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The Influence of Socio-economic Status and Cultural Factors on Gender-based Educational Discrimination: A Mediation Analysis

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ABSTRACT

The research paper investigated how socio-economic status, and cultural factors contribute to gender-based educational discrimination among female university students. A quantitative survey research design was used to explain the influence of socio-economic status, and cultural factors on gender-based educational discrimination. The population of the study was female students of Kohat University of Science and Technology (KUST). A purposive sampling technique was applied, and a sample size (n=372) was drawn through G*Power software. Data was collected through structured questionnaires and analysed through descriptive and inferential statistics. The result revealed that socio-economic status is negatively associated with gender-based educational discrimination, suggesting that female students from low socio-economic backgrounds experience higher level of discrimination at university level. Furthermore, cultural factors were found to negatively mediate the relationship between socio-economic status and gender-based educational discrimination. In conclusion, the findings demonstrate that socio-economic status significantly influences cultural factors, which in turn affect the level of gender-based educational discrimination experienced by female university students.

Keywords: Educational discrimination, Socio-economic status, Gender, Cultural factors, Inequality

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INTRODUCTION

Gender-based educational discrimination persists as a significant global issue, shaped by socio-economic and cultural factors. Gender inequality primarily refers to the disparate treatment or perceptions of people based on their gender, frequently rooted in socially constructed roles and norms (Ferretti & Souza, 2022; Nikupeteri, Skaffari, & Laitinen, 2022). Other related concepts such as gender gap, disparity, and discrimination emphasize various aspects of this inequity. A gender gap generally signifies quantifiable disparities in outcomes between males and females, particularly in terms of access to education or career opportunities. Gender disparity highlights the inequitable allocation of resources, whereas gender discrimination refers to the unfair treatment stemming from these disparities, often entrenched within societal frameworks (Abbas & Smith, 2023).

Worldwide, educational gender inequity persists despite the advancements and progress in certain areas. Paul, Zaw, and Darity (2022) state that although 25 nations have successfully eliminated the gender gap in education, the global disparity persists at 36.7%. The inequalities continue to exist in additional domains, including economic involvement and political empowerment (Drescher, Podolsky, Reardon, & Torrance, 2022; Morley & Kosbar, 2022). Iceland and its Nordic counterparts excel in attaining gender parity, while Pakistan persistently ranks among the nations with the highest levels of gender inequality (Hoor-Ul-Ain & Iraqi, 2022; Sarwar & Imran, 2019; Taj, 2022).

In Pakistan, gender inequality in education is notably severe, influenced by deep-rooted socio-cultural norms and economic constraints. Although numerous studies have examined the overarching issue of gender inequality in the country (Arif & Khalid, 2022; Javed et al., 2022; Sibghatullah, Saraih, & Hamdan, 2022; Sultan, 2022), there is a paucity of research specifically addressing the impact of socio-economic status on educational discrimination among female students at the university level, particularly within ethnically distinct groups like the Pashtuns.

The Pashtun society, predominantly situated in the northwestern areas of Pakistan, is defined by a stringent social hierarchy and conventional gender norms that profoundly affect educational access. Cultural values in this context frequently emphasize male education, but societal expectations around home duties, honor, and restrictions on mobility limit female educational achievement. Economic adversity exacerbates this inequality, as constrained home resources are often preferentially given to male children.

This study seeks to analyze the interplay between socio-economic and cultural factors in shaping gender-based educational inequality in Pashtun communities of Pakistan. The research employs a positivist approach to enhance the understanding of gender-based inequality in education and offers insights relevant to other traditional societies encountering parallel difficulties.

Research Objectives

1. To investigate the impact of socio-economic status on gender-based educational discrimination among the female students at Kohat University of Science and Technology (KUST).
2. To assess the mediating role of cultural factors in the relationship between socio-economic status and gender-based educational discrimination among female students in KUST.

LITERATURE REVIEW

Gender discrimination persists as a widespread problem in numerous nations, including Pakistan, where socio-economic, cultural, and systemic factors perpetuate educational disparities. The literature demonstrates a growing recognition and academic focus on gender-based inequalities, especially regarding educational access and results. Correspondingly, Afzal et al. (2013) emphasize that gender inequality manifests in various ways, frequently disadvantaging both men and women in distinct circumstances. The study further highlights

that these discrepancies adversely affect the social and economic opportunities available to individuals and are profoundly ingrained in structural and cultural norms.

DiPrete and Buchmann (2013) assert that all genders encounter educational prejudice but in varying forms and intensities across different nations. McKnight (2022) enhances this comprehension by observing that men frequently endure violence, terrorism, incarceration, and infirmity, while women are more prone to experience domestic violence, sexual assault, unemployment, illiteracy, and political marginalization. This dual susceptibility highlights the intricacy of gender discrimination, which transcends a single gender and is influenced by overarching societal causes. Mansoor (2013) contends that entrenched patriarchal attitudes, honor-centric norms, limited women's mobility, and adverse cultural biases substantially contribute to gender discrimination in Pakistan. These barriers impede women's access to education and perpetuate traditional gender norms.

Notwithstanding these problems, the Constitution of Pakistan (1973) establishes a legal framework that ensures equal rights and freedoms for all individuals, explicitly forbidding discrimination based on gender, class, or ethnicity. Cole (2022) notes that infringements on women's rights continue in multiple domains, including the home, education, employment, and politics. These transgressions are frequently sustained by insufficient gender sensitivity and social opposition to eradicating gender-based prejudices. Recent research has examined the worldwide aspects of gender-based educational discrimination. van Dijk (2022) observes that women in poor nations persistently encounter systemic disadvantages stemming from socio-economic inequalities, global political frameworks, and breaches of international law. These obstacles are especially pronounced in educational environments, where restricted access further marginalizes women.

