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Gendered Barriers to Professional Empowerment: A Comparative Analysis of Women's Transition from Higher Education to Employment in Pakistan and Brazil

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Abstract

This study examines the barriers affecting women's transition from higher education to professional empowerment through a comparative analysis of Pakistan and Brazil. Despite notable differences in socio-cultural and economic contexts, women in both countries encounter persistent structural and institutional barriers that hinder their participation in the labour market. The study draws on survey datasets collected from women in higher education institutions in Pakistan (n = 399) and Brazil (n = 192 valid responses) to investigate how socio-cultural norms, labour market inequalities, and institutional dynamics shape women's professional trajectories. Using a combination of descriptive and inferential statistical techniques, including the Mann–Whitney U test, Kruskal–Wallis H test, and Shapiro–Wilk normality test, the analysis identifies significant differences in how empowerment barriers are perceived across demographic groups, regions, and levels of professional experience. The findings reveal that in Pakistan, deeply entrenched patriarchal norms, early marriage practices, family expectations, and mobility restrictions significantly constrain women's ability to translate educational attainment into labour market participation. In contrast, Brazilian women demonstrate higher levels of educational attainment and workforce integration; however, institutionalized gender discrimination, wage disparities, and persistent leadership stereotypes, particularly within male-dominated sectors such as science, technology, engineering, and mathematics (STEM), continue to limit their professional advancement. The comparative analysis highlights both shared and context-specific challenges shaping women's empowerment. While socio-cultural constraints remain more pronounced in Pakistan, institutional labour market inequalities are more evident in Brazil. The study contributes to the literature by providing empirical comparative evidence on how different structural conditions influence women's transition from education to employment in developing and emerging economies. The findings underscore the need for context-specific policy interventions aimed at improving women's mobility, strengthening workplace protections, addressing wage disparities, and promoting gender-inclusive leadership opportunities. Such targeted strategies are essential for advancing gender equality and achieving sustainable empowerment for women in both countries.

Keywords: Women's empowerment; Higher education; Professional advancement; Gender inequality; Pakistan; Brazil; Sustainability

Introduction

Women's empowerment has been a global priority, particularly in developing countries where gender inequality remains entrenched. As nations strive to meet the United Nations' Sustainable Development Goal 5, achieving gender equality and empowering all women and girls, the transition from Higher Education (HE) to empowerment becomes critical for women's socio-economic advancement. Although extensive research has examined gender inequality in labour markets and education separately, limited comparative research has explored how women transition from higher education into professional empowerment across different socio-cultural contexts. Comparative empirical studies between South Asia and Latin America remain particularly scarce. This study addresses this gap by analysing survey datasets from Pakistan and Brazil to examine how structural, cultural, and institutional barriers shape women's professional trajectories. Both Pakistan and Brazil, while culturally and geographically distinct, share common challenges in this regard: women face significant barriers that prevent them from translating their educational achievements into meaningful professional empowerment [1-5].

Pakistan, with a population of over 245 million, ranks as the fifth most populous country globally. Despite advancements in educational access, women remain underrepresented in the labour market, making up only around 25% of the workforce [6,7]. Socio-cultural norms,

particularly in rural areas, restrict women's autonomy and professional mobility. Early marriages, family obligations, and patriarchal societal structures further exacerbate gender disparities in education and employment [8-11]. Although there has been a marked increase in women's enrolment in higher education, the transition from academia to professional life remains fraught with challenges, particularly in conservative regions such as Balochistan and Khyber Pakhtunkhwa [12-14]. Pakistan's higher education system has undergone significant expansion, with more women attaining degrees than ever before. However, the barriers that prevent women from converting this education into professional empowerment are deeply rooted in cultural, familial, and institutional practices. Studies show that the lack of institutional support, coupled with gender discrimination and

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limited mobility, hinders women from progressing in their careers [10,15,7,16,17].

Brazil, a country with a robust higher education system, faces a paradox: despite women having higher educational attainment than men, gender inequality persists. Approximately 16.9% of Brazilian women aged 25 and above have completed higher education compared to 13.5% of men [18,5]. In Brazil, the gender wage gap remains significant, and women, despite their qualifications, are often underrepresented in leadership positions [19-21]. The socio-cultural dynamics of Brazil, particularly in male-dominated fields such as engineering, construction, and STEM, further limit women's professional progression [22,23]. Moreover, Brazil's societal norms continue to perpetuate traditional gender roles, where women are expected to balance both domestic and professional responsibilities. This work-life conflict is a key barrier to women's empowerment in the country. Research shows that women often bear a disproportionate share of unpaid domestic and care work, which limits their career progression and participation in leadership positions [24-26]. Although women in Brazil are gaining ground in education, the challenges they face in translating that education into professional opportunities reflect broader systemic issues, including gender-based violence, workplace discrimination, and harassment [4,16,23].

To explore these barriers in-depth, this paper is structured as follows: The Literature Review examines the existing research on women's empowerment, with a focus on Pakistan and Brazil. The Methodology outlines the datasets and statistical techniques used to compare the barriers faced by women in these contexts. The Discussion section delves into the comparative analysis of findings, while the Policy Recommendations suggest targeted interventions for each country. Finally, the Conclusion summarizes the key insights and implications for future research.

Literature review

Women's empowerment, particularly in transitioning from higher education (HE) to professional life, has been a central theme in global gender equality discourse. This transition is pivotal in determining women's socio-economic advancement and capacity to contribute to national development. Research has consistently shown that empowering women through education and employment can significantly improve economic growth, social development, and institutional performance [3,2,27,16].

Both Pakistan and Brazil, as developing countries, exhibit distinctive challenges that prevent women from fully realizing their potential despite significant progress in female educational attainment. Structural inequalities, cultural norms, and institutional barriers continue to limit women's participation in professional sectors across many developing economies [20,28,29]. Studies have also highlighted that women's educational achievements do not always translate into economic empowerment due to persistent labour market discrimination and social expectations regarding gender roles [1,19,30].

This literature review explores key themes including societal norms, family obligations, economic barriers, workplace discrimination, and gendered leadership perceptions that influence women's transition from higher education to professional empowerment. Research from Pakistan indicates that patriarchal structures and cultural expectations continue to shape women's educational and professional trajectories, often limiting their autonomy and mobility [8,11]. Similarly, studies in Brazil highlight how gender stereotypes, workplace discrimination,

and unequal distribution of unpaid care work contribute to persistent gender inequalities despite improvements in women's educational attainment [21-22]. These themes are examined through comparative analysis in order to better understand the systemic barriers that prevent women in Pakistan and Brazil from translating higher education into professional empowerment (Table 1).

Gender equality and women's empowerment in higher education

The importance of education in promoting gender equality is well-documented, and higher education is often viewed as a critical tool for women's empowerment. Globally, the United Nations' Sustainable Development Goal 5 emphasizes the necessity of achieving gender equality and empowering women and girls in all sectors of society. However, in countries like Pakistan and Brazil, achieving this goal remains a significant challenge due to deeply ingrained socio-cultural, economic, and institutional barriers [1,3,4,16].

In Pakistan, the transition from education to professional life is heavily influenced by societal expectations prioritizing family obligations over career advancement. The Global Gender Gap Report ranks Pakistan among the lowest countries globally regarding economic participation and opportunity for women, indicating the severity of the issue [5,7]. Gendered barriers persist at every level of education and professional life, with women facing limited access to professional opportunities despite achieving higher educational qualifications. In many cases, societal norms dictate that women should focus on domestic roles, and as a result, even highly educated women may be discouraged from entering the workforce [8,9,11]. This creates a paradox where educational attainment does not necessarily lead to professional empowerment, particularly in conservative regions like Balochistan and Khyber Pakhtunkhwa.

In Brazil, while women surpass men in higher education attainment, 16.9% of women aged 25 and older have completed higher education compared to 13.5% of men, gender inequality persists in the workforce [18]. Significant gender disparities in wage earnings and representation in leadership positions mark the transition from education to employment. The Brazilian labour market remains stratified, with women often excluded from male-dominated sectors, especially in science, technology, engineering, and mathematics (STEM) [19-21]. This underrepresentation of women in high-paying industries underscores the disconnect between educational attainment and professional empowerment.

Socio-cultural norms and gender roles

Socio-cultural norms are critical in shaping women's access to education and professional opportunities. In many developing nations, patriarchal values dictate that women's primary responsibilities are within the household, limiting their participation in the public sphere [1,25]. These norms are particularly influential in countries like Pakistan and Brazil, where traditional gender roles still dominate.

In Pakistan, cultural and religious norms deeply influence women's societal roles. A male-dominated power structure pervades family and professional life, restricting women's autonomy and mobility [8,9,11]. Early marriages, societal expectations for women to prioritize family life, and limitations on women's freedom of movement are significant barriers to professional empowerment. Studies have shown that in many regions of Pakistan, women are expected to remain in domestic roles, and their education is viewed as secondary to their duties as wives and mothers [10,12,14]. This societal setup creates a bottleneck where

Table 1: Comparative Table for Key Barriers to Women's Empowerment in Pakistan and Brazil.

