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Women in leadership of higher education: critical barriers in Jordanian universities

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ABSTRACT

Inequality and the lack of inclusion of women in academic higher education (HE) leadership roles persist globally. While inclusivity at the top also applies to ethnicity and disability, the issue of gender is the focus of this article. More specifically, the distinct need is to examine the barriers that slow down and/or obstruct women from advancing in academia and gaining leadership positions. Thus, the purpose of this study is to provide a review of the case in Jordanian Universities. It presents the prevailing situation from the results of a desktop study and a survey questionnaire of the barriers that impede career progression for women in HE. The severity index (SI) formula is used to delineate critical barriers found in the literature in a Jordanian context through a questionnaire. Factor analysis was used to group the critical barriers, which in turn was used to derive an action plan to improve career progression for female academics. The study exposed that women's participation in leadership was determined to be low, which is attributed to several barriers: sociocultural barriers, gender stereotypes, lack of skill and opportunities, work-life conflicts, social network obstacles, mentoring and support, and poor institutional policies that support women. As a result, several actions are recommended to support an increase in female leaders.

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1. Introduction

According to recent United Nations statistics, the ratio of 101.016 males to every 100 females globally is higher in Jordan, standing at 107.332 (United Nations, 2023). Jordan's higher education sector is experiencing remarkable progress and growth, as evidenced by the proliferation of higher education institutions. This expansion is reflected in a significant increase in student numbers, with more than half of university students nowadays being women. Although the proportion of female faculty has increased over the past 15 years, with women comprising only 13.7% of faculty members at Jordanian universities in 2000/01. However, although this figure had doubled to 26.65% by 2014/15 (Dandan & Marques, 2017), women continued to be 'concentrated at the bottom of the academic ladder'.

With relatively equal male and female gender proportions globally, numbers across the world fail to demonstrate gender equality, particularly at all levels of leadership in academia (Burkinshaw et al., 2018). The percentage of worldwide top-ranked HE (Higher Education) institutions led by women is at an all-time high (Times Higher Education, 2023). However, this is still only a mere 24%: forty-eight of the top 200 universities in the recent World Times Higher Education (2023) ranking have a female leader, an increase from 43 (22%) in 2022, 41 (20%) in 2021, and 39 (19%) in 2020 (Times Higher Education, 2021);

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2023). While these numbers show year-on-year improvement, the article also points out that a continuous increase of women in higher education leadership is far from guaranteed. In nine Latin American countries, 18% of university presidents are women; while in 48 European countries, only 15% are women, and in 20 countries, there were no female leaders. Concurrently, female researchers in higher education institutions represent 39.7% of all researchers worldwide (Meza-Mejia et al., 2023). The reality is a stark leaky-pipeline of women in leadership roles in HE: a decline in the proportion of female students transitioning onwards to staff in HE.

Women tend to outperform men in tertiary education (National Center for Education Statistics, 2021); but in contrast, the advancement of women to leadership positions has been slow (Boulay, 2022). In the UK, 27.9% of Professors are women, and 17.1% have a female at the helm of the HE institution, a significant gap from the 46.7% of female academic staff workforce (AdvanceHE, 2021). In the MENA (Middle East and North Africa) region, teaching has traditionally been viewed as a 'suitable' job for women, but it is challenging to enter into the perceived 'masculine' world of leadership (Cubillo & Brown, 2003). In Arab countries, women work in organizations under male bosses, which negatively impacts the skill development and performance improvement of female employees and creates barriers to career mobility (Abdullah Dahlan, 2023). According to an empirical study completed by Hakiem (2022), Saudi higher education continues to offer generous career opportunities to men, it prevents women from reaching leadership positions. A substantial body of literature over the past two decades has explored various aspects of women and their roles in leadership within HE institutions.

The HE sector needs to be aware of the importance of women leaders (Madsen et al., 2012) and the immense contribution their advancement into the sector and society at large can bring (Kulkarni & Mishra, 2022). In contemporary society, women have become more dynamic and empowered to occupy top positions in higher education institutions (Caan-Palillo, 2022). Along with characteristics like a people-oriented approach, value-oriented approach, inclusive leadership, empathy, high emotional intelligence, multi-tasking capacity, flexibility and cooperative mindset, women leaders have some unique characteristics, such as determination, sincerity, hard work, commitment towards their work and setting future goals that give them the desired position in an organisation (Kulkarni & Mishra, 2022).

However, several factors have been found to affect women's participation in HE leadership negatively. Previous research studies of the barriers facing women in HE have covered topics such as the internal politics of academic institutions (Morley, 1999), the influence of managerialism on women's leadership aspirations (Currie et al., 2002; Deem, 1998), gender disparities and the limitations of progress in achieving gender equality (Burkinshaw & White, 2017; O'Connor, 2014), gender biases, often unconscious, slow down women's career progression in academia, leading to their marginalisation and undervaluation (Madsen, 2010; McTavish & Miller, 2009; Young, 2004; Carnes et al., 2008; Sharif et al., 2024a,b]. However, despite robust national anti-discrimination and affirmative action frameworks and institutional gender equality policies, women still remain underrepresented in leadership positions in HE (O'Connor, 2018).

In the landscape of research examining the underrepresentation of women in leadership roles within higher education institutions, there exists a rich body of literature that sheds light on various dimensions of this pervasive issue. While existing research on women in leadership within higher education provides valuable insights, much of it is situated within Western contexts or broader regional analyses, with limited attention given to the intricacies of the Jordanian context. Moreover, empirical data specific to the experiences of women in leadership roles within Jordanian universities are scarce. This study distinguishes itself by centering its investigation squarely on the Jordanian higher education landscape, offering a localized perspective that is attuned to the unique socio-cultural dynamics and institutional realities shaping women's leadership trajectories by a desktop study and a survey questionnaire. With a literacy rate of over 98% (World Bank, 2018), Jordan can proudly boast that it is one of the most highly educated countries in the MENA (Middle East and North Africa) region. Despite educational achievements - whereby females outnumber and outperform males in Jordanian universities - females are more likely to be restricted within specific career choices, specifically regarding leadership roles within the HE sector. HE institutions have typically focused on providing access and support to female students rather than measuring the progress and success of its staff. Therefore, this project aims to investigate and implore barriers by investigating ostensibly structural and societal factors for women in HE leadership.

2. Barriers to women in higher education leadership

Several barriers are reported to hinder women from advancing into leadership roles in HE. One such barrier is the underrepresentation of women as full professors, often considered a prerequisite for leadership roles like President, Vice-Chancellor, Deputy Vice-Chancellor, Pro Vice-Chancellor, or Dean (Jarboe, 2018). However, even when women attain the status of full professor, they may still encounter workplace discrimination, although some studies dispute this viewpoint noting that merely increasing the number of women in professorial roles may not be enough to transform the culture of HE, as what truly matters is the presence of women and men in leadership roles (O'Connor, 2017).

Disciplinary differences can also influence women's access to leadership roles, with STEM (science, technology, engineering and mathematics) academics being more likely to secure leadership positions (Jarboe, 2018). Mobility and geographical location can act as barriers and advantages for women, depending on their circumstances. For example, limited geographic mobility may hinder career progression, while being a foreigner in another country can sometimes be advantageous (Henry-Brown & Campbell-Lewis, 2005). Regional university employees may face location-specific obstacles.