Midya and Islam (2022) emphasize that educational prejudice is prevalent in numerous Muslim communities, particularly affecting women. This type of discrimination is intimately

connected to socio-economic and cultural circumstances, illustrating how ingrained traditions and ideals obstruct gender parity in education. Zajda (2022) supports this perspective, contending that educational disparity undermines fundamental democratic tenets of social fairness and equal opportunity, frequently sustained by class divisions and socio-economic differences. Augustine Bala, Azman, and Singh (2022) propose community-based behavioural treatments to address these difficulties, emphasizing the promotion of gender equality and anti-discrimination legislation. They underscore the necessity for heightened public awareness, support mechanisms for vulnerable individuals, and focused initiatives to tackle forced marriage and disparities in employment training.

Norley (2022) strongly associates socio-economic variety with disparities in educational attainment, notably highlighting how language hurdles and social status contribute to unequal outcomes. Similarly, Guliyeva-Kabaoglu (2022) examines the Russian situation, emphasizing that although initiatives for gender equality are in progress, a prolonged process of societal consciousness and institutional reform is essential. The historical development of women's education in Russia influenced by political, economic, and cultural shifts demonstrates the necessity of ongoing transformation to attain equity.

Gender-based educational discrimination is a worldwide concern intricately linked to socio-economic status, cultural traditions, and social institutional practices in a society. Resolving this issue necessitates structural transformation, legal reform, and grassroots advocacy to provide equitable educational opportunities for all genders (Paul et al., 2022).

Moreover, the above critical and scientific literature review reveals a gap in understanding how socio-economic status and cultural factors, directly or indirectly contribute to gender-based educational discrimination in a society. The conceptual understanding of gender-based educational discrimination is rooted in intersectionality theory. For example, Crenshaw (1989) established the paradigm known as intersectionality theory, which

acknowledges that individual perceptions of privilege and discrimination are influenced by the interaction of many overlapping social identities, including ability, sexual orientation, gender, class, and racism. Similarly, the present study used the assumption of intersectionality theory and conceptualized the female educational discrimination as an outcome variable. As a result, the study investigated the relationship between socio-economic status, cultural factors, and gender-based educational discrimination (see Figure 1). Two main hypotheses were developed based on review of literature and the assumption of the intersectionality theory.

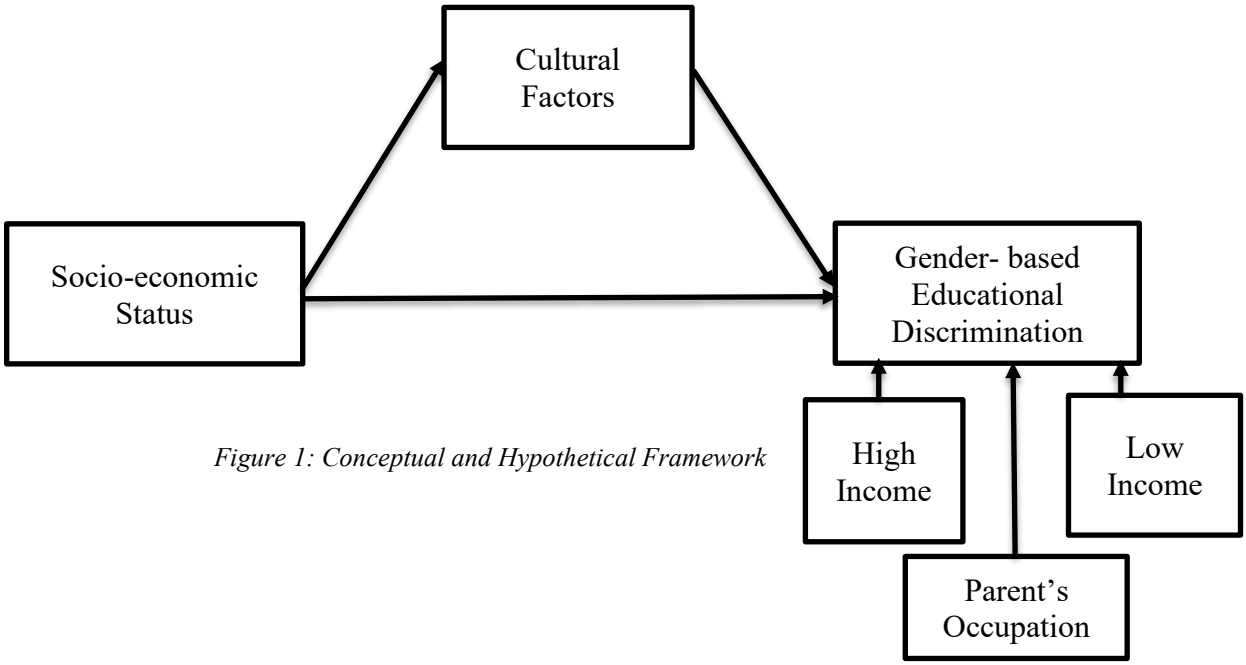


Figure 1: Conceptual and Hypothetical Framework

Research Hypotheses

- **H1:** There is a relationship between socio-economic status and gender-based educational discrimination.
- **H2:** Cultural factors mediate the relationship between socio-economic status and gender educational discrimination.

RESEARCH DESIGN

This study employed a cross-sectional research design to examine the correlates of socio-economic status within the study sample and to explore its relationship with cultural factors and gender-based educational discrimination. The nature of the research was positivistic and quantitative. The quantitative research measures the objective realities those are universal and rigid in nature (Babbie, Halley, & Zaino, 2007; Sekaran, 2000, 2006; Singleton, 1999). This study was quantitatively designed to test the association between the socio-economic factors and gender-based educational discrimination with the mediating role of cultural factors. The study overall applied Research Onion model which is developed by (Saunders, Lewis, & Thornhill, 2007). The research adopted a positivist philosophy, a deductive approach, survey strategy, a mono-method choice, and a cross-sectional time horizon. The below Figure 2 is depicting brief research design selection and research methodological lens.