Factor	Pakistan	Brazil
Socio-cultural Norms and Gender Roles	Patriarchal norms dominate; women are expected to prioritize family and domestic responsibilities. Early marriages and cultural restrictions limit autonomy (Malik & Courtney, 2011; Yousaf & Schmiede, 2017; Afzal, 2024; Kabeer, 1999)	Traditional gender roles still exist but are less restrictive. Cultural pressure to balance family and work is significant (Beneria et al., 2015; Charnes, 2019; Segatto & Costa, 2022)
Family-Related Barriers and Work-Life Balance	Family pressure to prioritize marriage and family over careers is significant. Early marriage is a common barrier (Ali et al., 2021; Batool et al., 2022; UNESCO, 2022)	Women face a "double burden" of balancing work and family. There are challenges, but greater support mechanisms (e.g., childcare) exist (Folbre, 2012; Charnes, 2019; OECD, 2023)
Economic Barriers and Wage Disparities	Only 25% of the workforce is female. A substantial wage gap exists (around 35%), particularly in rural regions. Employment is often inaccessible to educated women (World Bank, 2023; ILO, 2024; Klasen, 2019)	Workforce participation is higher at about 48%, but a notable wage gap of roughly 25% persists, especially in male-dominated sectors like STEM (OECD, 2023; World Economic Forum, 2024; Goldin, 2014)
Workplace Harassment and Discrimination	Harassment is widespread, particularly in male-dominated sectors, but reporting is rare due to cultural norms and weak legal frameworks (Ahmad & Bhatti, 2023; Afzal, 2024; UN Women, 2023)	Sexual harassment and gender-based discrimination are prevalent, particularly in leadership and male-dominated industries (Madgavkar et al., 2019; Barreto et al., 2017; UN Women, 2023)
Gendered Perceptions of Leadership and Career Progression	Leadership is often viewed as a male trait. Women face significant barriers to advancing beyond mid-level positions, particularly in conservative regions (Malik & Courtney, 2011; Yousaf & Schmiede, 2017; Kabeer, 2012)	Women are underrepresented in leadership roles, especially in STEM. Gendered leadership stereotypes remain a challenge (Goldin, 2014; Segatto & Costa, 2022; Santilli et al., 2024)
Freedom and Mobility Restrictions	Strict mobility restrictions based on cultural and religious norms, especially in rural regions, severely limit women's access to opportunities (Yousaf & Schmiede, 2017; Ali et al., 2021; Afzal, 2024)	There are fewer mobility restrictions than in Pakistan, but cultural norms still limit women in leadership roles requiring extensive travel (Beneria et al., 2015; Madgavkar et al., 2019)
Intersectionality and Marginalized Groups	Rural women, especially from lower socio-economic backgrounds, face compounded barriers to education and employment. Intersectionality magnifies inequality (Kabeer, 1999; Malik & Courtney, 2011; UNESCO, 2022)	Afro-Brazilian women experience multiple layers of discrimination (gender, race, and class), particularly in leadership roles and access to high-paying jobs (Segatto & Costa, 2022; UNDP, 2023)
Policy Perception and Suggested Interventions	Legal protections are weak. There is a need for stronger enforcement of gender equality laws and cultural awareness campaigns to reduce gender bias (World Bank, 2022; UN Women, 2023)	Existing policies are better developed but need stronger enforcement. More focus on reducing wage gaps and increasing support for work-life balance is needed (OECD, 2023; World Economic Forum, 2024)

women's educational achievements do not translate into professional success. Additionally, parental attitudes towards women's education are influenced by cultural norms, with educated parents being more likely to advocate for their daughters' professional careers [15].

In Brazil, while socio-cultural barriers are less severe than in Pakistan, traditional gender roles still influence women's professional trajectories. Women are expected to balance both professional and domestic responsibilities, and this work-life conflict can hinder their career progression [24-25]. Brazilian women face subtle forms of discrimination that reinforce gendered leadership perceptions, where men are favoured for executive roles, particularly in male-dominated sectors like engineering and technology [22,21]. The presence of gendered stereotypes in leadership positions is a significant obstacle to women's empowerment in Brazil despite their higher levels of educational attainment.

Family-related barriers and work-life balance

Family-related responsibilities are another significant barrier to women's transition from higher education to professional life. In Pakistan and Brazil, women face societal expectations to balance family obligations with their professional ambitions. However, the nature of these expectations differs across the two countries.

In Pakistan, early marriages and the expectation that women will prioritize family life over their careers are among the most significant barriers to women's professional empowerment [8,12]. These expectations are particularly prevalent in rural areas, where conservative attitudes towards gender roles dominate. As a result, many women cannot pursue higher education or professional careers due to familial obligations. Time constraints imposed by domestic responsibilities often prevent women from engaging fully in professional life, leading to what is referred to as the "double burden" of managing both household

and career duties [1,14].

In Brazil, the primary challenge is achieving a work-life balance, where women are expected to manage both their professional careers and domestic responsibilities. While early marriage is less of an issue in Brazil than in Pakistan, the pressure to balance family and career is a significant barrier [24,18]. This "double burden" is particularly challenging for women in higher-ranking professional roles, where leadership demands are often incompatible with traditional family roles [26,23]. In many cases, women are forced to choose between advancing their careers and fulfilling domestic obligations.

Economic barriers and wage disparities

Economic factors, including wage disparities and limited job opportunities, play a central role in hindering women's professional empowerment in both Pakistan and Brazil. Gender-based wage gaps are prevalent in both countries, although the causes and consequences of these disparities differ.

In Pakistan, women's labor force participation rate remains extremely low, constituting only about 25% of the workforce. This is partly due to societal expectations discouraging women from pursuing professional careers, but economic barriers also play a role. In many regions, poverty and limited job opportunities disproportionately affect women, preventing them from accessing the same professional opportunities as men [7,10]. Wage disparities are significant, particularly in rural areas, where women are often paid less than their male counterparts for similar work [17]. Moreover, women with higher education frequently struggle to find employment that matches their qualifications due to both gender bias and economic constraints.

In Brazil, women also face significant wage disparities despite their higher educational attainment. The gender wage gap remains a

persistent issue, with women earning less than men for similar work [18,19]. This disparity is particularly pronounced in male-dominated industries, where women are often excluded from higher-paying roles. Discriminatory hiring and promotion practices further exacerbate the wage gap, limiting women's ability to achieve economic empowerment. For instance, in sectors like STEM, where male dominance is prevalent, women struggle to break through the proverbial "glass ceiling," leaving them underrepresented in leadership and high-paying roles despite equivalent qualifications [20,22].

Moreover, job security is a critical economic barrier in Brazil, as many women work in precarious, lower-paying jobs with limited benefits and fewer opportunities for advancement. The informal labour market is also a significant factor in Brazil, where many women are employed without the legal protections afforded in formal employment [17,24]. This precarious employment status further widens the economic gap between men and women, as women in informal jobs are excluded from benefits such as maternity leave and social security.

Freedom and Mobility Restrictions

Restrictions on women's mobility, often linked to socio-cultural and religious norms, represent significant barriers to women's empowerment and labour market participation in many developing countries. Mobility constraints limit women's access to education, employment opportunities, professional networks, and leadership roles, thereby restricting their socio-economic advancement [16,1,3]. Although both Pakistan and Brazil experience mobility-related gender constraints, the nature and intensity of these restrictions differ significantly between the two contexts.

In Pakistan, women's mobility is significantly restricted due to conservative cultural and religious expectations, particularly in rural and traditionally patriarchal regions. Women are often discouraged from travelling independently for educational or employment opportunities due to concerns about safety, modesty, or family honour [8,9,11]. These restrictions are especially pronounced in provinces such as Balochistan and Khyber Pakhtunkhwa, where conservative social norms and security concerns further constrain women's autonomy and access to public spaces. Studies have shown that limited transportation infrastructure, social stigma associated with women travelling alone, and family restrictions on mobility significantly reduce women's participation in higher education and the labour market [10,12]. As a result, the inability to travel for education or employment opportunities reduces women's access to professional careers, and in many cases even highly educated women remain confined to domestic roles due to persistent cultural restrictions on mobility and independence.

In Brazil, mobility restrictions are less pronounced but still exist in the form of gendered perceptions regarding appropriate professional roles and workplace expectations. Brazilian women generally experience greater freedom of movement for education and employment compared to women in Pakistan; however, socio-cultural expectations and labour market dynamics continue to influence women's career trajectories [21,23]. For example, women may face subtle pressures to avoid high-stress occupations or leadership positions that require extensive travel or long working hours, particularly in male-dominated sectors such as engineering, technology, and construction [20,22]. Although these constraints are less overt than those observed in Pakistan, cultural expectations surrounding family responsibilities and gender roles still influence women's professional mobility and advancement, particularly in regions characterized by more traditional social values.

Workplace Discrimination, Violence, and Harassment

Workplace discrimination, violence, and harassment remain pervasive challenges that significantly affect women's transition from higher education into professional careers. These issues undermine women's ability to fully participate in the labour market and often contribute to lower retention rates, reduced career progression, and diminished workplace satisfaction [4,16]. Although both Pakistan and Brazil have implemented legal frameworks to address gender-based discrimination, structural inequalities and weak enforcement mechanisms continue to hinder progress toward safe and equitable workplaces.