One factor that negatively affects women's participation in HE leadership is the imposter syndrome. Imposter syndrome is an internal phenomenon whereby an individual feels inadequate or fraudulent despite any success achieved (Clance & Imes, 1978; Clance & O'Toole, 2014). The term was introduced by the study of high-achieving women; it described feeling like they fooled others into believing they were intelligent (Clance & Imes, 1978). Thus, they feared others would eventually discover they were 'intellectual imposters' (Boulay, 2022; Clance & Imes, 1978).

Compounding the problem of a lack of women in leadership positions, women still are being paid less than their male counterparts, especially in the private sector (Diehl & Dzubinski, 2016; Wynen et al., 2018; Zhong et al., 2018). The persistent gender pay gap in higher education remains a significant barrier to women's career advancement, with some countries reporting substantial disparities in pay between men and women in the sector—the notorious 'glass ceiling' significantly obstacles women from having a leadership roles (Sharif et al., 2024a,b). The glass ceiling is an invisible barrier that hinders women from advancing beyond certain levels to reach top management positions in organisations (Boulay, 2022; Jauhar & Lau, 2018). Another phenomenon affecting women in the workplace is the presence of the 'glass cliff'. Women who break through the glass ceiling often end up on a glass cliff, where the glass cliff represents being appointed into precarious leadership positions which are doomed to fail (Boulay, 2022; Diehl & Dzubinski, 2016; Javadi et al., 2016). Women who succeed in gaining leadership positions must work exceptionally hard to prove their competence or succumb to the pressure of these challenges (Glass & Cook, 2016; Maheshwari & Nayak, 2022). However, adding to the challenge of gender inequality in leadership - for those that break the glass ceiling - is the presence of the 'queen bee' syndrome: women who manage to advance to management positions are often responsible for the hindrance in the career progression of other women (April & Sikatali, 2019; Padavic et al., 2020). A necessary dynamic for women in male-dominated environments is gaining support from other females, whether in the workplace or externally, through social or professional networks. However, solidarity between women cannot always be assumed (Bagilhole, 2002). Social networks may greatly help women succeed in leadership roles by offering task advice, improving one's reputation and power, providing social support or support from those whose approval is necessary to pursue initiatives in organisations, and providing opportunities for mentoring and career sponsorship (Diehl & Dzubinski, 2016). However, study after study indicates that women lack valuable networks has been cited as one of the primary causes of the gender gap at work (Blommaert et al., 2020; McDonald, 2011).

Another challenge is the need for more transparency in recruitment, promotion, and retention processes within universities despite the presence of equality and diversity policies (Morley, 2014). Initiatives like Athena SWAN in the UK have sought to scrutinise these policies, but their impact still needs to be determined. Executive selection firms play a crucial role in appointing leaders in HE, further contributing to the lack of transparency. Problems appear in the recruitment process. At the managerial level, recruitment, hiring, and promotion processes are informed by images of the successful manager. This image is stereotypically masculine (Yousaf & Schmiede, 2017), yet women have been proven to be successful leaders, and leadership is considered gender-neutral (Gandhi & Sen, 2021; Knipfer et al., 2017; Slater

et al., 2017). A lack of women applying for senior leadership positions is associated with, *inter alia* (Litzky & Greenhaus, 2007; Katrina, 2023), a lack of women leaders as role models (Moodly & Toni, 2019); therefore, the lack of women leaders is perhaps a perpetual challenge.

Women's choices regarding flexible work options can influence their career trajectories. While flexible working arrangements were initially seen as a solution, many women still end up in lower-paid positions due to the need for senior-level flexibility (Sharif et al., 2024a,b). Job sharing has been suggested to retain more women in leadership roles, but it is rarely encouraged during recruitment for such positions, contributing to the perpetuation of gender inequality (Barrett & Barrett, 2011). Further research is needed to delve into this structural problem.

Culture and societal values also affect women's career and leadership development opportunities (Aisoli-Orake et al., 2022; Coetzee & Moosa, 2020; Maheshwari et al., 2023). Literature also reveals that women in the East are less eligible for promotion and lack early leadership engagement due to the challenges of balancing family and professional life (Chisholm-Burns et al., 2017; Maheshwari & Nayak, 2022). Likewise, Eastern women are more likely to comply with policies that do not sacrifice their values. Many women take maternity leave or request shorter work days to care for their children. This, too, can hinder their chances of being considered for promotion and even obstruct the maturation of their ambition and aspirations (Bruckmüller et al., 2014; Yousaf & Schmiede, 2017). Women are often viewed through the cultural lens of the countries they belong to (Waheeda & Nishan, 2018). The cultural expectations of women are generally childbearing and taking family responsibilities (Aisoli-Orake et al., 2022; Coetzee & Moosa, 2020). Research has shown that in some traditional societies, women are expected to take on more family responsibilities than men (American Association of University Women (AAUW), 2023). In these societies, gender stereotypes originate from the division of labour, in which greater strength has enabled men to engage in more power-related activities, while women were tasked with nurturing duties because of their ability to breastfeed (Balducci, 2023; Boulay, 2022). However, balancing family responsibilities and work is one of the most challenging obstacles for women aspiring to become leaders (Galsanjigmed & Sekiguchi, 2023). Due to all this - gender stereotype mindset from colleagues and also dual responsibilities at work and home - women often lack the self-confidence to take up leadership roles as they are hesitant about whether they would be able to establish the same authority as compared to their male counterparts (Maheshwari & Nayak, 2022).

Traditional beliefs and cultural attitudes regarding the role and status of women in society are still prevalent, and top leadership in any institution is viewed as a masculine domain. These findings are supported by (Diehl, 2014; Yousaf & Schmiede, 2017), including the unfortunate assertion that females cannot do what males do as leaders. Two essential points of gender bias are reported to lead to lower representation of women in the upper echelon of academia. Firstly, women do not have the skills, interests, or time to do serious scholarly work, as reflected in subordinates' perceptions of women leaders (Maheshwari & Nayak, 2022). Secondly, men intentionally discriminate because they do not want to share power (Yousaf & Schmiede, 2017).

Moreover, the discourse of academic meritocracy may also be masculine and thus, reproduces masculine practices, as a work ethic grounded in long hours of conducting research, teaching, or writing papers is the norm in the 'male' university (Brink et al., 2013; Cohen et al., 2020). The practices of the gatekeeping role in this male organisational culture have been traditionally defined as individuals (e.g. supervisors) or groups (e.g. professional associations or boards) who restrict (or enable) entry into highly prestigious occupations through their direct involvement in recruitment or the setting of occupational standards and norms (Barzilai-Nahon, 2009). Another aspect is raised: women often leave their jobs for non-economic reasons and opt out of senior academic positions or move to other tertiary institutions for satisfaction reasons (Ramohai, 2019). Satisfaction was mainly related to disgruntlement about institutional climate, practices, and support (Coetzee & Moosa, 2020; Ramohai, 2019). The three most common challenges faced by women included gender discrimination (25%), work-life balance (30%) and a lack of support from the organisation (24%) (Kirai & Mukulu, 2012). Other challenges included a lack of support from family (Boulay, 2022; Kalaitzi et al., 2017), a lack of self-confidence (Aisoli-Orake et al., 2022; Hoyt & Blascovich, 2007) and inefficient systems in the workplace. Women leaders often experience thoughts and feelings of exclusion (Mayer & May, 2018), marginalisation, voicelessness, sexual harassment (Coetzee & Moosa, 2020), lack of trust and acknowledgement (Boulay, 2022), as well as a lack of

Table 1. Summary of barriers to women in HE leadership.

