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KEYWORDS	ABSTRACT
Challenges, Female Researcher, Higher Education Sector, Pakistan	Despite the progress in gender equality, women face persistent challenges in their professional careers, especially in educational organizations. Study focuses on academic journey of female researchers, emphasizing systemic disparities, unequal funding opportunities, and challenges in married life. Research aims to examine the discomfort levels among female researchers, particularly concerning harassment and personal questions posed by male supervisors. To highlight systemic disparities affecting academic journey of female researchers, such as unequal funding opportunities and challenges in married life. To examine variability among female researchers, mixed-methods approach was used with descriptive design, including the female researchers from various academic departments in government & private sector universities. Sample comprised 250 respondents from WU Multan, EU Multan, IS Punjab, & Riphah University. Female scholars reported feeling comfortable in conversations with female supervisors, show significance of gender dynamics in mentorship relations. The study underscores necessity of addressing gender-specific obstacles as well as implementing targeted interventions to create equitable & supportive academic environment for female researchers.
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INTRODUCTION

Gender inequality persists across various facets of society, including education, where disparities between men and women are evident. This discrepancy is mainly notable within higher education institutions, even in contemporary times (Charlotte, Douglas & Smith, 2023). The root cause of this imbalance can be attributed to social gender constructs rather than biological sex. It is critical to understand how these terminologies differs from one another (Guetterman, Creswell, Deutsch, & Gallo 2018). According to World Health Organization, biological sex includes all physiological and biological traits that set men and women apart. On the other hand, social gender describes the

attributes, occupations and activities that society socially defines as fitting for either men or women. Given these definitions, it becomes evident that the existing disparity between women and men in education stems from social gender prospects rather than innate biological differences (Hallmark & Ardoin, 2021). During that era, such beliefs were widespread, and numerous instances akin to this one existed. Still, over years and through persistent efforts, women have successfully transcended these biases (Beasy, Emery & Crawford, 2021). Today, such convictions are rare, particularly in Turkey. Women overcome these societal hopes, knowing positive impacts of working and engaging in social life.

The advantages include economic independence, quality time spent with their children, enhanced respect from their spouses, improved social security, and heightened motivation to take care of their well-being (Hallmark & Ardoin, 2021). Thus, despite the women having made significant strides in overcoming bias and increasingly participating in social life, it is evident that they continue to encounter challenges in their professional careers (Jones & Blass, 2019). Like many other sectors, women employed in educational organizations confront obstacles associated with societal gender expectations. This is because the education system, whether implicitly/explicitly, perpetuates and reinforces patriarchal norms and social gender roles (Klenowski, Ehrich, Kapitzke & Trigger, 2011). Thus, even women who are highly educated and actively employed tend to internalize these social gender roles. Academic women face a heavier workload compared to many other working women. They must navigate intricate task of balancing their academic responsibilities, such as lecturing, publishing scholarly articles, and attending academic conferences, with their societal gender roles. These roles often encompass domestic duties like laundry, childcare, and household chores, among others (Hoof, 2020). Based on the reasons mentioned earlier, numerous studies have unequivocally demonstrated a significant gender disparity in academic realm, especially about senior positions (Howard, 2021).

To illustrate this, consider the statistics from various countries. In Finland, ladies contained just 13% of teachers and 22 percent of academic partners. In Sweden, ladies' teachers comprised a simple 9 percent of the whole scholastic body, and in the Netherlands, this figure dwindled to only 5%. This obvious underrepresentation of ladies in the scholarly world has been perceived as a major problem (Hallmark & Ardoin, 2021). Steps should be taken to address it, like Swedish Advanced Education Act, which underscores every college's liability to advance orientation correspondence in training and exploration as well as in arrangements (Arbeit, 2022). Researchers have aptly characterized academia as a 'man's world,' where women encounter challenges in securing the recommendations, acquiring research resources, & advancing their careers (Charlotte, Douglas & Smith, 2023). They also stress the importance of universities, even in the United Kingdom, maintaining and providing statistical records of staff, considering factors like gender, ethnicity, and marital status, to ensure equal opportunities for women and men. Nevertheless, despite these initiatives, the status of women in academia has not much improved, as shown by the study by Bett carried out in UK universities, which showed that proportion of female academics in senior positions was just 25%, while number of male academics in top positions was twice as high (CohenMiller, Demers, Schnackenberg, & Izekeanova, 2022).