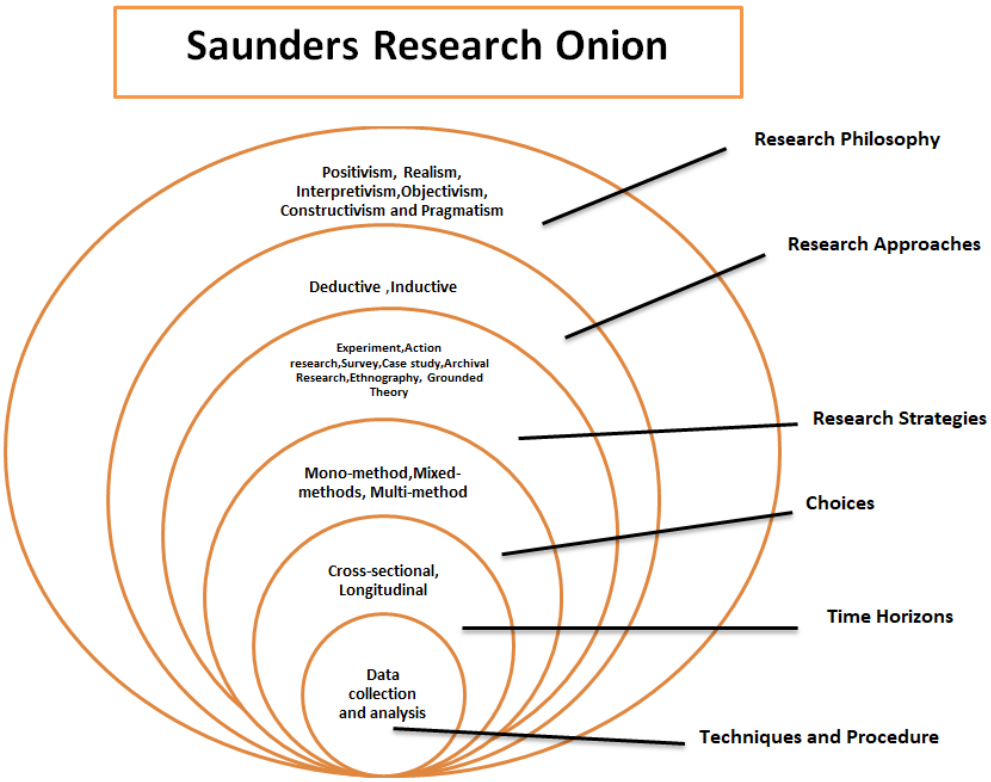


Figure 2: Source: (Saunders et al., 2007)

Study Population, Sampling Techniques and Sample Size

The research site for this study was KUST, Kohat, Khyber Pakhtunkhwa, Pakistan. The total number of male and female students is 6000, and we selected female students for this study from four different faculties of social sciences, biological sciences, chemical and pharmaceutical, and physical and numerical sciences. Purposive sampling technique was used to deliberately choose female students from KUST. Due to cultural factors, some Pashtun women were unwilling to participate or provide data because of family pressure. Therefore, the researchers rationalized that data can be more accurate if the purposive sampling technique is used and it can give interesting, pertinent, and varied insights regarding the impact of socio-economic status and cultural factors toward gender educational discrimination. The study aim was to examine the context-specific feelings and perceptions that might not be captured by random sampling and non-probability sampling technique can be reliable technique to find all the results.

For instance, Etikan, Musa, and Alkassim (2016) recommended that the purposive sampling technique can be used if the participants have been selected based on specific criteria during the conduct of quantitative research. Likewise, Palinkas et al. (2015) delineated that purposive sampling, often linked to qualitative research, may also be well used in quantitative studies when the objective is to examine a clearly defined minority group among the entire population (Palinkas et al., 2015). Therefore, the present research used a purposive sampling technique to collect data from each stratum of female students; a sample size of 372 was drawn by using power analysis.

As a result, seventy-two (72) respondents filled out the questionnaire during the pilot test, and it confirmed the questionnaire's reliability and validity. For example, during polit testing, respondents reported that certain survey questions were unclear or repetitive. Consequently, five questions were rephrased for clarity, and two redundant items were

eliminated to mitigate respondent fatigue and improve construct validity. Consequently, feedback revealed uncertainty about the orientation of the Likert scale, specifically the placement of "strongly agree" on the left or right. A uniform response format was implemented across all sections to ensure consistency and enhance reliability.

The initial survey was found to have a longer completion time than expected, averaging over 20 minutes. In reaction, the survey was simplified to eliminate unnecessary elements, reducing completion time to a standard of 12–15 minutes, thereby improving the probabilities of full answers in the primary inquiry. Feedback from subject matter experts during the pilot phase improved the content validity of the survey. Terminological alterations were implemented to be consistent with the particular knowledge of the desired population. The adjustments, guided by pilot data and respondents' feedback, enhanced the quality, reliability, and validity of the study instruments. The understanding gained from the pilot phase was crucial for guaranteeing the final research project would be methodologically robust as well as scientifically feasible.

Likewise, the research used specific demographic strata based on income, which were based on high and low-income strata to make the sample more representative. Lastly, parents' occupations were also stratified into five different strata to represent the sample size of the study. Faul, Erdfelder, Lang, and Buchner (2007) described that "G*Power software" or "power analysis" is a good and reliable tool for selecting sample size based on a number of variables. The sample size selection details are illustrated in Figures 3 and 4. In this case, the unit of analysis was female students of all four faculties.