No	Barrier	References
B1	Gender bias	(Coetzee & Moosa, 2020; Yousaf & Schmiede, 2017)
B2	Work/ life balance	(Galsanjimed & Sekiguchi, 2023; Maheshwari & Nayak, 2022; Yousaf & Schmiede, 2017)
B3	Subordinates' perception of women leaders	(Maheshwari & Nayak, 2022)
B4	Social networking obstacles	(Blommaert et al., 2020; McDonald, 2011)
B5	Personal Characteristics	(Halpern, 2000; Halpern et al., 2007; Maheshwari & Nayak, 2022; Rostiyanti et al., 2020; Yousaf & Schmiede, 2017)
B6	Imposter syndrome	(Boulay, 2022; Clance & Imes, 1978; Clance & O'Toole, 2014)
B7	Lack of organisational support	(Coetzee & Moosa, 2020; Kirai & Mukulu, 2012)
B8	Lack of family support	(Boulay, 2022; Kalaitzi et al., 2017; Ramohai, 2019)
B9	the heavy teaching and administration loads	(Aisoli-Orake et al., 2022; Tessens et al., 2011)
B10	lack of self-confidence	(Aisoli-Orake et al., 2022)
B11	Family responsibility	(Aisoli-Orake et al., 2022; Coetzee & Moosa, 2020)
B12	Lack of opportunities	(Aisoli-Orake et al., 2022; Coetzee & Moosa, 2020; Maheshwari et al., 2023)
B13	Women's voicelessness	(Diehl & Dzubinski, 2016; Kirai & Mukulu, 2012)
B14	Gender stereotypes	(Balducci, 2023; Boulay, 2022; Diehl & Dzubinski, 2016)
B15	Less evaluation of their performance	(Diehl & Dzubinski, 2016; Maheshwari et al., 2023)
B16	Glass cliff	(Boulay, 2022; Diehl & Dzubinski, 2016; Javadi et al., 2016)
B17	Lack of mentoring	(Diehl & Dzubinski, 2016)
B18	Lack of sponsorship	(Diehl & Dzubinski, 2016)
B19	Male gatekeeping	(Diehl & Dzubinski, 2016)
B20	Male organisational culture (male-dominated leaders in universities)	(Brink et al., 2013; Cohen et al., 2020; Diehl, 2014; Yousaf & Schmiede, 2017)
B21	Queen bee effect	(Boulay, 2022, April & Sikatali, 2019; Sharif et al., 2024a,b)
B22	Salary inequality	(Diehl & Dzubinski, 2016; Wynen et al., 2018; Zhong et al., 2018)
B23	Poor institutional policies to support women (legislation)	(Boulay, 2022; Diehl & Dzubinski, 2016)
B24	Workplace harassment	(Coetzee & Moosa, 2020)
B25	Glass ceiling	(Boulay, 2022, Jauhar & Lau, 2018; Sharif et al., 2024a,b)
B26	Lack of career progression	(April & Sikatali, 2019; Padavic et al., 2020)
B27	Lack of trust, recognition and acknowledgement (unequal expectations)	(Boulay, 2022; Lekchiri et al., 2019; Mayer & May, 2018)
B28	Significant risk challenging to prove themselves self	(Glass & Cook, 2016; Maheshwari & Nayak, 2022)
B29	Lack of ambition and aspiration	(Bruckmüller et al., 2014)
B30	Lack of early leadership engagement	(Chisholm-Burns et al., 2017)

authority (Diehl & Dzubinski, 2016; Kirai & Mukulu, 2012). The barriers affecting women HE leaders are summarised in Table 1.

3. Higher education in Jordan

The most recent statistics published from Jordan's Ministry of Higher Education and Scientific Research (MOHE, 2020) show that in 2019-20, the number of female enrollments significantly increased year on year, with a 184.5% increase for UG and a 695.5% increase for PG students over 20 years (Table 2). Despite this, the gender distribution among teaching staff in Jordanian universities has been highly imbalanced (Table 3). In the academic year 2000-01, women comprised only 13.7% of the teaching staff, but this proportion increased to 26.6% in 2014-15, then returned to 20.1% in the academic year 2019-20. Although this improvement is notable, it remains significantly lower than the female student enrollment percentage.

There has been a significant increase in the proportion of women in HE academic positions, such as full Professorship, which rose from 1.9% in 2000/01 to 14.3% in 2019/20, a 652.6% increase over the 20 years. Similarly, the proportions of women in Associate and Assistant Professorship have also improved, with 20.0% of Associate Professors and 28.3% of Assistant Professors being women in 2019/20. However, the highest proportion of women was observed in the lower teaching levels, including instructors, lecturers, and teaching and research assistants, where women constituted over 50% of the total teaching staff at these levels in 2019/20. Thus, women are often building their academic careers later than their male colleagues, and are less likely to have a traditional trajectory, starting as a Lecturer and then progressing through the ranks to Assistant Professor, Associate Professor and Full Professor; in particular, doctoral degrees are often cited as difficult to commit to as they usually require travelling

Table 2. HE enrollment by gender and level of education in Jordan (MOHE, 2020; MOHE, 2016).

Academic Year	Undergraduate (UG) Students			Postgraduate (PG; inc. Diploma, Master, PhD) Students		
	Total	Female	% Female	Total	Female	% Female
2000-01	118,657	58,385	49.2%	7,555	2,536	33.6%
2004-05	178,619	89,459	50.1%	13,937	4,818	34.6%
2009-10	224,509	115,106	51.3%	19,695	9,017	45.8%
2014-15	267,489	138,620	51.8%	22,842	11,251	49.3%
2019-20	295,288	166,087	64.1%	36,240	20,173	55.7%

Table 3. Proportion of women HE academic staff by role in Jordan (MOHE, 2020; MOHE, 2016).

Academic Year	Academic Staff Total			Breakdown of Female Academic Staff by Role					
	Total	Female	% Female	Full Professor %	Associate Professor %	Assistant Professor %	Instructor %	Lecturer %	T&R Assistant %
2000-01	4,656	637	13.7%	1.9%	7.4%	9.1%	34.5%	21.7%	38.1%
2004-05	5,942	998	16.8%	4.1%	8.0%	12.5%	34.5%	27.8%	46.5%
2009-10	8,038	1,740	21.6%	5.7%	8.2%	17.8%	45.6%	46.9%	53.3%
2014-15	10,675	2,836	26.6%	7.3%	14.7%	23.9%	54.6%	59.4%	53.9%
2019-20	8,887	1,784	20.1%	14.3%	20.0%	28.3%	56.6%	55.9%	80.6%

Table 4. HE student and staff pipeline proportions by gender.

Country and year	Gender	UG students		PG students		All academic staff		HE Leadership (President)		References
		%	%	%	%	%	%			
UK, 2019-20	Male	43.9%	50.5%	53.3%	72.1%	82.9%	(AdvanceHE, 2021)			
	Female	56.1%	49.5%	46.7%	27.9%	17.1%				
EU, 2020	Male							85%		
	Female							15%		
Worldwide, 2023	Male							76%		
	Female							24%		
Jordan, 2019-20	Male	35.9%	44.3%	79.9%	85.7%	100%	(MOHE, 2020)			
	Female	64.1%	55.7%	20.1%	14.3%	0%				

abroad for study, and this demands strong family support even if the availability of funds or obtaining a grant/scholarship is awarded.