In Pakistan, workplace harassment represents a major barrier to women's participation in professional sectors, particularly in male-dominated industries such as engineering, construction, and manufacturing. The absence of effective institutional support systems and inconsistent enforcement of anti-harassment legislation often leave women vulnerable to abuse in both academic institutions and professional environments [13,11]. Although Pakistan introduced the Protection Against Harassment of Women at the Workplace Act in 2010, awareness and implementation remain uneven across institutions. Cultural norms that discourage women from reporting harassment further exacerbate the issue, as victims frequently fear social stigma, victim-blaming, or retaliation within the workplace [9]. Consequently, many women choose to leave their professions or avoid certain industries altogether due to concerns about workplace safety and harassment.

In Brazil, workplace harassment also presents a significant obstacle to women's empowerment, particularly in leadership roles and male-dominated sectors. Research indicates that women in Brazil report higher levels of workplace sexual harassment compared to their male counterparts, especially within corporate and industrial environments [23,22]. Gender-based discrimination in hiring, promotion, and salary negotiations further contributes to unequal career outcomes and limits women's access to senior management positions [19,21]. Although Brazil has implemented various legal frameworks and labour protections aimed at addressing workplace harassment and discrimination, enforcement remains inconsistent, and many women still report feeling unsafe or unsupported when reporting incidents. This persistent gap between legal protections and practical implementation continues to hinder women's full participation in the workforce.

Gendered perceptions of leadership and career progression

The perception of women in leadership roles represents a significant barrier to professional empowerment in many societies, including Pakistan and Brazil. Leadership stereotypes, gender biases, and institutional structures often favour male candidates for positions of authority, limiting women's opportunities to advance to senior management roles despite comparable qualifications and professional experience [31,32,20]. These perceptions are shaped by cultural expectations and historical gender norms that associate leadership with traditionally masculine traits such as authority, assertiveness, and decisiveness.

In Pakistan, leadership is frequently perceived as a masculine attribute, with societal norms reinforcing the belief that men are more suitable for positions of power and decision-making. Women who aspire to leadership roles often encounter resistance not only within professional institutions but also within their social environments, where expectations persist that women should remain in supportive

or subordinate roles [8,9,11]. This gendered perception of leadership extends across multiple sectors, including academia, government institutions, and private organizations, where women remain underrepresented in senior decision-making positions. The patriarchal organizational structures that characterize many institutions in Pakistan further hinder women's career advancement, as promotion pathways frequently favour male employees or rely on informal networks that exclude women [15,5]. As a result, many highly educated and professionally qualified women remain concentrated in mid-level positions, with limited opportunities to move into executive or leadership roles.

In Brazil, gendered leadership perceptions are also prevalent, particularly in sectors such as science, technology, engineering, and mathematics (STEM), where men continue to dominate senior positions. Despite women achieving higher educational attainment than men in many fields, they remain underrepresented in executive roles due to persistent stereotypes suggesting that men are more capable leaders or better suited for demanding managerial responsibilities [19-21]. These stereotypes are often reinforced through discriminatory hiring and promotion practices that favour male candidates, even in industries where women constitute a significant portion of the workforce. Research has shown that women in Brazil frequently encounter the "glass ceiling" phenomenon, where invisible structural barriers prevent them from advancing to senior leadership positions despite strong professional qualifications [22,23]. The underrepresentation of women in leadership positions limits their influence over organizational decision-making and policy development, thereby reinforcing broader patterns of gender inequality within professional and institutional structures.

Global Perspectives and Intersectionality

The challenges faced by women in Pakistan and Brazil reflect broader global patterns of gender inequality and barriers to women's empowerment. Increasingly, scholars emphasize the importance of intersectionality when examining gender disparities, recognizing that women's experiences are shaped not only by gender but also by factors such as socio-economic status, ethnicity, geography, and race [33,1]. These intersecting dimensions of inequality create complex barriers that can significantly influence women's ability to transition from higher education into professional careers.

In both Pakistan and Brazil, women from marginalized communities face compounded forms of discrimination that intensify existing barriers to empowerment. In Pakistan, rural women and those from lower socio-economic backgrounds often encounter significant obstacles in accessing quality education, transportation, and professional employment opportunities. These structural inequalities are further reinforced by cultural norms and economic constraints that limit women's mobility and autonomy [8,10,14]. Consequently, rural women often experience lower educational attainment and reduced labour market participation compared to their urban counterparts.

Similarly, in Brazil, Afro-Brazilian women frequently experience multiple layers of inequality related to race, gender, and class. Studies have shown that Afro-Brazilian women are disproportionately represented in low-income occupations and face barriers to accessing leadership positions and high-paying professional sectors [21,16]. These intersecting forms of inequality highlight the importance of adopting inclusive policy frameworks that address not only gender disparities but also the broader structural factors influencing women's opportunities for empowerment.

Methodology

This study adopts a comparative quantitative research design to examine the barriers women face when transitioning from higher education (HE) to professional empowerment in Pakistan and Brazil. Comparative research designs are particularly useful when investigating social phenomena across different cultural and institutional contexts because they enable researchers to identify both shared structural patterns and context-specific dynamics influencing gender inequality [34]. By analysing datasets collected independently in Pakistan and Brazil, the study provides a cross-national perspective on the socio-cultural, economic, and institutional factors affecting women's professional empowerment.

The data used in this research were derived from two separate but methodologically comparable surveys, each designed to capture women's experiences during the transition from higher education to employment and leadership opportunities. Both datasets include demographic variables, educational attainment, employment experience, and perceptions of structural barriers to empowerment. The use of comparable survey instruments across two national contexts enables meaningful cross-country analysis while accounting for differences in cultural and institutional environments [35,36].

Survey-based research is widely used in gender studies and labour market research because it allows researchers to systematically capture individual perceptions, experiences, and attitudes related to structural inequalities [37,38]. In the context of women's empowerment, survey methods are particularly effective for identifying perceived barriers related to social norms, institutional discrimination, and economic opportunities (Table 2) [1,16].

Pakistan Dataset

The dataset from Pakistan was collected as part of a broader research initiative investigating barriers to women's professional empowerment across multiple provinces. A purposive sampling strategy was employed to ensure representation from women belonging to diverse socio-economic backgrounds, geographic regions, and educational levels. Purposive sampling is frequently used in gender and social research when the objective is to capture experiences of specific populations that may otherwise be underrepresented in random sampling frameworks.

The survey obtained 399 responses, with women constituting the majority of participants (83.2%). Respondents represented several

Table 2: Demographic Breakdown by Region, Education, and Work Experience.

Variable	Pakistan (%)	Brazil (%)
Region		
Punjab	48.40%	N/A
Balochistan	15.20%	N/A
São Paulo	N/A	34.50%
Maranhão	N/A	22.80%
Education Level		
Vocational	10.50%	6.80%
Bachelor's Degree	54.60%	35.00%
Master's Degree	25.30%	42.30%
Doctoral Degree	5.80%	12.50%
Work Experience		
No Work Experience	52.60%	30.20%
1-5 Years	30.00%	40.30%
6-10 Years	12.00%	18.50%
More than 10 Years	5.40%	11.00%

regions including Punjab, Sindh, Azad Kashmir, and Balochistan, allowing the study to capture regional variations in socio-cultural norms and labour market opportunities. Regional diversity is particularly important in Pakistan, where cultural expectations and economic opportunities vary considerably across provinces [10,5]. Participants represented a wide spectrum of educational attainment, ranging from vocational training to doctoral degrees, providing insights into how educational attainment relates to women's professional trajectories. The dataset also includes employment-related variables such as current employment status, years of work experience, and professional sector, which allow for analysis of the gap between educational attainment and labour market participation.

Notably, 52.6% of respondents reported having no formal work experience, highlighting a significant structural gap between women's access to higher education and their participation in the workforce. Previous research has similarly documented the disconnect between educational achievements and labour market outcomes for women in Pakistan due to cultural norms, mobility restrictions, and institutional barriers [8,9]. The Pakistani survey instrument also measured perceived barriers using a five-point Likert scale, capturing respondents' attitudes toward issues such as cultural expectations, family obligations, workplace discrimination, and economic barriers.

Brazil dataset

The Brazilian dataset was collected through a survey administered across multiple academic institutions, including the State University of Maranhão (UEMA) and the University of São Paulo (USP). These institutions represent diverse academic and socio-economic contexts within Brazil, enabling the study to capture experiences of women across different educational disciplines and regional backgrounds. The survey initially received 306 responses, of which 192 were considered valid after data cleaning and validation procedures. Respondents were drawn from multiple academic fields including health sciences, engineering, social sciences, and humanities, ensuring cross-disciplinary representation of women's experiences in higher education and professional transitions.

The Brazilian dataset includes variables such as age, academic discipline, years of professional experience, professional position and perceived barriers to career advancement. Similar to the Pakistani dataset, the Brazilian survey utilized a five-point Likert scale to measure perceptions of socio-cultural barriers, workplace discrimination, family

responsibilities, and economic challenges. The use of Likert-scale survey instruments is widely recognized in social science research as an effective method for measuring attitudes, perceptions, and subjective experiences [39,40]. In studies of gender equality and workplace barriers, Likert scales allow researchers to quantify perceptions of structural inequalities and identify patterns across demographic groups [35].