Research Objectives

1. To identify and discuss practical & psychological barriers, including traveling issues, lack of confidence, & challenges in married life, faced by female researchers.
2. To highlight the systemic disparities affecting the academic journey of female researchers, such as unequal funding opportunities and challenges in married life.
3. To examine variability in reported discomfort levels among female researchers, mainly in incidents of harassment & personal questions posed by male supervisors.

LITERATURE REVIEW

The concerns regarding their children's health and well-being are major concerns for some female students and their parents. especially when the female students cannot access college or university transportation. In addition to numerous other issues, female students frequently had trouble getting at their designated time in the morning. Due to the hardships faced by female students on public transportation and the high cost of private transportation, parents are unable to cover these costs. A survey of the literature reveals that women's participation in higher education and the workforce is impeded by South Asian family arrangements (Laar, 2021). Gender prejudice is another barrier to education for women. In comparison with female education, male education has piqued parents' attention more. Some parents believe that education is unnecessary for women, mainly for higher-ranking women. According to a study (Liang, 2021), employers may be reluctant to hire the women because they believe they will leave their employment after getting married or having children, which could explain why there is a lower rate of female participation in the workforce (Rahman & Alam, 2021).

Gender Disparities & Challenges

In existing research, gender disparities in academia are well-documented, with female researchers being underrepresented in leadership positions, having lower publication rates, and receiving less research funding than their male counterparts. In this linking, this disparity is mainly pronounced in STEM fields, where female researchers face significant barriers towards the desired advancement, development and often experience the discrimination and bias in the academic institutions (Linder & Grimes, 2023). There are several reasons why female research scientists in the higher education confront difficulties, such as the work-life balance concerns, institutional and cultural hurdles, and gender prejudices and stereotypes. Institutional and cultural barriers include the lack of female representation in leadership positions, inflexible policies regarding family and parental leave, and lack of support for career advancement. Gender biases and stereotypes are pervasive in academia, with female researchers often being seen as less competent or committed than the male researchers. Finally, the work-life balance issues can be challenging for female research scholars, who often face the expectations of being primary caregivers while also pursuing their research careers (Linder & Grimes, 2023).

Strategies, Challenges & Mentorship

To address challenges faced by female research scholars in higher education, several strategies have been proposed. Increasing number of women in leadership roles, putting work-life balance rules into place, and raising awareness of gender stereotypes and prejudices in academics are a

few of these. Programs for sponsorship and mentoring can also be successful in fostering growth and success of female researchers (Montaño, Remandeban, Villones, & Madera, 2023). It is vital to note that the challenges faced by female research scholars are not experienced uniformly by all women. The women of color face additional challenges related to intersectionality, including racism, discrimination & bias. The research has shown that women of color are underrepresented in academia and face significant barriers to career progress and funding opportunities (Patricio, 2022). Mentorship programs have been identified as effective strategy for supporting the success and advancement of female research scholars. Research has shown that mentorship can provide valuable guidance & support for early-career researchers, helping them to navigate challenges of academia and achieve their career goals. Additionally, mentorship can promote networking prospects and help address gender biases and stereotypes in academia (Attalla, Ahmed, Akter, & Kumar, 2022).

RESEARCH METHODOLOGY

The study addressed the challenges of female researcher in higher education, more specifically it is aimed to design to decrease problems of female researcher and to highlight their challenges and to give them equal rights and opportunities. The target population of the study was the MPhil and PhD scholar from social science and natural science department from Multan district. The sample of research study includes students of public & private universities in Multan. These universities were women university Multan, Emerson university Multan, institute of southern Punjab Multan and Riphah international university Multan. A stratified random sampling technique was used for this research. Aside from descriptive statistics, inferential statistics played a crucial role in analysis. Chi-square tests were used to determine correlation and dependencies between variables. The chi-square tests provide a statistical framework for evaluating the importance of correlation within the category data.