Leadership is crucial in achieving the goals of a university, and it is essential to note that leadership positions are not limited to men in Jordan. According to the Universities Act Jordanian Law number 20 for 2009 (Universities Act, 2009), which governs Universities, there is no differentiation between men and women in any public office, including leadership positions. Article 2 states that the University President can be of any gender if they are a Jordanian national and have held a Professorial post. Despite the absence of gender-specific requirements, there is a visible pattern of male dominance in senior leadership positions in Jordanian universities. In the academic year 2016-17, none of the Jordanian universities had a female President (MOHE, 2016).

Similarly, there were no female appointments in public universities at the Vice President and Dean levels, where appointments are based on the President's recommendation. Only five women held the position of Vice President in private universities, compared to 39 men. This underrepresentation of women in senior management positions can be attributed to significantly fewer women being employed in academic or administrative positions than men.

Table 4 summarises the latest statistics published in the literature, showing a leaky pipeline. It is essential to acknowledge that there are qualified women for these positions, but they often face challenges in selection. With a more significant presence of women in academic and administrative roles, the number of women in senior management will likely increase. Further, with the absence of more recent data and an in-depth review of the barriers for women, the basis of this research is paramount.

4. Research method

In this study, a mixed-method approach combining qualitative and quantitative research techniques was utilised to identify and validate the critical barriers obstructing women from gaining leadership positions

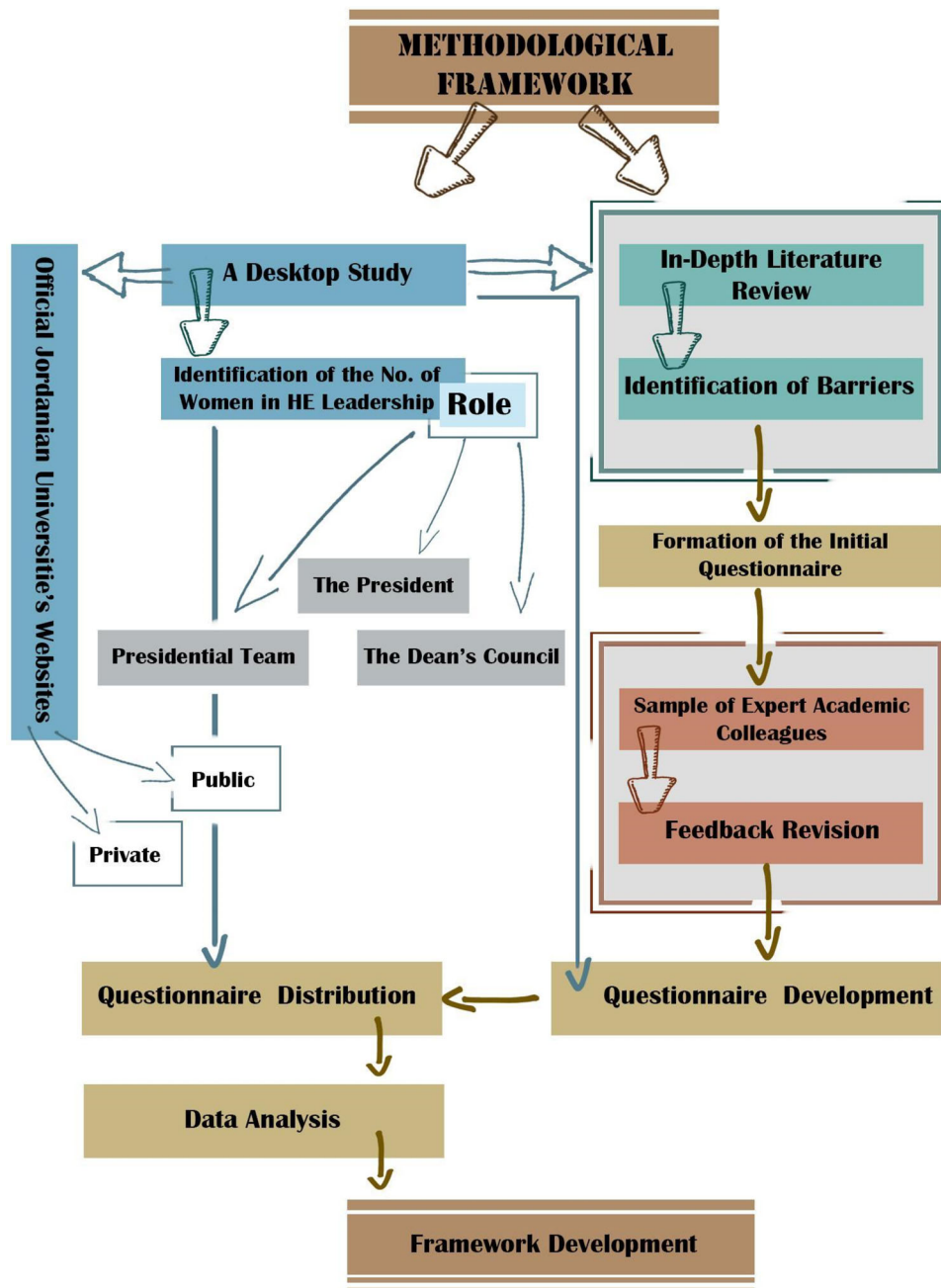


Figure 1. Methodological framework adopted in this study.
Long description for Methodology framework figure [80 words].

in Jordanian universities. This included a desktop study, in-depth literature review, and questionnaire survey. Figure 1 illustrates the methods adopted in this study.

The figure describes a sequential process with boxes representing stages, connected by arrows. A methodological framework links with a desktop study and literature review. The desktop study involves accessing Jordanian university websites, conducting a literature review, and identifying women in HE leadership. The right side sequentially started with a literature review, barrier identification, questionnaire creation, expert sampling, feedback, and questionnaire development. Identifying women in leadership roles and questionnaire development helped in Questionnaire distribution followed by data analysis and framework development.

Firstly, in the absence of statistical data, A qualitative technique represented by the ground theory was used. The selection of grounded theory because its effectiveness contributes in the areas in which little research has been done (Lawrence & Tar, 2013). The grounded theory considers a structured and

subjectivist qualitative method where interpretations are positioned in the centre of the process of extracting data about social reality (Corbin & Strauss, 2014). The grounded theory is an inductive methodology that provides systematic guidelines for collecting, synthesising, analysing, and conceptualising qualitative data for the purpose of the theory construction. In the ground theory more documents are reviewed during the first stage of this research without any presumptions and theories. The document from the official website of the Jordanian universities is used for identify the number of women in the leadership positions. Three level of analysis: (a) present data without interpretation, (b) create a rich and believable descriptive narrative using field notes, and (c) build a theory using a high level of interpretation and abstraction (Corbin & Strauss, 2014). This research combines the first and second level of analysis which allows the readers to make sufficient contextual judgement through identify the current representation of women in leadership positions in the Jordanian universities. Based on that, a desktop study was conducted in April 2023. This involved thoroughly searching all official public and private university websites in Jordan to ascertain the number of women in leadership roles. A total of 30 universities were reviewed, to ascertain the gender of the President (equivalent to Vice-Chancellor, Principal, and Provost role), the Presidential team (equivalent to Pro-Vice Chancellor, Deputy Principals type roles), and the Dean's Council (including Dean acting Dean type roles).