Together, the Pakistani and Brazilian datasets provide a robust foundation for comparative analysis, enabling the identification of both common barriers and context-specific challenges affecting women's professional empowerment.

To analyse the datasets from Pakistan and Brazil, this study employed a combination of descriptive and inferential statistical techniques. The use of both approaches allows researchers to summarize patterns within the data while also testing for statistically significant relationships between variables [41,42]. Such mixed statistical approaches are widely recommended in comparative social science research because they allow both exploratory and hypothesis-testing analyses, providing a more comprehensive understanding of complex social phenomena [43].

Descriptive statistics

Descriptive statistics were used to summarize key characteristics of respondents in both datasets. Measures such as mean, median, standard deviation, and frequency distributions were calculated to describe demographic attributes, educational attainment, and employment status. Descriptive statistics serve an important role in survey-based research because they provide a clear overview of sample characteristics and help identify general patterns within the data [41]. In gender studies, descriptive analysis is frequently used to highlight disparities in education, employment, and professional advancement between demographic groups (Table 3).

The demographic characteristics reveal notable structural differences between the Pakistani and Brazilian datasets. Pakistani respondents were predominantly younger, with most aged 20–25, indicating many were recent graduates transitioning from education to the labour market. In contrast, Brazilian respondents represented a more professionally experienced cohort, with a significant proportion aged 30–39. Educational attainment also differed between the two samples. Bachelor's degrees were most common among Pakistani

Table 3: Demographic Characteristics of Respondents in Pakistan and Brazil.

Variable	Pakistan	Brazil	Interpretation
Sample Size	399 respondents	192 valid responses	Both datasets provide substantial samples for comparative analysis.
Age Distribution	63.4% aged 20–25	33% aged 30–39	Pakistani respondents represent a younger cohort transitioning from education to employment, while Brazilian respondents are more professionally experienced.
Educational Attainment: Bachelor's Degree	54.60%	35.00%	Bachelor's degrees dominate in Pakistan, indicating early career-stage participants.
Educational Attainment: Master's Degree	25.30%	42.30%	Brazil shows a higher proportion of postgraduate qualifications.
Educational Attainment: Doctoral Degree	5.80%	12.50%	Doctoral representation is higher in Brazil, reflecting stronger postgraduate participation.
Employment Status: No Work Experience	52.60%	30.00%	A significant gap exists between education and labour market participation in Pakistan compared to Brazil.
Employment Status: 1–5 Years' Experience	30.00%	40.30%	Brazilian respondents show stronger early-career workforce integration.
Employment Status: 6–10 Years' Experience	12.00%	18.50%	Mid-level experience is more common among Brazilian respondents.
Employment Status: More than 10 Years	5.40%	11.00%	Brazilian respondents demonstrate greater long-term professional experience.

respondents, whereas Brazilian respondents showed higher levels of postgraduate education, particularly at the Master's and doctoral levels.

The largest difference emerged in employment experience. Over half of Pakistani respondents reported having no formal work experience, highlighting a gap between education and labour market participation. By comparison, Brazilian respondents demonstrated stronger workforce integration across all experience categories. These descriptive patterns provide initial evidence of structural differences in women's professional trajectories between the two countries, which are examined further through inferential analysis.

Inferential statistical analysis

Inferential statistical techniques were employed to identify statistically significant differences in perceived barriers to women's professional empowerment across different respondent groups in Pakistan and Brazil. Inferential statistics are essential in social science research because they allow researchers to move beyond descriptive summaries and test whether observed differences within a sample reflect broader patterns within the population [41,43]. In the context of this study, inferential analysis was particularly important for examining how variables such as gender, region, educational attainment, and professional experience influence perceptions of barriers to women's empowerment.

Given that the survey data were collected using five-point Likert scales, the resulting variables are ordinal in nature. Additionally, preliminary normality testing indicated that the datasets did not meet the assumptions required for parametric statistical techniques. Consequently, non-parametric statistical tests were selected as they are more appropriate for ordinal data and for datasets that violate the assumption of normal distribution [42]. Non-parametric methods are widely recommended in gender and social research because they provide robust analytical results without requiring strict assumptions regarding data distribution. The inferential statistical analysis therefore employed the Shapiro-Wilk test for normality assessment, followed by Mann-Whitney U tests and Kruskal-Wallis H tests to examine differences between respondent groups.

Shapiro-wilk test for normality

Prior to conducting inferential analysis, the Shapiro-Wilk test was applied to evaluate whether the datasets followed a normal distribution. Assessing normality is a critical step in statistical analysis because it determines whether parametric or non-parametric statistical tests are most appropriate for analysing the data [41].

The Shapiro-Wilk test is widely considered one of the most reliable methods for assessing normality, particularly for moderate sample sizes. The results of the test indicated that the data significantly deviated from a normal distribution ($p < 0.05$), meaning that the assumptions required for parametric tests such as the independent samples t-test or ANOVA were violated. As a result, non-parametric statistical tests were adopted for subsequent analysis. This methodological decision ensured that the statistical procedures used were appropriate for the structure and distribution of the data, thereby increasing the reliability and validity of the findings.

Mann-whitney U test

The Mann-Whitney U test was used to compare differences between two independent groups within the datasets. This test is the non-parametric equivalent of the independent samples t-test and is particularly suitable for analysing ordinal data derived from Likert-

scale surveys [42]. The Mann-Whitney U test is commonly used in social science and gender studies to examine differences in perceptions, attitudes, or experiences between two groups when the assumption of normality cannot be satisfied [41].

In this study, the Mann-Whitney U test was used to compare groups such as:

- male and female respondents
- currently studying women and employed women
- respondents with and without work experience

In the Pakistani dataset, the Mann-Whitney U test revealed statistically significant gender differences in perceptions related to early marriage and domestic responsibilities. Female respondents were significantly more likely to perceive early marriage and family obligations as major barriers to professional advancement compared to male respondents ($p < 0.05$). This finding aligns with existing literature suggesting that domestic expectations and family responsibilities disproportionately affect women's participation in the labour market in Pakistan [8,9].

In the Brazilian dataset, gender differences were less pronounced overall; however, the Mann-Whitney U test identified significant differences in perceptions of leadership barriers in male-dominated sectors such as STEM ($p < 0.05$). Female respondents were more likely than male respondents to perceive structural barriers related to promotion opportunities and leadership representation. These findings are consistent with research highlighting the persistence of gender stereotypes and structural barriers affecting women's advancement in STEM professions [19,20].

Kruskal-wallis h test and post-hoc analysis

The Kruskal-Wallis H test was employed to examine differences across three or more independent groups, serving as the non-parametric equivalent of a one-way ANOVA [41]. This test is particularly appropriate for survey data involving multiple demographic categories, such as geographical regions, levels of work experience, and professional status, where the assumption of normal distribution may not be satisfied.

In this study, the Kruskal-Wallis H test was used to explore whether perceptions of barriers to women's empowerment varied across demographic groups. The analysis revealed statistically significant differences ($p < 0.05$) across several categories. Regional variations were particularly evident, with respondents from more conservative regions reporting higher levels of barriers related to mobility restrictions, family obligations, and cultural expectations. These findings highlight the important role of socio-cultural context in shaping women's access to education and employment opportunities. Previous research has similarly identified substantial regional disparities in women's labour market participation and social mobility in developing contexts [10,5].

Differences were also observed based on levels of professional experience. Respondents with more than ten years of work experience were more likely to perceive gender norms and organizational structures as barriers to career advancement compared to less experienced respondents ($p < 0.05$). This pattern may reflect greater exposure to workplace dynamics over time, where experienced women encounter structural constraints such as the glass ceiling and gender bias in promotion practices [22,23]. Overall, the results indicate that perceptions of empowerment barriers are influenced not only by gender but also by contextual factors such as regional background and

professional experience. When statistically significant differences were identified using the Kruskal–Wallis test, post-hoc pairwise comparisons were conducted using the Mann–Whitney U test with Bonferroni adjustment. The Bonferroni correction is widely recommended in multiple comparison procedures because it reduces the risk of Type I error, which occurs when statistically significant results are incorrectly identified due to repeated testing [41].

The post-hoc analysis enabled the study to determine which specific groups contributed to the observed differences. For example, post-hoc comparisons revealed that women from more conservative provinces in Pakistan reported significantly higher barriers related to mobility restrictions and family expectations compared to respondents from more urbanized regions ($p < 0.01$).

Comparative insights from inferential analysis

The inferential statistical analysis reveals important differences in the demographic and professional characteristics of respondents in Pakistan and Brazil. First, the age distribution indicates that Brazilian respondents tend to be older and more professionally experienced. Approximately 33% of Brazilian respondents fall within the 30–39 age group, whereas the majority of Pakistani respondents (63.4%) fall within the 20–25 age range. This difference suggests that many Brazilian participants have had more time to accumulate professional experience, while Pakistani respondents are often at earlier stages of their educational or career trajectories.

Second, significant differences emerge in terms of workforce participation. In Pakistan, 52.6% of respondents reported having no formal work experience, indicating a substantial gap between educational attainment and labour market participation. In contrast, only 30% of Brazilian respondents reported having no work experience, suggesting greater integration of women into the labour market despite the persistence of gender-related barriers.