Data Collection

Cross-sectional research design was used for study. A self-administered questionnaire was used to collect data from participants. The questionnaire consisted of three parts: demographic information of the participants, organizational incivility scale, adapted from the Workplace Incivility Scale (Cortina, 2001) and student performance scale, adapted from the Student Performance Scale (Kaur & Kaur, 2016).

Table 1 Likert Scale

Scoring of Data	SA	A	UD	DA	SDA
Positive	5	4	3	2	1
Negative	1	2	3	4	5

Data Analysis

The analysis of data obtained from questionnaire was done using SPSS. Calculations were made for mean, standard deviation and chi square-tests. Four factor statements were coded as follows: AP stands for attitude problems; GB for gender biasness; LF for lack of facilities & EOP for educational/organizational problems.

RESULTS OF STUDY

The study has been produced in this section showing the main outcomes obtained through the statistical procedures in order to explain the description of variables and their association among research variables.

Table 2 Female Experience More Comfortable Conversation with Female Supervisors.

Description	Frequency	Percentage
Strongly Agreed	127	50.8%
Agreed	93	37.2%
Undecided	11	4.4%
Disagreed	15	6.0%
Strongly Disagreed	4	1.6%

The table offers important information and reveals the perspectives of 250 female research scholars on their comfort during conversations with female supervisors. A majority (50.8%) strongly agree that they feel at ease, while 37.2% agree, indicating overall positive perception of comfort. A small percentage (4.4%) is undecided, and 7.6% express discomfort, with 6.0% disagreeing and 1.6% strongly disagreeing.

Table 3 Female Students Face Travelling Issues from Home to Institute.

Description	Frequency	Percentage
Strongly Agreed	57	22.8%
Agreed	110	44.0%
Undecided	26	10.4%
Disagreed	46	18.4%
Strongly Disagreed	11	4.4%

The table depicts responses from 250 female students regarding challenges during their commute to the institute. A significant 44.0% agree, and 22.8% strongly agree, indicating a notable portion facing traveling issues. 18.4% disagree, and 4.4% strongly disagree, suggesting that some students do not perceive significant challenges. A minority (10.4%) remains undecided. The Chi-square is a valuable analysis tool that reveals much about the nature of research data. It is a vital statistic that allows researchers to test hypotheses regarding nominally measured variables. All the inferential statistics, results are most trustworthy when obtained from randomly selected people when sample sizes are high enough to achieve enough statistical power (ELsayed, 2022). Formula for calculating Chi-Square is:

$$\chi^2 = \frac{\sum (O_i - E_i)^2}{E_i}$$

Where: E_i : Expected value, χ^2 : The cell Chi-square value

Chi-Square Test has some limitation for the application to find Correlation between two variables or two factors. This test is only suitable for up to two variables. The chi square test revolves about null hypotheses. Null hypothesis defined as "There is no significant association between variable and factors. Statistical tests have been a vital tool for interpreting the results of research correctly (Karl, 2020)

Table 4 Pearson Correlation

Statement	Significance
The researchers face difficulty when the supervisors concerned are not present at their workplace.	.001
Supervisees always try to catch the supervisor but somehow fail according to their presence availability.	.016
Female researchers with jobs find it difficult to leave their work and meet supervisor according to the given time by supervisors.	.011
The concerned supervisors are unwilling to talk to the researchers for a long time at workplace.	.002
Because of the busy schedule of the supervisor, they cannot pay proper attention to scholarly work.	.015
The female researchers with jobs face time management issues to spend extra hours before and after working time.	.000
The supervisors bully' researchers at the start of research and humiliate them with their careless attitude.	.070
The female researchers have a low temperament level to face any harsh attitude of supervisors.	.087
The male researchers have more patience to face harsh behavior by supervisors in the institution.	.001

Researchers face significant difficulties when their supervisors are not present at their workplace, as indicated by a highly significant p-value of 0.001. This suggests a strong association between the absence of supervisors and challenges reported by researchers. Supervisee often struggle to catch supervisors based on availability, with the significant p-value of 0.016, indicating noteworthy link between two variables. Female researchers with jobs encounter challenges in meeting supervisors' specified times, supported by a significant p-value of 0.011, emphasizing existence of a relationship between reported difficulty and statement. Low p-value of 0.002 indicates statistical significance regarding supervisors' reluctance to participate in extended conversations, supporting the presence of a link.

