their scholarship, and be empowered to effect change at their institution as they pursued their own advancement [27]. Furthermore, maintaining this sense of connectivity allowed the authors to pool limited resources and creatively and resourcefully solve problems while pursuing professional development goals. The authors observe that their collective actions enabled them to gain visibility in an institution where they may not have achieved notoriety individually [27].

4. Discussion

Many studies in recent years have investigated glass ceilings, glass cliffs and leaky pipelines that prevent women from rising through the academic ranks to assume leadership roles. However, data released by the Times Higher Education [2] suggests that the tide may be shifting, with rising numbers of women assuming elite academic leadership positions.

This integrative literature review set out to explore which factors are prevalent or influential in supporting women who aspire to achieve leadership positions in higher education settings, and to illuminate why such an increase may be taking place. Fifteen articles were analyzed for prominent

concepts that help elevate women into academic leadership roles, with the following key principles emerging as a result: mentorship, savvy, institutional proactivity, female role model visibility and strategic networks. Nonetheless, as there is still a scarcity of data regarding the current state of female leadership in academia, further qualitative and quantitative studies would be beneficial in capturing and gauging the numbers of women in academic leadership roles, their perspectives and experiences.

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