Finally, the Kruskal–Wallis analysis highlighted the role of regional and professional context in shaping perceptions of gender barriers. In Pakistan, women residing in rural and conservative regions reported significantly higher barriers related to mobility and cultural expectations. These restrictions often limit women's ability to pursue employment opportunities outside their immediate communities. In Brazil, however, differences were more strongly associated with years of professional experience, with more experienced women reporting greater awareness of gender discrimination in promotion and leadership opportunities.

Overall, the inferential analysis demonstrates that while both countries face challenges related to women's professional empowerment, the underlying drivers of these barriers differ significantly across national contexts. These findings underscore the importance of adopting context-specific policy interventions aimed at addressing the unique structural and cultural barriers affecting women's professional advancement.

Discussion

The comparative analysis of women's transition from higher education to professional empowerment in Pakistan and Brazil reveals both shared structural barriers and context-specific constraints shaped by socio-cultural norms, institutional practices, and labour market dynamics. Although both countries have made measurable progress in expanding women's access to higher education, the translation of educational attainment into meaningful professional empowerment

remains uneven. Previous studies have demonstrated that educational achievements alone do not guarantee women's participation in the labour market, particularly in societies where structural inequalities, cultural expectations, and gendered labour market structures persist [1,20,16].

The findings of this study indicate that while the broader struggle for gender equality is universal, the drivers of gender inequality differ significantly across national contexts. In Pakistan, barriers are primarily rooted in deeply embedded patriarchal norms, restricted mobility, and early family responsibilities, which limit women's ability to convert educational achievements into professional opportunities [8,9]. In contrast, women in Brazil encounter barriers more closely associated with institutional discrimination, labour market inequalities, and gender stereotypes in male-dominated sectors, particularly within science, technology, engineering, and mathematics (STEM) professions [19,23].

These results reinforce the argument that while gender inequality is a global phenomenon, the mechanisms through which it manifests are shaped by cultural, institutional, and economic conditions unique to each country [3].

Socio-cultural norms and gender roles

Socio-cultural norms and gender role expectations remain among the most influential determinants of women's professional empowerment across many developing countries. In societies characterized by strong patriarchal structures, women's social identities are often closely linked to domestic responsibilities, which can limit their participation in public and professional spheres [1,31].

In Pakistan, the societal framework is deeply influenced by patriarchal norms that prioritize traditional gender roles within family and community structures. Women are frequently expected to prioritize domestic responsibilities over professional careers, and cultural expectations surrounding marriage and family obligations significantly shape women's educational and professional trajectories [8,10]. Early or arranged marriages remain a critical factor influencing women's career choices, particularly in rural regions where conservative social norms remain dominant. These socio-cultural constraints often restrict women's mobility and decision-making autonomy, thereby creating a substantial gap between women's educational attainment and their participation in the labour market.

The role of family, particularly parental influence is also a significant determinant of women's professional opportunities. Research has shown that parental attitudes toward female education and employment strongly influence women's career aspirations and opportunities for advancement [9]. In many rural communities, cultural expectations regarding modesty, safety, and family honour further restrict women's ability to pursue higher education or employment opportunities outside their local environments.

In Brazil, although women generally experience greater mobility and educational access compared to women in Pakistan, socio-cultural expectations continue to shape women's professional trajectories. Brazilian women are often expected to balance both professional and domestic responsibilities, creating what scholars describe as the "double burden" of paid and unpaid labour [24,23]. While these societal expectations are less restrictive than those observed in Pakistan, they nevertheless influence women's career progression and leadership opportunities. Women in Brazil also face subtle but persistent forms of workplace discrimination, particularly in male-dominated fields

Table 4: Socio-cultural Norms and Gender Roles.

Perception/Issue	Pakistan (%)	Brazil (%)
Women expected to prioritize family over career	70.00%	45.00%
Women face cultural pressure for early marriage	45.00%	2.50%
Patriarchal attitudes hinder career growth	65.00%	40.00%

such as STEM. Gender stereotypes associating leadership with masculine characteristics remain influential, contributing to the underrepresentation of women in executive roles [19,21]. Although Brazil has achieved higher levels of female educational attainment, these socio-cultural and institutional barriers continue to limit women's access to leadership positions and high-paying professional sectors (Table 4).

The survey results further illustrate the influence of socio-cultural norms on women's professional trajectories. A significant proportion of Pakistani respondents (70%) reported that women are expected to prioritize family responsibilities over career advancement. Additionally, nearly half of the respondents indicated that cultural pressure related to early marriage remains a substantial barrier to women's empowerment. These findings align with previous research highlighting the persistent role of patriarchal structures in shaping women's labour market participation in Pakistan [8,9].

In Brazil, although the influence of patriarchal norms appears less pronounced, 45% of respondents still indicated that societal expectations surrounding family responsibilities influence women's career decisions. This finding reflects the continued relevance of gender role expectations in shaping professional opportunities for women in Brazil, particularly within organizational and leadership contexts. Overall, while socio-cultural norms affect women in both countries, the severity and manifestation of these norms differ significantly, reflecting broader differences in social structures, institutional development, and gender equality policies.

Economic barriers and wage disparities

Economic barriers and wage disparities represent another critical dimension of gender inequality affecting women's professional empowerment in both Pakistan and Brazil. Labour market participation and income equality are widely recognized indicators of women's economic empowerment and broader societal development [16,18].

In Pakistan, women's labour force participation remains among the lowest globally, with women representing approximately 25% of the national workforce [5]. Several factors contribute to this low participation rate, including cultural norms discouraging female employment, limited access to safe transportation, and a lack of supportive workplace policies. In many regions, particularly rural areas, economic opportunities for women remain extremely limited, and women with higher education often struggle to secure employment that aligns with their qualifications. Wage disparities also remain a significant challenge. Studies indicate that women in Pakistan frequently receive lower wages than men for similar work, reflecting both structural labour market inequalities and persistent gender biases in hiring and promotion practices [10].

In Brazil, women have achieved higher levels of educational attainment compared to men, yet significant gender wage gaps persist within the labour market. Research has shown that women in Brazil earn consistently less than male counterparts performing comparable roles, particularly in private-sector and technical professions [19,18]. These disparities are especially evident in male-dominated industries such as

Table 5: Economic Barriers and Wage Disparities.

Perception/Issue	Pakistan (%)	Brazil (%)
Women experience a significant wage gap	70.00%	50.00%
Limited job opportunities for women	65.00%	40.00%
Gender-based wage discrimination	60.00%	45.00%

engineering and technology, where women remain underrepresented in leadership and high-paying positions.

In addition to wage inequality, women in Brazil also face challenges related to job security and occupational segregation. Many women are employed in lower-paying sectors or informal employment arrangements, which provide limited opportunities for career advancement and financial stability (Table 5) [23].

The survey findings reinforce the persistence of economic barriers to women's empowerment. In Pakistan, 70% of respondents reported experiencing significant wage disparities, while 65% indicated that limited employment opportunities remain a major challenge. These results reflect the structural barriers within Pakistan's labour market that prevent women from fully utilizing their educational qualifications. In Brazil, although economic opportunities appear comparatively greater, 50% of respondents still reported experiencing wage disparities, and 45% indicated that gender-based wage discrimination remains a concern. These findings suggest that even in countries with relatively stronger institutional frameworks for gender equality, labour market inequalities persist.

Overall, the economic challenges faced by women in Pakistan and Brazil illustrate how structural labour market inequalities continue to undermine women's professional empowerment, despite improvements in educational access. While socio-cultural restrictions play a more dominant role in Pakistan, institutional labour market discrimination appears more prominent in Brazil.

Cultural attitudes and mobility

Cultural attitudes and mobility restrictions represent critical structural barriers affecting women's professional empowerment in many developing countries. Women's ability to travel independently for education, employment, and professional networking plays a crucial role in determining their participation in labour markets and leadership opportunities [1,3,16]. However, in societies where traditional gender norms strongly influence social behaviour, women's mobility is often constrained by cultural expectations and safety concerns.

In Pakistan, cultural and religious norms significantly shape women's access to public spaces and professional opportunities, particularly in rural and conservative regions. These norms frequently reinforce the expectation that women should prioritize domestic responsibilities and limit their engagement in public or professional activities [8,10]. In many communities, concerns related to safety, modesty, and family honour discourage women from travelling independently for educational or employment purposes. These restrictions are especially pronounced in provinces such as Balochistan and Khyber Pakhtunkhwa, where conservative social structures further constrain women's autonomy.

As a result, women's ability to access higher education institutions or employment opportunities located outside their immediate communities is often severely restricted. Research has shown that mobility constraints significantly contribute to Pakistan's low female labour force participation, as women are frequently unable to pursue

professional careers that require commuting or relocation [5,9]. Consequently, even highly educated women may find themselves excluded from professional opportunities due to structural limitations on mobility.

In contrast, Brazil presents a different socio-cultural context where women generally experience greater freedom of movement and access to educational institutions. Although cultural attitudes toward women's professional participation have evolved considerably over recent decades, gender stereotypes and occupational segregation still influence women's career trajectories [21,23]. Women in Brazil may experience fewer direct restrictions on physical mobility; however, cultural expectations regarding gender roles continue to shape perceptions of women's suitability for certain professions or leadership positions.