Secondly, an in-depth literature review was conducted to identify all the potential barriers facing women in HE leadership. This produced a list of 30 barriers (Table 1) which were employed as the basis of a survey questionnaire for review in the Jordanian context. The questionnaire aimed to collate the academic perspective of the significant barriers obstructing women from leadership roles in Jordanian Universities. In order to gain an academic perspective of each barrier, a six-point Likert scale was used to gain respondent's perspective, whereby 0 represented 'Not Found' and 5 represented 'Strongly Agree.' The questionnaire was drafted in English and Arabic for ease of understanding. It was initially piloted by 6 expert academic colleagues (3 female and 3 male) in Jordan, who were asked to provide feedback, including identifying complex or ambiguous questions, and guidance on terminology or translation concerns. These 6 experts were explicitly chosen for their vast experience preparing research questionnaires. All recommendations following the pilot were made.

The questionnaire was prepared for online distribution using a web link and was circulated to the email addresses of academics published on university websites that were collated from the aforementioned desktop study in all 30 Jordanian universities from May 2023 to August 2023. In total, the questionnaire was sent directly to 390 academics. Each respondent was also asked to forward the survey to their colleagues for completion. After three months of data collection, 127 usable responses were received, equating to a 30.8% response rate.

Whilst descriptive statistics was initially used to analyse the agreement of each barrier, the Severity Index (SI) formula was used to ascertain the severity of a situation or condition based on the responses (Shash, 1993) SI is commonly used to analyse issues related to health, such as addiction and accidents, and is an ideal formula to rank and define critical barriers, which in turn can be used to drive action plans to improve career progression for female academics. The Severity Index (SI) formula used was as follows:

$$\text{Severity Index (SI)} = \left(\sum_{i=0}^5 Wi * fi \right) * \frac{100\%}{N}$$

$Wi = i/N$

Where

SI = Severity Index - This is computed as a summation of the importance rating

i = the rating from 0 to 5

wi = the weight of each rating

fi = the frequency of responses for a particular rating point

N = the total number of respondents rating a particular factor in the survey.

Subsequently, factor analysis was administered after SI analysis: the factor analysis test is a statistical technique that aims to create a theory of a relatively large set of latent variables (Adeyemi & Aigbavboa, 2022). It was conducted by using SPSS software 26.0 to group the barriers. During the process, some barriers were eliminated, while others were grouped to detect the structures in the relationship of the

latent group factors of the barriers that prevent women from having leadership positions in Jordanian Universities.

5. Results

The organogram and/or operational structure of investigated HE Jordanian institutions including 10 public universities, 17 private universities, 2 private universities following their private law, and 1 regional/international university, were scrutinised in April 2023 as part of a desktop study to identify the number of women in leadership roles. Table 5 illustrates the results. During the data generation period (May and August 2023), there were only two women university presidents (equivalent to Vice-Chancellor, Principal, and Provost roles) across the 30 HE institutions in Jordan, equating to 6.7%.

In an attempt to understand succession planning in Jordan and the gender pipeline, the desktop study also reviewed the number of women presiding within the Presidency, who sit at the second tier of university management: that is, at the level immediately below the President (equivalent to Deputy Vice-Chancellors, Pro-Vice Chancellor, Deputy Principals type roles); and at the Dean's council level roles which includes all Deans with faculty or campus line management responsibilities, as well as Deans with policy oversight for a specific portfolio, such as research or teaching and learning. Table 5 shows more promising statistics, whereby 8 women held roles within the Presidency, totalling 8.8%, a slight improvement on the 6.7% female President statistic, and 52 women held roles within the Dean's Council, equating to 13.9%, which again indicates an improvement in the pipeline.

According to the survey questionnaire, a total of 127 academic staff completed the survey (Table 6); the researchers recognise that whilst 67.7% of the respondents were female, it was just as essential to gain a male perspective on the barriers too - particularly as any actions for improvement would be limited in successful implementation if male academics were excluded. Notably, 53.5% of respondents worked at a private university, reflecting a massive expansion of the number of private HE institutions in Jordan. 25.2% of respondents were currently serving in leadership roles, of which 14.2% were women.

Table 6 highlights a significant disparity in gender within the same time experience in terms of leadership. Overall, 53.3% of women had not experienced any leadership role, compared to 21.3% of their male peers, indicating a gap of 32%. This gap reduces to up to 5 years of experience, with 5.5% of women compared to 7.1% of their male peers, thus a gap of 1.6%; this same 1.6% continues for those with 6 to 10 years of experience.

Each participant was asked to show their agreement to the 30 identified barriers from the in-depth literature review using the Likert scale. Whilst descriptive statistics was initially used to analyse the agreement of each barrier, the Severity Index (SI) formula was used to ascertain the severity of a situation or condition based on the responses.

The SI for each barrier was calculated and later ranked in order of severity - for this study, an SI score of over 50 was deemed a critical barrier. Accordingly, 24 of the 30 barriers were deemed critical (as reflected in Table 7) overall. The SI score was also calculated separately for both female and male respondents and again later ranked. Table 7 shows that there were also 24 out of the 30 barriers that

Table 5. Number and proportions of women leaders at Jordanian Universities as published in April 2023.

University type	No. of women Presidents	No. of women in the Presidency (inc. President)	Total no. of members of the Presidency	No. of women in the Deans' Council	Total no. of the Deans' Council	% of women Presidents	% women in Presidency	% women in the Dean's council
Public Universities	0	2	42	25	172	0%	4.8%	14.5%
Private Universities	2	6	42	23	180	11.8%	14.3%	12.8%
Universities with private laws	0	0	4	3	17	0.0%	0.0%	17.6%
Regional and International Universities	0	0	3	1	5	0.0%	0.0%	20.0%
Total all Jordanian Universities	2	8	91	52	374	6.7%	8.8%	13.9%

Table 6. Number and per cent of the profile of survey questionnaire respondents.

Participants' Background	Number and Percent Responses by Gender		Total Number and Percent
	Female	Male	
Overall	86 (67.7%)	41 (32.3%)	127 (100%)
<i>Sector</i>			
Government	4 (3.1%)	2 (1.6%)	6 (4.7%)
Public University	38 (29.9%)	15 (11.8%)	53 (41.7%)
Private University	44 (34.6%)	24 (18.9%)	68 (53.5%)
<i>Currently in leadership Position</i>			
Yes	18 (14.2%)	14 (11.0%)	32 (25.2%)
No	68 (53.5%)	27 (21.3%)	95 (74.8%)
<i>Experience in academia</i>			
0-5 years	20 (15.7%)	9 (7.1%)	29 (22.8%)
6-10 years	19 (15.0%)	18 (14.2%)	37 (29.1%)
11-15 years	27 (21.3%)	7 (5.5%)	34 (26.8%)
16-20 years	7 (5.5%)	5 (3.9%)	12 (9.4%)
>20 years	13 (10.2%)	2 (1.6%)	15 (11.8%)
<i>Leadership experience in academia</i>			
Not yet been in leadership	68 (53.3%)	27 (21.3%)	95 (74.8%)
0-5 years	7 (5.5%)	9 (7.1%)	16 (12.6%)
6-10 years	9 (7.1%)	3 (2.4%)	12 (9.4%)
11-15 years	1 (0.8%)	2 (1.6%)	3 (2.4%)
16-20 years	0 (0.0%)	0 (0.0%)	0 (0.0%)
>20 years	1 (0.8%)	0 (0.0%)	1 (0.8%)

Table 7. Severity Index (SI) score and rank for each barrier.