Additionally, the sample size contains six predictors and a non-centrality parameter value of ($\lambda = 22.320$). The "Critical F" value is crucial for determining the sample size, and it was (2.034) with numerator df (7). The effect size f square was 0.06. For instance, f^2 is an effect size measure used in regression analysis, and it is describing that how strong is the relationship

between variables. Here, in this study the effect of f^2 is small effect which is also possible to draw a relationship between these study variables. Likewise, the denominator df was count 364. The sample size's power (1-β = 0.95) was also assessed, and the actual power was 0.950. Finally, the sample size for the research (n= 372) was calculated.

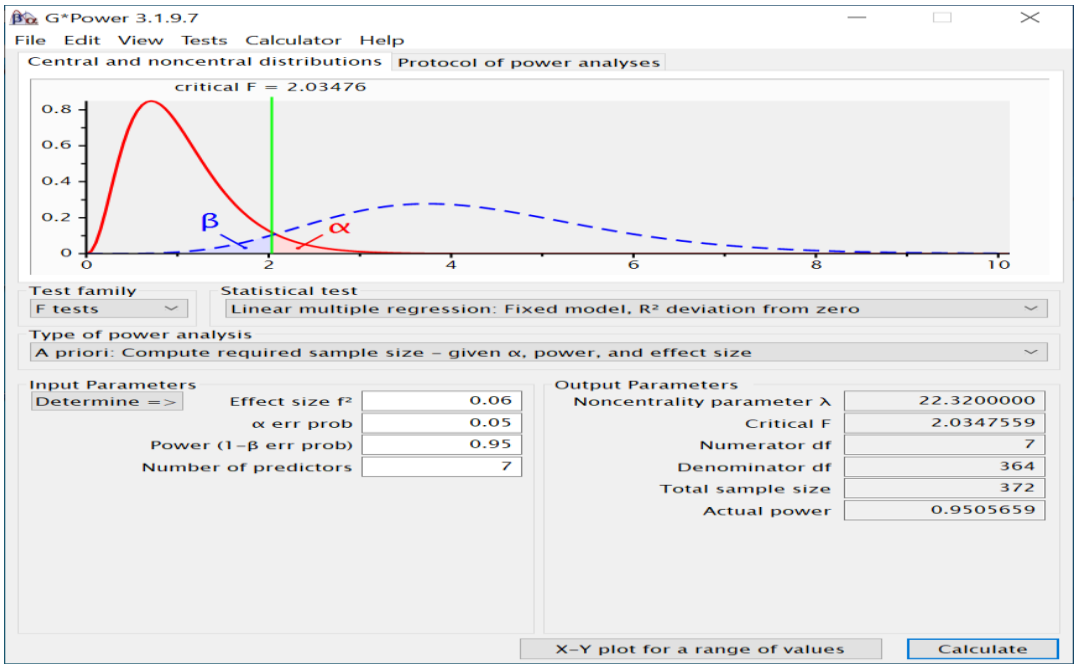


Figure 3: Power Analysis for Sample Size

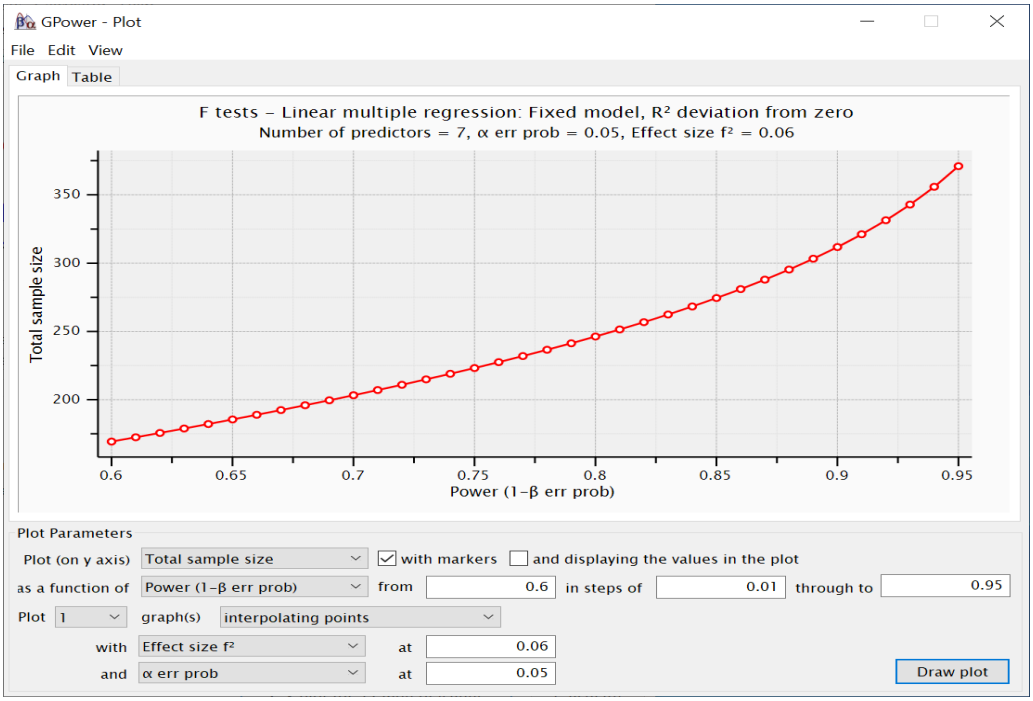


Figure 4: Graphical Representation of Sample Size Distribution

Study Limitation

The research findings may not be applied to other contexts, individuals, or areas because the external validity was not ensured. The study's conclusions could only apply to the particular group of students or circumstances under investigation, not to the general public. In addition to the issue of external validity, the researchers understand that self-reported data may have been influenced by response bias, and the researchers made nominal changes to the model during the analysis to deal with data differences, which could affect how accurate the predicted results are.