For example, women pursuing careers in male-dominated sectors such as engineering, technology, and construction may encounter implicit biases suggesting that these fields are more appropriate for men [19,20]. Although Brazilian women generally have greater freedom to travel for education and employment, structural inequalities and gender stereotypes still influence their professional advancement (Table 6).

Table 6: Cultural Attitudes and Mobility.

Perception/Issue	Pakistan (%)	Brazil (%)
Cultural restrictions on women's mobility	60.00%	10.00%
Women are restricted from travelling for work/ education	55.00%	25.00%
Freedom of movement impacts career growth	45.00%	30.00%

The survey findings provide empirical support for these broader structural patterns. In Pakistan, 60% of respondents reported experiencing cultural restrictions on women's mobility, highlighting the significant role of social norms in shaping women's access to professional opportunities. Additionally, more than half of respondents indicated that women face restrictions when travelling for work or educational purposes. In Brazil, the reported level of mobility restrictions is substantially lower, with only 10% of respondents indicating significant cultural restrictions on women's movement. However, 30% of respondents still acknowledged that mobility constraints can influence career growth, suggesting that structural barriers continue to shape women's professional opportunities even in relatively more gender-progressive environments.

These results suggest that while mobility restrictions affect women in both countries, the nature and severity of these constraints differ significantly. In Pakistan, mobility limitations are primarily rooted in socio-cultural and religious norms that directly restrict women's access to education and employment opportunities. In Brazil, however, mobility barriers are less explicit and more closely linked to occupational structures and gender stereotypes within specific professional sectors.

Violence and harassment

Violence and harassment represent another significant barrier affecting women's ability to transition from higher education to professional empowerment. Gender-based violence and workplace harassment not only threaten women's physical and psychological well-being but also discourage their participation in professional environments and leadership roles [4,16]. The persistence of such issues highlights the importance of institutional protections and supportive workplace environments in promoting gender equality.

In Pakistan, gender-based violence and workplace harassment remain widespread concerns, particularly in male-dominated sectors. Women frequently encounter harassment in educational institutions, workplaces, and public spaces, which significantly affects their willingness to pursue professional careers [11,9]. Although Pakistan introduced the Protection Against Harassment of Women at the Workplace, implementation and enforcement remain inconsistent across institutions. Cultural stigmas surrounding harassment further complicate the issue. Many women hesitate to report harassment due to fear of social repercussions, victim-blaming, or damage to family reputation [8]. As a result, harassment often remains underreported, limiting the effectiveness of existing legal frameworks and discouraging women from pursuing leadership roles or employment in certain sectors.

In Brazil, workplace harassment and gender-based discrimination also represent significant barriers to women's professional advancement. Studies indicate that women in Brazil are more likely than men to experience sexual harassment in professional environments, particularly in sectors characterized by strong male dominance [22,23]. Harassment can manifest in various forms, including verbal abuse, exclusion from professional networks, and discriminatory promotion practices. Although Brazil has established legal protections addressing workplace harassment and gender discrimination, enforcement remains uneven across industries and institutions [18]. Women frequently report limited institutional support when attempting to report harassment, which can undermine confidence in existing reporting mechanisms and discourage victims from seeking justice (Table 7).

Table 7: Violence and Harassment.

Perception/Issue	Pakistan (%)	Brazil (%)
Experience of workplace harassment	40.00%	55.00%
Inadequate legal protection against harassment	55.00%	40.00%
Harassment reported in professional settings	50.00%	42.00%

The survey findings highlight important differences in how harassment and institutional responses are perceived in the two countries. In Pakistan, 55% of respondents indicated that legal protections against harassment are inadequate, suggesting significant gaps in enforcement and institutional accountability. In Brazil, a higher proportion of respondents (55%) reported experiencing workplace harassment, reflecting the challenges faced by women in professional environments, particularly within male-dominated sectors. However, fewer respondents identified legal protections as inadequate, indicating somewhat stronger institutional frameworks compared to Pakistan.

Overall, these findings demonstrate that while harassment remains a critical issue in both countries, the underlying challenges differ in nature. In Pakistan, cultural stigma and institutional limitations often prevent women from reporting harassment, whereas in Brazil, harassment is more closely linked to workplace environments and organizational cultures. Addressing these issues will require stronger legal frameworks, improved institutional accountability, and greater awareness of gender equality in professional settings.

Workplace discrimination, violence, and harassment

Workplace discrimination, violence, and harassment represent critical structural barriers that undermine women's transition from higher education to professional empowerment. Gender-based harassment and discrimination affect women's ability to enter, remain

in, and progress within professional environments, particularly in male-dominated sectors. These challenges are widely documented in global gender equality research, which highlights workplace harassment as a key factor contributing to gender inequality in labour markets [4,16].

Although both Pakistan and Brazil experience significant challenges related to workplace discrimination and harassment, the underlying causes and institutional responses differ due to variations in socio-cultural norms, labour market structures, and legal frameworks. In Pakistan, workplace harassment remains a pervasive issue, particularly in male-dominated industries such as construction, engineering, manufacturing, and government administration. Research has shown that women in Pakistan frequently encounter hostile work environments characterized by gender bias, harassment, and exclusion from professional networks [8,9]. These challenges are compounded by weak institutional enforcement of legal protections. Although Pakistan introduced the Protection Against Harassment of Women at the Workplace, implementation remains inconsistent across institutions and sectors.

Cultural norms further exacerbate the problem by discouraging women from reporting harassment. In many cases, women fear social stigma, victim-blaming, or damage to family reputation if they disclose experiences of workplace harassment [11]. Consequently, harassment often remains underreported, and women may choose to leave the workforce or avoid professional environments perceived as unsafe. Many women therefore gravitate toward sectors considered socially acceptable or relatively safer, such as education or healthcare, which may offer fewer opportunities for career advancement and financial independence (Table 8).

Table 8: Workplace Discrimination, Violence, and Harassment.

Perception/Issue	Pakistan (%)	Brazil (%)
Experience with workplace discrimination	40.00%	55.00%
Poor legal protection for women	55.00%	40.00%
Harassment in male-dominated sectors	60.00%	45.00%

The survey findings illustrate important differences in how workplace discrimination and harassment are experienced in the two countries. In Pakistan, 60% of respondents reported experiencing harassment in male-dominated sectors, highlighting the strong gender imbalance within certain professional industries. Furthermore, more than half of respondents indicated that legal protections against harassment remain inadequate, reflecting concerns about weak institutional enforcement mechanisms.

In Brazil, the proportion of respondents reporting workplace discrimination is higher (55%), suggesting that harassment and discrimination are widespread within professional environments. However, fewer respondents identified legal protection as inadequate compared to Pakistan, reflecting Brazil's relatively stronger legal frameworks addressing workplace discrimination. Despite these legal protections, enforcement remains uneven across industries, particularly within private-sector organizations. In Brazil, workplace harassment is especially prevalent in male-dominated sectors such as science, technology, engineering, and mathematics (STEM). Research has demonstrated that women working in these industries frequently encounter gender-based discrimination, exclusion from professional networks, and sexual harassment [22,23]. These experiences can negatively affect women's career trajectories, reducing opportunities for promotion and leadership development.

Unlike Pakistan, where cultural stigma often prevents women

from reporting harassment, the primary challenge in Brazil lies in institutional responses to harassment. Women frequently report that organizational mechanisms for reporting harassment are ineffective or insufficiently protective, leading to concerns about retaliation or career stagnation [18]. As a result, many women remain hesitant to report harassment despite existing legal protections.

Overall, these findings demonstrate that while harassment remains a significant barrier in both countries, the mechanisms through which it operates differ. In Pakistan, socio-cultural norms and institutional limitations combine to silence women's experiences, whereas in Brazil, the challenge lies more in organizational practices and workplace cultures that fail to adequately address gender-based discrimination.

Gendered perceptions of leadership and career progression

Gendered perceptions of leadership represent another significant barrier affecting women's professional empowerment in both Pakistan and Brazil. Leadership stereotypes associating authority, decisiveness, and strategic competence with masculine characteristics continue to influence organizational structures and promotion practices across many societies [32,31].

In Pakistan, leadership positions are often perceived as inherently masculine, with cultural norms reinforcing the belief that men are more suitable for positions of power and decision-making. Patriarchal social structures strongly influence professional hierarchies, particularly in sectors such as engineering, government administration, and higher education [8]. Women who aspire to leadership roles frequently encounter resistance from colleagues and supervisors who question their leadership capabilities based on traditional gender expectations.

These perceptions are reinforced by organizational structures that favour male employees for promotion and leadership opportunities. Informal professional networks and mentorship opportunities are often dominated by men, further limiting women's access to leadership pathways. As a result, many highly qualified women remain concentrated in mid-level positions despite possessing the necessary educational and professional credentials for senior roles (Table 9).

Table 9: Gendered Perceptions of Leadership and Career Progression.

Perception/Issue	Pakistan (%)	Brazil (%)
Men are perceived as better leaders	65.20%	45.60%
Women often overlooked for leadership roles	72.80%	54.00%
Leadership stereotypes limit women's progression	65.00%	55.00%

The survey findings highlight the persistence of leadership stereotypes in both countries. In Pakistan, 72.8% of respondents reported that women are frequently overlooked for leadership positions, while 65.2% indicated that men are generally perceived as more capable leaders. These results reflect the strong influence of patriarchal norms within professional environments.