Barriers	Description	Total response		Female response		Male response		Median	Mode	Std. Deviation
		SI	Rank	SI	Rank	SI	Rank			
B2	Work/ life balance	76.2	1	69.3	9	83.9	2	4.00	4	1.204
B9	The heavy teaching and administration loads	75.6	2	69.8	8	71.2	3	4.00	4	1.234
B11	Family responsibility	74.5	3	62.8	18	87.3	1	4.00	4	1.290
B3	Subordinates' perception of women leaders	74.3	4	74.4	2	53.7	6	3.00	3	1.235
B12	Lack of opportunities	72.8	5	68.4	11	67.8	4	4.00	4	1.150
B4	Social networking obstacles	67.4	6	70.7	5	50.2	8	3.00	4	1.211
B1	Gender bias and Discrimination	65.8	7	72.6	3	40.5	11	3.00	4	1.415
B25	Glass ceiling	65.2	8	68.4	12	40.5	12	3.00	4	1.154
B20	Male-dominated leaders in universities	63.9	9	75.3	1	33.2	19	3.00	4	1.491
B19	Male gatekeeping	62.4	10	67.9	13	36.6	13	3.00	4	1.449
B28	Take up significant risk challenging to prove themselves self	62.4	11	62.3	19	46.3	9	3.00	4	1.166
B30	Lack of early leadership engagement	61.1	12	67.0	14	41.0	10	3.00	2	1.261
B7	Lack of organisational support	60.2	13	70.2	7	32.2	21	3.00	4	1.424
B27	Lack of trust, recognition and acknowledgement	59.7	14	69.3	10	34.6	16	3.00	2	1.493
B23	Poor institutional policies to support women	59.4	15	72.1	4	24.9	28	3.00	1	1.640
B17	Lack of mentoring	59.2	16	66.5	15	35.6	14	3.00	4	1.409
B18	Lack of sponsorship	57.3	17	65.6	16	34.1	17	3.00	4	1.421
B13	Women's voicelessness	57.2	18	65.1	17	28.8	25	3.00	2	1.453
B15	Less evaluation of their performance	56.4	19	70.7	6	23.4	29	2.00	1	1.760
B16	Glass cliff	55.1	20	61.4	20	29.3	24	3.00	1	1.378
B6	Imposter syndrome	54.2	21	42.8	27	54.1	5	2.00	3	1.083
B26	Lack of career progression	54.2	22	61.4	21	28.3	26	2.00	2	1.271
B5	Personal characteristics such as mentality and communication skills	51.7	23	41.4	28	51.7	7	2.00	3	1.080
B24	Workplace harassment	50.6	24	57.7	22	27.8	27	2.00	2	1.299
B21	Queen bee effect	49.8	25	55.3	23	34.1	18	2.00	1	1.434
B14	Stereotypes	47.4	26	47.9	25	35.1	15	2.00	2	1.277
B8	Lack of family support	45.7	27	46.0	26	31.2	22	2.00	1	1.180
B22	Salary inequality	43.8	28	54.9	24	9.8	30	2.00	0	1.709
B29	Lack of ambition and aspiration	34.6	29	31.6	29	33.2	20	1.00	1	1.387
B10	Lack of self-confidence	31.8	30	30.2	30	30.2	23	1.00	1	1.022
Total number of SI > 50		24		24		8				

female academics rated as critical, and only 8 of the 30 barriers were deemed critical by male academics.

The result shows that work-life balance (B2) was rated the foremost critical barrier overall (SI = 76.2), which was strongly supported by male respondents as 2nd critical barrier. Nevertheless, females rated it

as 9th critical. The female voice in literature generally dominates this barrier. The fact that male respondents also identified work-life balance as a critical barrier indicates a growing recognition of this issue across genders, although it's crucial to note that women may experience these challenges more acutely due to societal expectations and gendered divisions of labor (Sharif et al., 2024a). Likewise, it is pleasant to observe that men in Jordan have been more involved in family obligations than in the past despite this being a barrier for them now. Women have expressed concern regarding the lack of organisational support and policies for their parental role (Liff & Ward, 2001). They also confirmed women's fear of losing opportunities for promotion to leadership positions when they request arrangements that accommodate their work and family commitments.

The results showed that overall responders agreed that the barrier of heavy teaching and administrative loads (B9) is considered a critical barrier, as it ranked as second critical barriers. Women often find themselves disproportionately burdened with extensive teaching responsibilities and administrative duties, leaving little time and energy for career development and the pursuit of leadership roles. This imbalance in workload can result in limited opportunities for women to engage in research, publish scholarly work, or participate in professional development activities necessary for leadership advancement that undermine their visibility and credibility in the academic hierarchy.

In contrast, male leaders criticise women who attempt to balance family and work life. Many men believe women cannot manage the balance, and it is not appropriate for them to even attempt it (Shakeshaft, 1989). The sources of stress for women seeking to take over management positions in the field of education are related to the fact that women faced high levels of stress upon assuming this position due to cultural and social expectations associated with women's roles and their feminine characteristics identified by cultural and social norms (Carli & Eagly, 2012; Jones & Palmer, 2017). The male emphasis on the criticality of this barrier is supported by B11 and family responsibility, which they rated as the highest critical barrier.

For the female respondents, the most significant barrier was B20 of male domination of leaders in HE. Like their counterpart, female academics noted that it was difficult to change the gender balance as it is still so male-dominated, and there was a lack of women role models and/or lack of leaders who stood as agents of change for gender equality. B20 is linked to B12, which is the need for opportunities. The historical process of presidential appointments denotes academic career growth and leadership roles in Jordan, which are not always intrinsically linked to performance or transparent opportunity and recruitment practices.

Male respondents perceived family responsibilities (B11) as the most significant impediment for women to gain leadership roles; however, female respondents rated this significantly lower (rank 18). The barrier of B9 of heavy teaching and administration roles was rated high by all participants; it was ranked 2nd overall, 3rd by male respondents, and 8th by female respondents. It is acknowledged that this is likely to be HE sector-related instead of gender impacted, as both males and females experienced increased workload.

Subordinates' perception of women leaders (B3) is noted as particularly concerning, where ranking was 4th by all respondents in general and ranked 2nd by the female respondents. There is a low expectation for women leaders to succeed in their roles, which has perhaps led to unsupportive colleagues and has perpetuated the need for more women leaders. Social networking obstacles (B4) were also seen as a critical barrier, ranked 6th overall. Academics in Jordan often described situations where they were prohibited and/or unable to meet with senior leadership staff and demonstrate their capabilities. Equally, there needed to be more opportunities within Jordan to engage with other Universities to collaborate and network to seek career opportunities.

In addition, there were 4 noticeable differences in the agreement of critical barriers for the female respondents. The first is that (B6) imposter syndrome, surprisingly, was not considered critical by the female academic respondents as a barrier. Imposter syndrome is a common barrier cited in the literature, often used to describe a feeling of inadequacy that persists despite evidence of success. The barrier of personal characteristics (B5), such as mentality and communication skills, was also not considered critical for the female academic respondents. This is confirmed by the study that women can benefit organisations through their actions and strengths, such as high emotional intelligence, empathy, democratic

Table 8. Grouped barriers using the factor analysis test.