Data Collection Techniques and Instruments

The researchers collected data with the help of survey and from the previous adapted and adopted constructs (see Appendix-1 for more details). Such as socio-economic status short form questionnaire (SES-SQ) (5-items) was adopted and adapted from the study of (Roohafza et al., 2021). The 8-item Cultural Factors Scale was adapted from Abdollah, Abdullah, and Voon (2016), and the 6-item Discrimination Scale was adapted from Shaukat, Siddiquah, and Pell (2014).

Diversified data analysis techniques were applied in the form of structural equation modeling (SEM) (AMOS) and python software was used to draw simulation results which is a widely used statistical technique. SEM (AMOS) and computer based software could predict good future direction (Awang, Afthanorhan, & Mamat, 2016; Awang at al., 2017). Confirmatory factor analysis and structural model could be used with the help of SPSS and AMOS (Babbie et al., 2007; Hair, Gabriel, & Patel, 2014b). In this regard, the researchers measured the prediction of socio-economic status, cultural factors and it is predictive relationship on gender-based educational discrimination. The researchers ensured that informed consent was obtained from the selected sample of female students at KUST and also secured permission for data collection from the university's research department. The study tested hypotheses and compare results with the past scientific literature. Second, items and elements

were adopted and adapted from the previous empirical studies. A close ended questionnaire was designed through 5-point Likert Scale and data was collected from the respondents through this adopted and adapted questionnaire. The relationship between endogenous and exogenous variables was tested by using SEM (AMOS). With the help of university key consultants, researchers administered the questionnaire and collected data. Similarly, the process of data collection is given in the diagram below (see Figure. 5).

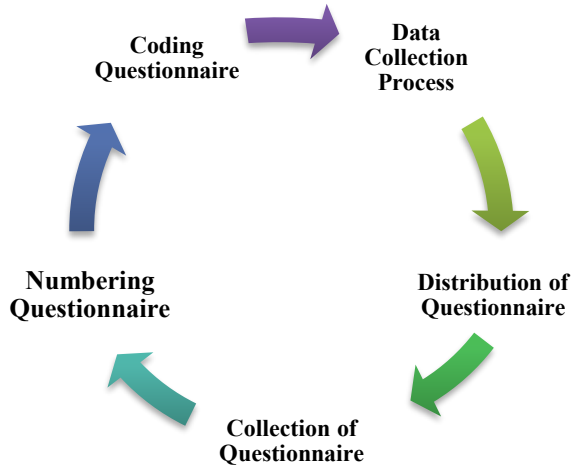


Figure 5: Data Collection Process

FINDINGS

The results revealed that socio-economic status negatively influences gender educational discrimination, and cultural factors play a mediating role between this relationship. The analysis of SEM was used to measure the initial model and model fit for these abovementioned variables. The paper constructed linearity with the help of a linear model and studied socio-economic status among female university students and its dependency on gender-based educational discrimination with the mediating relationship of cultural factors. Furthermore, a research data process used in the study is shown in Figure 6.

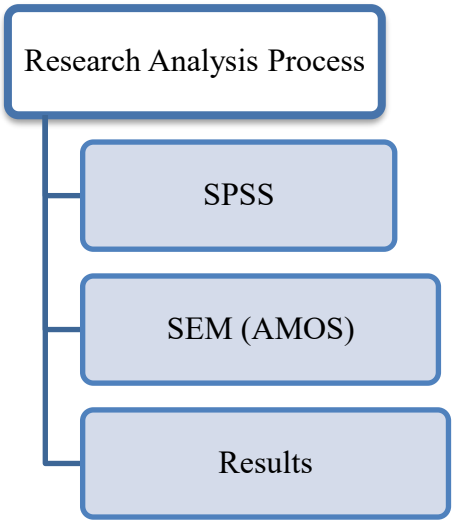


Figure 6: Research Data Analysis Process

The study evaluated demographic factors based on frequency and percentages. The age was measured based on four different categories. Most students belonged to the 26–30 years age group, with a frequency of 121 (32.53%). Educational level was measured among the participants, with 124 (33.34%) bachelor's degree students, 109 (29.30%) master's students, 99 (26.61%) MPhil students, and 40 (10.75%) PhD students. Likewise, 31-35-year-old students were 72 (19.35 %) and lastly, 36-40-year-old students were much less in number, and their frequency was 60 (16.13%). Furthermore, family income level was measured, with the majority (196 respondents, 56.2%) reporting a monthly income between 51,000 and 70,000. Additionally, parents' occupation was enquired, revealing that 103 respondents (27.6%) had parents working as daily wage earners, which was the most common occupation among the sample (see Table 1 for details).