The busy schedules of supervisors hindering them from paying proper attention to scholarly work are also statistically significant with a p-value of 0.015. Female researchers with jobs facing time management issues around extra hours before and after work show a highly significant association, with a very low p-value of 0.000. Still, statements regarding supervisors bullying researchers at the start of research and female researchers having a low temperament level to face harsh attitudes do not exhibit strong statistical evidence, with p-values of 0.070 & 0.087, suggesting lack of significant association at conventional significance level. In contrast, male researchers having more patience to face harsh behavior by supervisors is strongly supported by a low p-value of 0.001, indicating a significant relationship.

Findings reveal that mean age of female research scholars in higher education is 1.576. Most female research scholars fall within age range of 21-25, constituting 58.4% of total. The second-largest age group is 26-29, comprising 26.4% of total. A smaller percentage of scholars, 14.4%, belong to the age group of 30-34. The age group 35-39 represents the smallest percentage, with only 0.8% of the total. The overall mean age of female research scholars in higher education is 1.576. Findings

reveal that mean qualification is given as 1.228. Most female research scholars in higher education have MPhil qualification, representing a significant portion at 77.2% of total. A smaller proportion of scholars, 22.8%, have PhD qualification. Overall mean qualification is given as 1.228. However, interpretation of this Mean depends on how qualifications are coded or scaled. Without additional context, it's challenging to provide a detailed interpretation of the Mean in terms of qualification (Loskant, 1974).

DISCUSSION & CONCLUSION

To support this study a study was conducted in 2014 on "Problems Faced by Women in Educational Institutions of Bijapur" was conducted by Al-Ameen, Medical College, Bijapur, India. The study's primary conclusions are as follows: most respondents, who have more than ten years of experience, are between the ages of 26 and 40. The majority of those surveyed worked for private organizations (Kozlenia & Domaradzki, 2021). Approximately 62% of the participants expressed opinion that they had some problems, while 25% said they had many problems. One encouraging conclusion from research was that 77% of women chose this line of work because it fit their interests, whereas only 23% of respondents did so for financial gain. Of people who responded, 70% were married, and 67% of them stated that single women experience less difficulties than married women. The fact that 88% of respondents thought that educational institutions in Bijapur were good for them is highly positive conclusion of this study. 16.76% of respondents reported having trouble managing their time (Omiunu, 2006). Based on these results the detailed exploration of the factors influencing experiences of female researchers exposes nuanced landscape of challenges, ranging from practical obstacles like traveling issues & unequal funding prospects to complex interpersonal dynamics with male supervisors.

In summary, the research highlights the need of tackling gender-specific obstacles and executing focused interventions to establish the fairer and more encouraging academic setting for the female investigators (Kamogelo & Lucky 2022). In this connection, mostly from the respondents reveals positive endorsement of using body language to overcome improper behavior, reflecting proactive approach to maintaining a respectful and inclusive academic atmosphere. However, moderate variability suggests opportunities for further exploration of communication strategies (Kannappan & Chacko, 2020). Thus, turning towards the specific challenges faced by female research scholars, comfortable conversation with female supervisor highlights positive rapport in the discussions with female supervisors, indicating the supportive mentorship environment. Consequently, addressing travel-related issues and building confidence in interactions with male supervisors is identified as key enhancements towards developments (Karakaya & Ilkilic 2016). Thus, examining supervisor-related challenges identifies obstacles like difficulty in supervisor availability and instances of bullying, emphasizing areas for institutional improvement. In this regard, the significance of these challenges underscores the necessity of robust mentorship programs and supervisor training (Kemp & Nurius, 2015).

Suggestions for Future Research

1. Conduct a detailed investigation into existing mentorship programs for female research scholars, focusing on their effectiveness, areas for improvement, and the impact of mentorship on academic and research outcomes.

2. Undertake longitudinal studies to track the career progression of female research scholars, examining the influence of various factors such as mentorship, workplace environment, and collaborative research experiences on their professional development.
3. Explore gender-based differences in challenges faced by male and female research scholars. A comparative analysis could reveal unique obstacles experienced by each gender and inform tailored support strategies.

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