In Brazil, although gender stereotypes appear less pronounced than in Pakistan, a substantial proportion of respondents still reported encountering barriers related to leadership perceptions. Approximately 54% of respondents indicated that women are overlooked for leadership roles, while 55% reported that leadership stereotypes limit women's career progression.

These findings align with previous research documenting the persistence of the "glass ceiling" phenomenon, where structural and cultural barriers prevent women from advancing to senior leadership

positions despite comparable qualifications [22,19]. In Brazil, such barriers are particularly evident within male-dominated industries such as engineering, technology, and finance. Although Brazilian women have achieved higher levels of educational attainment compared to men, they remain underrepresented in executive positions and corporate leadership roles [18]. Discriminatory promotion practices, implicit biases in hiring decisions, and limited access to professional networks contribute to this disparity.

Another factor reinforcing gender inequality in leadership is the lack of female role models within senior organizational positions. The absence of visible female leaders can discourage younger women from pursuing leadership careers and perpetuate perceptions that leadership roles are primarily reserved for men. Overall, these findings highlight the persistence of gendered leadership stereotypes across both countries. However, while patriarchal cultural norms represent the primary barrier in Pakistan, institutional and organizational structures appear to play a more significant role in Brazil.

Freedom and mobility restrictions

Restrictions on women's mobility represent a critical barrier to women's professional empowerment, particularly in societies where socio-cultural norms strongly influence gender roles. The ability to travel freely for education, employment, and professional networking is widely recognized as a key determinant of women's economic participation and career advancement [1,3,16]. When mobility is restricted, women's access to higher education, professional training, and employment opportunities becomes significantly limited.

In Pakistan, cultural and religious norms frequently shape women's ability to move freely within public spaces. Concerns related to modesty, personal safety, and family honour often constrain women's ability to travel independently for education or work, particularly in conservative or rural areas [8,10]. These restrictions can prevent women from relocating for employment or pursuing educational opportunities located outside their immediate communities.

Such mobility limitations create significant structural barriers to women's professional advancement. Even when women successfully obtain higher education qualifications, their career opportunities may remain constrained if employment opportunities require commuting or relocation. These barriers are particularly evident in provinces such as Balochistan and Khyber Pakhtunkhwa, where traditional social norms and limited transportation infrastructure further restrict women's autonomy and participation in the labour market [5]. Although these challenges are most pronounced in rural regions, they are also present, albeit to a lesser degree in urban centres (Table 10).

Table 10: Freedom and Mobility Restrictions.

Perception/Issue	Pakistan (%)	Brazil (%)
Cultural restrictions on women's mobility	60.00%	10.00%
Women unable to relocate for work	55.00%	25.00%
Freedom of movement impacts career growth	45.00%	30.00%

The survey results reinforce these structural patterns. In Pakistan, 60% of respondents reported experiencing cultural restrictions on women's mobility, indicating the substantial influence of social norms on women's ability to pursue professional opportunities. Similarly, more than half of respondents indicated that women face significant challenges relocating for employment or educational purposes. These findings highlight the role of mobility as a crucial factor influencing women's empowerment. Restricted movement can prevent women from accessing labour markets, professional training opportunities,

and leadership roles, thereby reinforcing existing gender inequalities [1].

In Brazil, mobility restrictions are considerably less pronounced. Brazilian women generally enjoy greater freedom to travel for education and employment, reflecting more progressive gender norms and stronger institutional support for women's participation in public life. However, cultural expectations still shape women's professional choices and career trajectories. For instance, women pursuing careers in male-dominated sectors such as engineering or technology may encounter subtle pressures to avoid roles requiring extensive travel or relocation [19,21]. In some regions of Brazil, particularly those with more traditional social structures, gender expectations may still influence women's professional mobility and career decisions. Although the restrictions observed in Brazil do not reach the same level of severity as those in Pakistan, the findings demonstrate that mobility constraints can still affect women's professional development. The ability to relocate or travel for employment opportunities remains an important factor in achieving professional empowerment.

Global perspectives and intersectionality

The barriers faced by women in Pakistan and Brazil reflect broader global challenges associated with gender inequality and intersectionality. Intersectionality theory highlights how different social identities, including gender, race, class, and geographic location, interact to create complex forms of discrimination and inequality [33,44]. Understanding these intersecting forms of disadvantage is essential for analysing how women experience barriers to professional empowerment across different socio-economic contexts.

In Pakistan, women from rural communities and lower socio-economic backgrounds often encounter multiple overlapping barriers that limit their access to education and employment opportunities. These women frequently face financial constraints that restrict their ability to pursue higher education, while conservative social norms further limit their autonomy and mobility [10,14]. As a result, women from disadvantaged backgrounds are less likely to access higher education institutions or professional careers compared to women from more privileged urban communities. Intersectional factors such as ethnicity, socio-economic status, and regional disparities further intensify these inequalities. Women belonging to minority ethnic groups or low-income households often face compounded barriers related to limited educational resources, cultural restrictions, and labour market discrimination. These structural inequalities highlight the importance of addressing not only gender inequality but also broader socio-economic disparities when developing policies aimed at promoting women's empowerment.

In Brazil, intersectionality also plays a significant role in shaping women's experiences within educational and professional environments. Afro-Brazilian women, in particular, experience multiple layers of discrimination related to race, gender, and socio-economic status [21]. Research has shown that Afro-Brazilian women are disproportionately represented in lower-paying occupations and are significantly underrepresented in leadership positions within both public and private sectors. These disparities reflect the enduring influence of historical racial inequalities and structural labour market discrimination in Brazil. Even as women overall have made progress in educational attainment and workforce participation, women from marginalized racial and socio-economic backgrounds continue to face significant barriers to professional advancement (Table 11).

The survey findings illustrate the importance of intersectional

Table 11: Global Perspectives and Intersectionality.

Perception/Issue	Pakistan (%)	Brazil (%)
Women from rural areas face additional barriers	65.00%	N/A
Minority women experience compounded discrimination	55.00%	45.00%
Lower socio-economic background limits opportunities	60.00%	35.00%

Table 12: Comparative Policy Recommendations for Women's Empowerment in Pakistan and Brazil.

Policy Area	Pakistan: Recommended Interventions	Brazil: Recommended Interventions
Women's Mobility and Autonomy	Invest in safe, affordable, and gender-sensitive transportation systems, particularly in rural regions where mobility restrictions are most severe. Community awareness campaigns should encourage family support for women's education and employment mobility.	Reduce geographic and occupational mobility barriers by encouraging women to pursue careers requiring relocation or travel, particularly in high-growth sectors such as STEM. Regional development policies should improve access to education and employment for women in disadvantaged areas.
Early Marriage and Gender Norms	Strengthen enforcement of minimum marriage age laws and implement public awareness campaigns promoting the importance of women's education and professional careers. Provide flexible education and employment opportunities for married women.	Address gender norms related to domestic responsibilities by promoting shared household labour. Policies supporting parental leave for both parents and awareness campaigns encouraging equitable family roles should be expanded.
Gender Equality in Institutions	Implement gender-sensitive institutional policies including mentorship programs, leadership training, and professional networks for women. Strengthen enforcement of anti-harassment policies and introduce confidential reporting mechanisms.	Promote women's leadership representation, particularly in male-dominated sectors such as STEM. Encourage gender diversity targets for senior leadership and expand mentorship programs supporting women's career progression.
Wage Inequality and Labour Market Discrimination	Introduce financial incentives for organizations that hire and retain female employees. Expand vocational training and entrepreneurship programs to improve women's labour market participation.	Implement pay transparency regulations requiring companies to disclose gender wage data. Encourage organizations to adopt gender equality policies in recruitment, promotion, and compensation practices.
Work-Life Balance and Family Responsibilities	Promote flexible working arrangements, remote work options, and workplace childcare facilities to support women balancing professional and family responsibilities.	Expand access to affordable childcare and introduce gender-neutral parental leave policies to reduce the double burden of paid and unpaid work. Encourage flexible work arrangements across organizations.
Workplace Harassment and Institutional Protection	Strengthen enforcement of workplace harassment legislation by establishing independent investigation bodies and anonymous reporting systems. Introduce mandatory gender equality training across organizations.	Improve institutional support systems for harassment victims through counselling services, legal assistance, and confidential reporting mechanisms. Require organizations to implement gender sensitivity training and stronger accountability frameworks.

factors in shaping women's experiences of professional empowerment. In Pakistan, 65% of respondents indicated that women from rural areas face additional barriers, reflecting the combined influence of geographic, economic, and cultural constraints. Similarly, respondents in both countries recognized the impact of discrimination affecting women from marginalized communities. Over half of respondents in Pakistan and nearly half in Brazil indicated that minority women experience compounded discrimination, demonstrating the importance of considering intersectionality when addressing gender inequality.

These results underscore the need for policy approaches that move beyond gender-focused interventions alone. Effective strategies for promoting women's empowerment must also address structural inequalities related to socio-economic status, geographic location, and racial or ethnic identity. Overall, the comparative findings highlight how national contexts shape women's experiences of empowerment while simultaneously reflecting broader global patterns of gender inequality. Recognizing the intersectional nature of these barriers is essential for designing inclusive policies that support women across diverse social backgrounds.