Table 1

Demographic Factors of Respondents (n=372)

Characteristics	***f***	***%***
Age		
20-25	119	31.99
26-30	121	32.53
31-35	72	19.35
36-40	60	16.13
Educational Level		
Bachelor	124	33.34
Master	109	29.30
MPhil	99	26.61
PhD	40	10.75
Family Income Level		
30000-50000	139	37.37
51000-70000	196	52.69
Above 71000	37	9.94
Parent's Occupation		
Managerial Positions	65	17.47
Academicians	71	19.09
Trader	68	18.28
School Teachers	65	17.47
Daily Wages	103	27.69
Total	372	100.0

Note: f=frequency and %=percentage

This study examines all indicators for each statement. Figure 7 displays the constructs of factor loading or confirmatory factor analysis for each statement. Similarly, Cronbach's alpha reliability was higher than 0.70. For example, cultural factors have α=0.810, socio-economic status has α=0.750, and gender-based educational discrimination has α=0.750. Likewise, average variance extracted (AVE), composite reliability (CR), and discriminant validity (DV) were also measured to explain the constructs interrelationship (see Table 2). The measurement model was adequate for conducting structural model analysis because each step satisfied the data. This paper has used structural equation modelling to assess better prediction in the future, as demonstrated in (Figures 8 and 9). The unique contribution of the research was

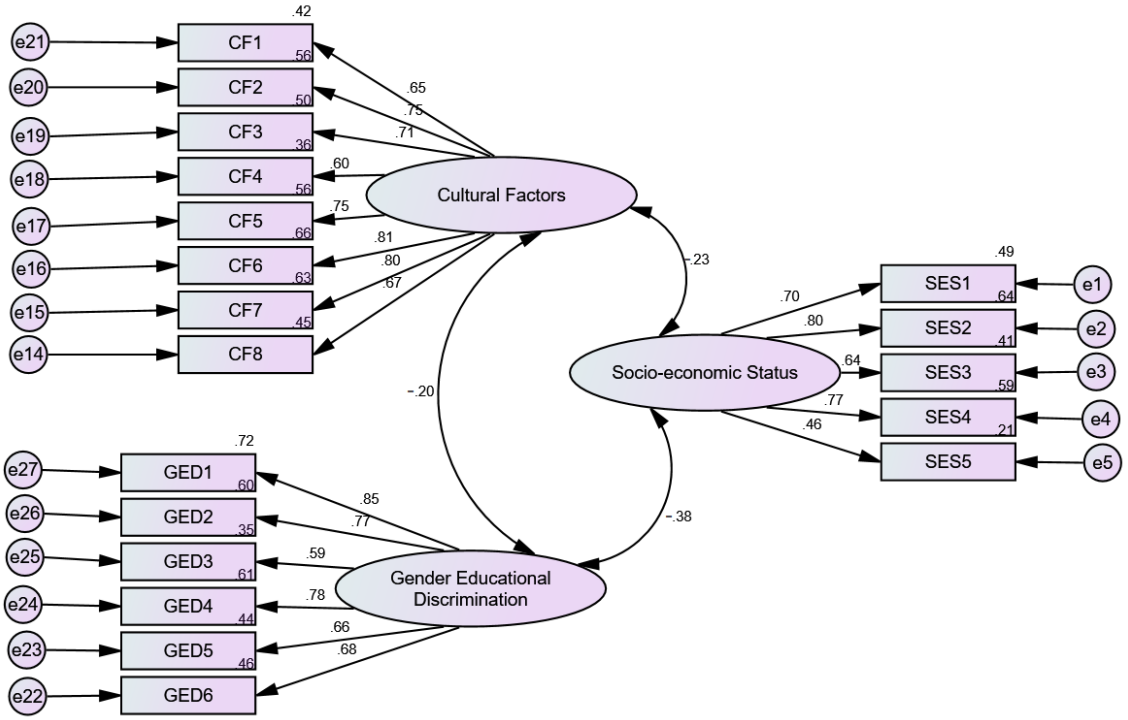
to predict gender-based educational discrimination among female university students so that policymakers can develop better policies from the depiction of the initial model and model fit. To achieve the expected predicted statistical findings, the research evaluated three control variables (high and low income, and parents' occupation) include error terms (e4), covariate variables paths, and proposed model. Considering these above-mentioned additional variables, we can assess the statistical importance of the model prediction and learn about the control substantial effect of parental income and occupation on gender educational discrimination (see Figures 8 and 9).

Table 2

Reliability and Validity Analysis (n=372)

Constructs AVE, CR and DV	**Values**
Cultural Factors	
AVE	0.544
CR	0.811
DV	0.781
A	0.810
Socio-economic Status	
AVE	0.510
CR	0.890
DV	0.712
A	0.750
Gender Educational Discrimination	
AVE	0.522
CR	0.822
DV	0.813
A	0.751

Figure 7: Combined Measurement Model of Gender-based Educational Discrimination (n=372)



The fundamental objective of statistical path modelling in survey research is to identify correlations between variables. For example, several authors suggested that SEM determines whether or not independent and dependent variables have relationship in the causal path modelling (Hair, Gabriel, & Patel, 2014a). Likewise, in this research, the R^2 coefficient association between the initial fit and the proposed fit models were evaluated to know the actual effect. Similarly, the cause-and-effect relationship was identified using the flowchart arrow model, which drew the absolute path of a cause-and-effect linear relationship to understand the prediction among constructs better. Path analysis is an excellent method for measuring the relationship between direct and indirect causal association, as well as providing a theoretical predictive explanation, graphically shown in percentages and ratios, of the paths in which different interactions between causes and effects generate numerical results.

Agresti and Finlay (1997) demonstrated that path analysis is a critical process that predicts cause and effect association between exogenous and endogenous constructs. The development of scientific understanding is made possible by indirect implications. The beta values are presented in Table 3 and 4, which illustrates how endogenous indicators are influenced by additional factors or elements when a variable has an indirect impact. Similarly, the SEM equation model has found the CMIN value which was significant ($\chi^2 df$ =8.765). The fit indices indicated that socio-economic status, culture factors and gender-based educational discrimination have good model fit indices, which are shown in Table 3 (see second line results).