Group	Barrier	Description	Factor Analysis Test Weighting in a ranked group order	
Organisation/ institution	B23	Poor institutional policies to support women	0.911	
	B27	Lack of trust, recognition and acknowledgement	0.891	
	B7	Lack of organisational support	0.876	
	B15	Less evaluation of their performance	0.851	
	B18	Lack of sponsorship	0.847	
	B16	Glass cliff	0.844	
	B25	Glass ceiling	0.804	
	B26	Lack of career progression	0.802	
	B17	Lack of mentoring	0.802	
	B3	Subordinates' perception of women leaders	0.800	
	B1	Gender bias and discrimination	0.782	
	B30	Lack of early leadership engagement	0.772	
	B24	Workplace harassment	0.741	
	B20	Male-dominated leaders in universities	0.739	
	B13	Women's voicelessness	0.686	
	B28	Take up significant risk challenging to prove themselves self	0.683	
	Personal	B6	Imposter syndrome	0.844
		B11	Family responsibility	0.636
Social	B19	Male gatekeeping	0.713	
	B4	Social networking obstacles	0.692	
Work/ Life	B2	Work/ life balance	0.907	
	B9	The heavy teaching and administration loads	0.840	
Skills	B5	Personal characteristics such as mentality and communication skills	0.744	
Opportunities	B12	Lack of opportunities	0.681	

leadership style, sincerity and ability to make decisions under critical circumstances (Kulkarni & Mishra, 2022). Further, this barrier reinforces the lack of criticality of barrier B6.

In masculine and extremely competitive organisational contexts, women who succeed in their careers often exhibit behaviours that hinder, rather than help, other women develop professionally, which are called queen bees (Gomes et al., 2022). The queen bee effect (B21) was not rated critical by all respondents, but it was for the female academic respondents. Women in leadership positions may resist forming relationships with those at lower levels as a response to threats to their gender identity; they perceive such relationships as risking their carefully maintained image, as failures are often attributed more negatively to their gender, regardless of their position in the hierarchy (Duguid, 2011). Thus, this phenomenon extends to Jordan HE institutions.

Salary inequality (B22) was not deemed critical overall, but as predicted, female academics found this to be an issue. This barrier describes the gender difference between salaries for the same job role. B22 has a distinct link to B25, the glass ceiling, which refers to a metaphorical invisible barrier that prevents specific individuals from being promoted to managerial - and executive-level positions within an organisation or industry.

Following the severity index results, whereby an SI score of more than 50% was deemed critical, 24 critical barriers were identified, and the barriers were grouped into six main groups using a factor analysis test. The factor analysis test is a statistical technique that aims to create a theory of a relatively large set of latent variables (Adeyemi & Aigbavboa, 2022) to detect the structures in the relationship of the latent group factors of the barriers that prevent women from having a leadership position in Jordanian Universities. It establishes the underlying dimension between measured and latent factors, measures the effects of the latent variables reflected in the observed variables, and can be considered a data reduction method (Field, 2013). The factor analysis test was conducted using SPSS 26.0 software to group the barriers. The dimension reduction technique was run 19 times using absolute values of 0.50 and varimax rotation. During the process, some barriers were eliminated while others were grouped. This final grouped barriers into six main groups, as well as the elimination of 6 barriers, is shown in Table 8.

The results in Table 8 show that the vast majority of barriers impacting women leadership deemed critical following the survey questionnaire found that 18 out of 24, or 75%, of the barriers related to the organisation - in this case, the University(ies) - which was rated much higher than personal, social, work/

life, skills and opportunity barriers. The lack of institutional policies to support women (B23) tied with the lack of organisational support (B7); the lack of trust, recognition and acknowledgement (B27) of the work that women across the university do - linked closely to inappropriate performance measurement of academic staff (B15); the notion of a 'glass cliff' (B16) was also perceived to be very apparent, referring to the likelihood that women more than men would achieve a leadership role during the period of a crisis or downturn, when the risk of failure is at its highest, which would also inevitably impact negatively on female colleagues on gaining a leadership role in the future.

7. Discussion

The literature shows that inequality and the lack of inclusion of women in academic HE leadership roles continues to persist globally. For decades, women have been at the receiving end of discriminatory practices, often marginalised and underrepresented in leadership positions (Davis & Maldonado, 2017). This research has provided a timely review of the lack of women in leadership positions amongst HE institutions in Jordan. This is confirmed by the desktop study which revealed that there are only 2 female Presidents (equivalent to Vice-Chancellor, Principal, and Provost roles) in Jordan in 2023, equating to 6.7%. Thus, there is an alarming gap compared to the top 200 World Times Higher (2023) universities, which stands at 24% (Times Higher Education, 2023).

Regarding the barriers facing women in leadership in Jordanian Universities, the study expresses that 24 barriers were deemed critical using the Severity Index formula in the review of an attitudinal survey questionnaire administered to 127 Jordanian academics. It became apparent from the results that there were different perceptions of the barriers women faced by their male colleagues. Notably, males perceived that family responsibilities (B11) were the most significant impediment to women gaining leadership roles. However, this was rated significantly lower (rank 18) by the female respondents because they see themselves as capable of making an exceptional effort to overcome obstacles and doing several things simultaneously if there is support from their family and a good evaluation of their effort from the institution. In addition, males identified only 8 out of the 30 barriers as critical, compared to 24 rated by females.

The study reveals that preserving a good work/life balance (B2) was rated as the foremost critical barrier that prevents women from acquiring leading roles. In Arabic countries, particularly in Jordan, women tend to have significant family duties, including childcare and participatory duties with the extended family community. Socially, Jordanian women face cultural norms that prioritize familial duties and often expect them to prioritize caregiving responsibilities over career advancement (Ait Ali Slimane et al., 2020; Kaasolu et al., 2019). Holding this balance can result in various health-related problems and can be particularly stressful, impacting on performance in the workplace. It was found that women who received support from their families could advance their careers but needed to continually build up their personal leadership skills to maintain a work/life balance (Bhattacharya et al., 2018). This is confirmed by women's response to B8, lack of family support, in this questionnaire study. Thus, men in Jordan have been heavily involved in family obligations, which has enabled Jordanian women to receive the necessary support from their families, and so this has become a non-critical barrier.

Later, a factor analysis test was undertaken to detect the structures in the relationship of the latent group factors of the barriers that prevent women from having leadership positions in Jordanian Universities. The results found that organisational barriers - related to the University structure, policies and culture - largely dominated the masculine culture. Several social and cultural barriers are found in Middle Eastern countries that do not adequately support women in the workplace (Tlaiss, 2014). Thus, if institutions are to consider policy changes and formal mentoring programmes, women can be expected to grow and thrive as leaders (Soklaridis & López, 2014).