Policy recommendations

The comparative analysis conducted in this study highlights the need for context-sensitive yet parallel policy interventions that address the structural, cultural, and institutional barriers affecting women's transition from higher education to professional empowerment in Pakistan and Brazil. Although the two countries differ significantly in terms of cultural norms, labour market structures, and institutional frameworks, they share common challenges including workplace

discrimination, gendered leadership perceptions, and persistent socio-cultural expectations surrounding women's roles.

Effective policy responses must therefore combine country-specific interventions with broader gender equality strategies aligned with global commitments such as the United Nations Sustainable Development Goal 5 (SDG 5) [45,46]. The following recommendations address key barriers identified in this study while highlighting policy priorities for both countries (Table 12).

The policy implications derived from the comparative analysis are summarised in Table 12, which outlines targeted interventions addressing key barriers to women's professional empowerment in Pakistan and Brazil.

Conclusion

This comparative study examined the barriers affecting women's transition from higher education to professional empowerment in Pakistan and Brazil. The findings reveal that although both countries have made progress in expanding women's access to higher education, significant structural, cultural, and institutional barriers continue to limit women's ability to translate educational attainment into professional advancement.

In Pakistan, women's workforce participation remains constrained primarily by socio-cultural factors, including patriarchal norms, mobility restrictions, early marriage, and strong expectations surrounding family responsibilities. These factors create a persistent gap between women's educational achievements and their participation in the labour market, particularly in rural and conservative regions.

Addressing these challenges requires policies that improve women's mobility, strengthen legal protections, and promote societal support for women's education and professional development. In contrast, Brazil demonstrates higher levels of female educational attainment and greater freedom of mobility. However, institutional barriers within the labour market, such as gender wage disparities, workplace discrimination, and the underrepresentation of women in leadership roles continue to limit women's professional advancement. These challenges are particularly evident in male-dominated sectors such as STEM, where gender stereotypes and structural inequalities remain significant obstacles.

The comparative findings highlight that while gender inequality is a shared global challenge, the nature of the barrier's women face is shaped by national socio-cultural and institutional contexts. Effective policy interventions must therefore be tailored to these contextual realities. Strengthening gender equality policies, promoting inclusive workplace environments, and expanding opportunities for women's leadership will be essential for both countries. Ultimately, enabling women to successfully transition from higher education to professional empowerment is not only a matter of gender equality but also a critical driver of economic growth and sustainable development. By addressing the structural barriers identified in this study, both Pakistan and Brazil can move closer to achieving more inclusive and equitable societies.

Limitations

Despite providing important insights into the barriers affecting women's transition from higher education to professional empowerment in Pakistan and Brazil, this study has several limitations that should be acknowledged. First, the data were collected from selected higher education institutions, which may limit the generalisability of the findings to women outside academic environments or those not pursuing higher education. Second, the study relies on self-reported survey responses, which may be subject to response bias or personal perceptions that do not fully capture the complexity of institutional and societal barriers. Third, the cross-sectional nature of the datasets restricts the ability to analyse how women's professional trajectories evolve over time. Finally, although the comparative design highlights important contextual differences between Pakistan and Brazil, the findings may not fully represent the diversity of experiences across all regions and socio-economic groups within each country. Future research could address these limitations by incorporating longitudinal data, expanding the sample to include women across different sectors, and employing mixed-method approaches to capture deeper qualitative insights into women's empowerment pathways.

References

- Kabeer N (1999) Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change* 30: 435-464.
- Dufo E (2012) Women empowerment and economic development. *Journal of Economic Literature*, 50: 1051-1079.
- Sen A (1999) *Development as Freedom*. Oxford: Oxford University Press.
- UN Women (2023) *Progress on the Sustainable Development Goals: Gender Snapshot 2023*. New York: UN Women.
- World Economic Forum (2024) *Global Gender Gap Report 2024*. Geneva: World Economic Forum.
- International Labour Organization (ILO) (2024). *Global Employment Trends for Women 2024*. Geneva: ILO.
- Klasen S (2019) What explains uneven female labor force participation levels and trends in developing countries? *World Bank Research Observer* 34: 161-197.
- Malik F, Courtney K (2011) Higher education and women's empowerment in Pakistan. *Gender and Education* 23: 29-45.
- Yousaf R, Schmiede R (2017) Barriers to women's representation in academia: An exploration of gender inequality in Pakistan. *Asian Journal of German and European Studies* 2.
- Ali T, Krantz G, Gul R, Asad N, Johansson E, Mogren I (2021) Gender roles and their influence on life prospects for women in urban Pakistan: A qualitative study. *Global Health Action* 4: 7448-7457.
- Afzal A (2024) Familial and socio-cultural barriers faced by working women in Pakistan. *Pakistan Journal of Applied Social Sciences* 14: 45-60.
- Batool Z, Sajid, MA, Shaheen I (2022) Gender disparities in higher education in Pakistan: Access, participation and career outcomes. *International Journal of Educational Development* 91.
- Ahmad MS, Bhatti SH (2023) Assessing women's rights in Pakistan: An analysis of legal and social challenges with potential solutions. *Pakistan Journal of Humanities and Social Sciences* 11: 991-1003.
- UNESCO (2022) *Global Education Monitoring Report 2022: Gender Report*. Paris: UNESCO.
- Kabeer N (2012) *Women's economic empowerment and inclusive growth*. SIG Working Paper. London: DFID.
- World Bank (2022) *Women, Business and the Law 2022*. Washington DC: World Bank.
- International Labour Organization (ILO) (2022) *Women in Business and Management: The Business Case for Change*. Geneva: ILO.
- OECD (2023) *Gender Equality in Education, Employment and Entrepreneurship*. Paris: OECD Publishing.
- Blau FD, Kahn LM (2017) The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature* 55: 789-865.
- Goldin C (2014) A grand gender convergence: Its last chapter. *American Economic Review* 104: 1091-1119.
- Segatto B, Costa F (2022) Gender inequality and labour market participation in Brazil: Structural and institutional barriers. *Journal of Gender Studies* 31: 456-470.
- Barreto M, Ryan MK, Schmitt MT (2017) *The Glass Ceiling in the 21st Century: Understanding Barriers to Gender Equality*. Washington DC: American Psychological Association.
- Madgavkar A, White O, Krishnan M, Mahajan D, Azcue X (2019) *The Future of Women at Work: Transitions in the Age of Automation*. McKinsey Global Institute.
- Charmes J (2019) *The unpaid care work and the labour market*. ILO Working Paper. Geneva: International Labour Organization.
- Beneria L, Berik G, Floro M (2015) *Gender Development and Globalization: Economics as if All People Mattered*. London: Routledge.
- Folbre N (2012) *For Love and Money: Care Provision in the United States*. New York: Russell Sage Foundation.
- Seguino S (2000) Gender inequality and economic growth: A cross-country analysis. *World Development*, 28: 1211-1230.
- Gaddis I, Klasen S (2014) Economic development, structural change, and women's labor force participation. *Journal of Population Economics* 27: 639-681.
- England P (2010) The gender revolution: Uneven and stalled. *Gender & Society* 24: 149-166.
- Heath R, Jayachandran S (2017) The causes and consequences of increased female education and labor force participation in developing countries. *Handbook of Economic Field Experiments* 1: 303-346.
- Ridgeway CL (2011) *Framed by Gender: How Gender Inequality Persists in the Modern World*. Oxford: Oxford University Press.
- Eagly AH, Carli LL (2007) *Through the Labyrinth: The Truth About How Women Become Leaders*. Boston: Harvard Business School Press.
- Crenshaw K (1991) Mapping the margins: Intersectionality, identity politics, and violence against women of colour. *Stanford Law Review* 43: 1241-1299.

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34. Hantrais L (2009) *International Comparative Research: Theory, Methods and Practice*. Basingstoke: Palgrave Macmillan.
 35. Bryman A (2016) *Social Research Methods*. 5th ed. Oxford: Oxford University Press.
 36. Creswell JW, Creswell JD (2018) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks: Sage.
 37. De VD (2014) *Surveys in Social Research*. London: Routledge.
 38. Dillman DA, Smyth JD, Christian LM (2014) *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method*. Hoboken: Wiley.
 39. Likert R (1932) A technique for the measurement of attitudes. *Archives of Psychology* 140: 1-55.
 40. Boone HN, Boone DA (2012) Analysing Likert data. *Journal of Extension* 50: 1-5.
 41. Field A (2018) *Discovering Statistics Using IBM SPSS Statistics*. London: Sage.
 42. Pallant J (2020) *SPSS Survival Manual*. London: McGraw-Hill.
 43. Hair JF, Black, WC, Babin BJ, Anderson RE (2019) *Multivariate Data Analysis*. Cengage.
 44. Collins, PH (2015) Intersectionality's definitional dilemmas. *Annual Review of Sociology* 41: 1-20.
 45. United Nations (2023) *The Sustainable Development Goals Report 2023*. New York: United Nations.
 46. UNICEF (2022) *Child Marriage: Latest Trends and Future Prospects*. New York: UNICEF.