Furthermore, graphical representations were measured on the prescribed significant criteria of Hu and Bentler (1999) and they recommended a range of 1 to 3 for the value of χ^2/df. Similarly, RMSEA and SRMR values are considered good when they are below the threshold .08, while CFI, TLI, NNFI, and GFI values are usually considered excellent when are above .90, while values between 0.80 and 0.90 are regarded as acceptable. In Table 3, the modified model demonstrates a good fit based on multiple fit indices. The χ^2/df ratio is within the recommended range, and indices such as GFI, CFI, and NNFI exceed the 0.90 threshold, signifying excellent fit. Additionally, the RMSEA and SRMR values meet the criteria for acceptable fit. Overall, these results suggest that the modifications significantly enhanced the model, making it a good fit to the data.

The structural equation model modification process is very complex, and the initial model result did not fulfil the prescribed criteria, which need to be modified in the initial stages. The researchers made changes in the model variables and intercorrelated them with control variables. Tomás, Meliá, and Oliver (1999) found that error terms and covariance can be better used to make the model fit. Furthermore, Cook, Campbell, and Day (1979) defined a quasi-

survey-based study as an important method to draw variance between legitimate factors. For instance, Byrne (2016) described that some covariance errors should give at least 4.0 results whenever any researcher makes modifications in fit indices. In a similar vein, the value of covariance and the "chi-square Chang" were higher than 4.0, and the second model was significant and acceptable. Thus, the second model, "chi-square Chang," had a value of 4.108 in this study. It was primarily a model modification procedure; the second model yielded a substantially better fit, with an indexed value of 4.108. Therefore, in step two, the modification procedure eliminated all non-significant pathways and included control factors (low and high income, parent's occupation) to create covariance paths.

Accordingly, in the second step, we recalculated the model fit and eliminated paths with terms of insignificant covariance. The findings (Table 3) showed that the absolute model estimate was satisfied by the RMSEA (.080) and SRMR (.079). Results for the model fit were evaluated using the following indexed metrics: GFI = 0.918, CFI = 0.923, and NNFI = 0.915. In a similar way, the outstanding prediction was shown by the enhanced value of goodness of fit ($\chi^2/df =$ 2.913). Consequently, the research results revealed some distinct differences between the suggested and saturated models. When we consider cultural factors, parental profession, income level, and socio-economic status, we find that this saturation model is the most effective in explaining gender educational discrimination among university students. Referring to Table 3 and Figure 8, the research concluded that the saturated model was a good fit and that no further modifications were necessary for the theoretical model to achieve additional model fitness.

Table 3

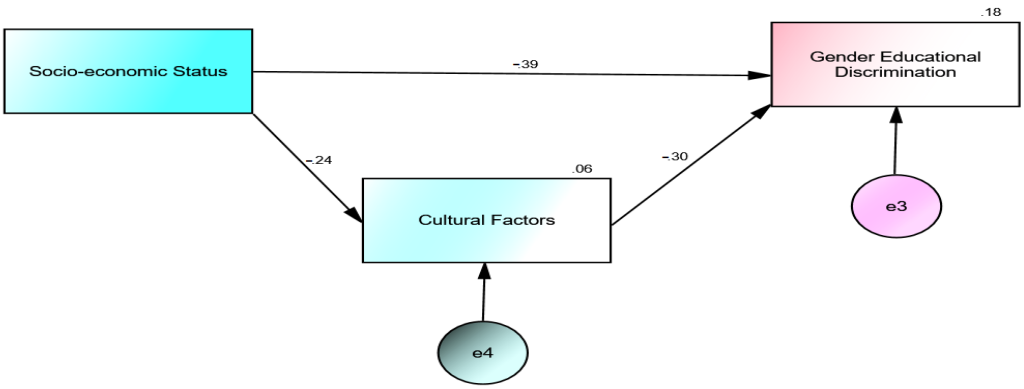
Fit Indices for Socio-economic Status and Cultural Factors Influence Educational Discrimination (n=372)

Model	χ^2df	χ^2/df	GFI	CFI	NNFI	RMSEA	SRMR
Initial Model	12.873	7.922	.892	.889	.879	.211	.132
Model Fit	8.765	2.913	.918	.923	.915	.080	.079
$\Delta\chi^2$	4.108						

"Note: n= 372, All the changes in chi square values are computed relative to model, χ^2>.05, GFI = Goodness of fit index, CFI = comparative fit index, NNFI (TLI) = Non-normed fit index, RMSEA = root mean square error of approximation, SRMR = Standardized root mean square, $\Delta\chi^2$ = chi square change".

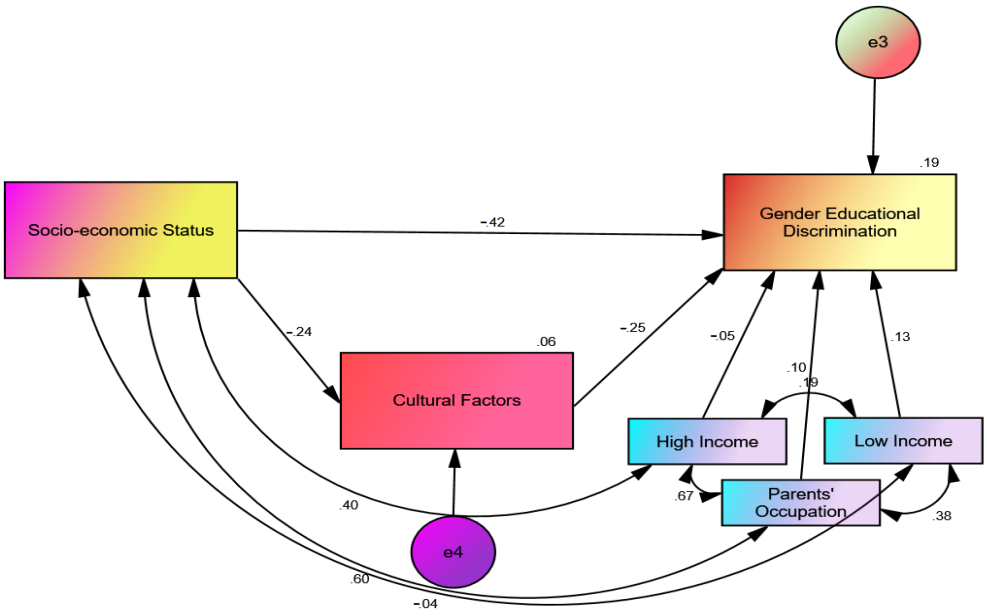
In Table 4, the model paths such as, socio-economic status, cultural factors have predictive association with gender educational discrimination and the beta values (socio-economic status ---> gender educational discrimination: β = -.42***), (socio-economic status ---> cultural factors: β = -.24***, (cultural factors ---> gender educational discrimination: β = -.25***). These results concluded that indirect and direct relationship were present between study constructs. The inferential data concluded that socio-economic status was a strong negative coefficient for gender educational discrimination when applied intervening effect of cultural factors. Likewise, cultural factors bring 28 percent change or variance $100 \times .281 = 28\%$. The R^2 predicted 28 percent total change in the gender educational discrimination was when added cultural factors (see Table 5). The proposed hypotheses were statistically justified that cultural factors combined intervening the relationship between socio-economic status and gender educational discrimination (see Figure 8).