Based on the study results, Jordan HE institutions should believe in women's leadership qualities and contributions and show genuine interest in their leadership development. The barriers to women's leadership development in Jordan span various dimensions, from recruitment and promotion to the culture and structure of academic institutions. Thus, achieving gender equality in higher education involves

addressing various aspects of gender disparity and ensuring equal opportunities and treatment for all individuals, regardless of their gender:

- **Enrolment and access:** Gender equality in HE begins with ensuring that both men and women have equal access to educational opportunities - commencing with the necessary skills required for success in schools to transition to HE and onwards into the workplace. In many countries, there has been progress in reducing gender gaps in enrolment, with more women pursuing higher education. However, challenges persist in some regions, particularly in low-income countries, where disparities in access remain. Regarding HE institutions, despite making up more than half of higher education students in Jordan, women are still under-represented as researchers and leaders. Universities have previously focused on providing women access and support rather than measuring their progress and success. Therefore, universities need to ensure that they also track success rates and outcomes by gender, and it is critical to periodically review these data to make evidence-based decisions to improve women's outcomes.
- **Field of study:** Gender stereotypes and societal expectations can influence the fields of study that men and women choose in HE. Efforts must be made to encourage women to pursue traditionally male-dominated fields (such as STEM) and promote gender balance in all academic disciplines. Through promoting gender-inclusive recruitment and admissions practices within academic institutions and championing initiatives to provide mentorship and support networks for women in non-traditional fields of study (Bear et al., 2020; Rosa & Clavero, 2022), as well as collaborating with industry partners and employers to create opportunities for women in traditionally male-dominated fields (USAID, 2023). All these empower women to pursue their academic and career goals without limitations imposed by gender stereotypes.
- **Representation in leadership:** Gender equality in leadership positions within HE institutions is crucial to overall gender equality. While women have progressed in attaining leadership roles, there still needs to be a significant underrepresentation of women in top positions, including university Presidents/Vice Chancellors. Offering dedicated funding, training, mentoring, and networking opportunities can increase women's confidence and capacity to support career advancement and reach leadership positions.
- **Discrimination:** Addressing issues of gender-based discrimination and other forms of gender-based violence within academic settings is vital for ensuring a safe and inclusive environment for all students and staff. One approach involves creating a zero-tolerance approach to discrimination and violence that sends a strong message that such behavior will not be tolerated within their academic institutions (McMullin-Messier, 2021). Additionally, Must be organized workshops, training sessions, and awareness campaigns to educate students, faculty, and staff that creating support networks and safe spaces where individuals can seek advice, guidance, and support if they experience discrimination or violence (Pandea et al., 2020).
- **Work-life balance:** Many women in academia face challenges related to work-life balance, which can impact their career progression. The prominence of work-life balance as a critical barrier in this study suggests that traditional academic structures and expectations may be outdated and ill-suited to accommodate the diverse needs of today's workforce (Martinez, 2018; Sullivan & Mainiero, 2008). Research shows that institutional policies can significantly influence employee well-being and productivity; policies that support family-friendly work arrangements, such as parental leave, flexible working options, the use of technology as a facilitator, and a cultural shift towards valuing work-life balance are essential to promote gender equality. Additionally, One key approach involves advocating for their own needs and priorities within academic institutions. By openly discussing the challenges they encounter and articulating the importance of work-life balance and family-friendly policies, women leaders can raise awareness and drive change within their organizations (Barbar et al., 2023; Sheppard, 2016).
- **Mentoring and support:** Providing mentorship and support for women in academia can help them overcome barriers and advance in their careers. Although the number of highly qualified female academics in Jordan is slowly increasing, it still needs to be more significant than their male counterparts. This divide demands HEs to support female academics as they seek to improve their

qualifications, confidence level, professionalism, and intellectual ability, all related to leadership development. One strategy involves establishing structured mentorship initiatives that pair junior female academics with experienced mentors who can provide guidance, support, and advice on navigating the academic landscape (Quinn, 2012). By facilitating mentorship relationships, they enable women to access valuable insights, develop key skills, and build confidence in their abilities, thereby accelerating their career progression (Kalele, 2021). Formal mentoring programs, promotion of informal peer support networks, provision of professional development opportunities, and facilitation of networking initiatives, all are essential and empower women to overcome barriers, fulfill their potential, and thrive in leadership roles within higher education.

- Research and curriculum: Gender equality should also be reflected in research and the curriculum. This includes studying and addressing gender-related issues, promoting gender-inclusive content and perspectives in academic programs, and training staff on gender equality - gender equality should be embedded in all aspects of the university and beyond campus walls. One method involves promoting gender-sensitive research, they contribute to a deeper understanding of gender dynamics and inform evidence-based policies and practices aimed at promoting equality within academia and society (Rosa & Clavero, 2022). leveraging technology and automation tools to streamline administrative tasks and improve efficiency by implementing digital solutions for course management, grading, and administrative processes reduces the burden on faculty members and administrative staff, allowing for more time and energy to be allocated toward research, professional development, and leadership activities.
- Student organisations and initiatives: Universities and colleges often have student organisations and initiatives focused on gender equality and women's rights. These groups can play a crucial role in advocating for gender equality and raising awareness on campus. Moreover, By advocating for institutional backing for these organizations and initiatives, they institutionalize student activism and create sustainable platforms for advancing gender equality on campus (O'Meara et al., 2017; Thomson et al., 2022).
- Institutional policies: Establishing and enforcing policies and practices promoting gender equality is essential. This includes anti-discrimination policies, grievance procedures, and diversity and inclusion initiatives. Through policy advocacy, enforcement, and resource allocation, they create a supportive framework that safeguards the rights and interests of all members of the academic community, particularly women (Rosa & Clavero, 2022). Additionally, working closely with administrative and human resources departments to ensure providing training, guidance, and support to staff responsible for implementing these policies, enhance accountability, and ensure compliance with gender equality standards (Pandea et al., 2020).

8. Conclusion

The underrepresentation of women in leadership roles in HE institutions continues to persist globally. Certainly, considering the social, political, and economic context of Jordan is crucial for understanding the barriers to women's leadership in higher education within the country (Sreng, 2014). Like other countries, Jordan has less inclusion of women in leadership positions in HE institutions. The results indicated that the significant barriers that obstruct women from having leadership roles are work/life balance, heavy teaching and administration loads, family responsibility, subordinates' perception of women leaders, lack of opportunities, and social networking obstacles. This confirms the actuality that Jordanian women face social and cultural norms that prioritize familial duties and often expect them to prioritize caregiving responsibilities over career advancement (Sharif et al., 2024b). This study also highlights that while each significant barrier has a negative impact, institutional barriers are considered the most significant, as they also exacerbate sociocultural and personal barriers to women's leadership development. The queen bee effect, stereotypes, lack of family support, salary inequality, lack of ambition and aspiration, and lack of self-confidence -identified as significant barriers in some other countries, were not mentioned as critical barriers to women's leadership in Jordan. Promoting gender equality in HE requires the collaboration of governments, educational institutions, civil society, and the broader community. Their continued efforts are necessary to address the remaining gender disparities in access,

representation, policies and opportunities within higher education. Thus, women can get support and motivation to overcome critical barriers and reach the desirable position. Addressing these challenges is a fundamental step toward achieving a more equitable and inclusive society. Understanding the multifaceted nature of these barriers in the Jordanian context is paramount for crafting comprehensive approaches encompassing social, political, and economic dimensions. Such strategies, including policy reforms, cultural shifts, and institutional interventions, are essential for promoting gender equity and enabling women to realize their leadership potential within higher education. Finally, this research faces various limitations as its results related to Jordan context. Thus, future research can encompass developed and developing countries to offer a comprehensive understanding for women's participation in the top management at higher education institutions.

Authors' contributions

Conceptualization, A.S.A, A.L, A.A.S and M.Q.R.; methodology, A.S.A; software, A.S.A; validation, A.L., A.A.S. and N.A.; formal analysis, A.S.A. and N.A; investigation, A.S.A. and N.A.; resources, A.S.A.; data curation, A.S.A.; writing—original draft preparation, A.S.A., A.L., and N.A; writing—review and editing, A.A.S. and A.L; visualisation, N.A.; supervision, A.S.A and A.L; project administration, A.S.A; funding acquisition, A.S.A. All authors have read and agreed to the published version of the manuscript.

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