Figure 8: Empirical Results from a Complex Multivariate Model Fit 1 Representation (n=372)



Note: "A complex multivariate model of two endogenous constructs and one exogenous indicator. Completely standardized maximum likelihood parameter estimate for gender educational discrimination".

Figure 9: Complex Multivariate Model Fit 2 Statistics (n=372)



Note: "A complex multivariate model of two endogenous constructs and one exogenous factor along with three control factors (high low income, parents' occupation). Completely standardized maximum likelihood parameter estimate for gender educational discrimination".

The research evaluated the direct and indirect impacts using the bootstrapping approach to enlargement the statistical sampling for measuring socio-economic status, cultural factors and gender educational discrimination. Socio-economic status directly and indirectly affects using cultural factors and gender educational discrimination. For example, Valeri and VanderWeele (2013) set a scientific criteria and prescribed that a 5000-bootstrapped sample is reliable and valid for SEM based linear multiple regress association.

In Table 4, the findings show that socio-economic status has a significant negative impact on cultural factors and gender educational discrimination. Likewise, the results of direct effects revealed that socio-economic status is a highly negative predictor of cultural factors. The direct statistical theory concluded that socio-economic status has a negative effect on gender educational discrimination. This means that socio-economic status adversely increases gender educational discrimination at the university level among female students. On the other hand, the study hypothesized that cultural factors mediate between socio-economic status and gender educational discrimination (see Table 5).

Table 4

Direct Effects of Gender- based Educational Discrimination (n=372)

Variables	Cultural Factors			Gender Educational Discrimination		
	β	S.E.	C.R.	β	S.E	C.R.
Socio-economic Status	-0.257***	0.051	-5.044	-0.421***	0.064	-6.423

*Note: *p<.05, **p<.01, ***p<.001, β = beta, S.E.= Standard Error, C.R.= Composite Reliability.*

Furthermore, in Table 5, the study depicted indirect effects of the cultural factors in the context of gender educational discrimination with the independent influence of socio-economic status. Also, cultural factors was statistically significant and also negative mediator for gender educational discrimination at the university level. The overall mediation model could bring a 28 per cent chance of variation in gender educational discrimination.

Table 5

Indirect Effects of the Paths for Socio-economic Status and Gender Educational Discrimination (n=372)

Variables	Gender Educational Discrimination		
	β	S.E.	C.R.
Socio-economic Status	-	-	-
Cultural Factors	-0.232***	0.058	-4.002
R^2	.281		

Note: *p<.05, **p<.01, ***p<.001

The hypotheses testing was real and practical objective of this research. Likewise, the results showed that all theoretical and practical proposed hypotheses were accepted during evaluation of statistical model. For instance, socio-economic status predicted cultural factors, and gender educational discrimination. Lastly, the statistical paths concluded that three (3) hypotheses were significant (see Table 6). These predictive findings were discussed with previous critical and scientific literature review.

Table 6

Hypothetical Paths and Hypotheses Significant Level for Socio-economic Status and Gender Educational Discrimination (n=372)

Hypotheses	Paths	Variables	Estimate	S.E.	C.R.	Pvalue	Label
Cultural Factors	<---	Socio-economic Status	-0.257	0.051	-5.044	***	Sig
Gender Educational Discrimination	<---	Socio-economic Status	-0.421	0.064	-6.402	***	Sig
Gender Educational Discrimination	<---	Cultural Factors	-0.232	0.058	-4.002	***	Sig

*Note: *p<.05, **p<.01, ***p<.001*

DISCUSSION

The main objective of the research was to investigate the effect of socio-economic status on gender-based educational discrimination among female university students. Increasing attention is being paid to the role of cultural factors in shaping gender inequality in education. For example, several studies argued that social and cultural factors influence gender inequality in education in various societies (Arif & Khalid, 2022; Javed et al., 2022; Sibghatullah, Saraih, & Hamdan, 2022). In a community, men and women often have different roles, duties, availability, and control over resources, which leads to a distinct division of labour. The results of another study revealed that men and women have unequal access to educational success in society (Ahmad, Zamri, & Omarali, 2024). Educational achievements among both men and women contributes to improved employment opportunities. In this way, cultural factors may adversely affect educational discrimination among both genders (De Welde & Stepnick, 2023).

The results of the present study showed that cultural factors adversely affect the discrimination in educational institutions among female students. Furthermore, Xu and Zhang (2024) stressed that gender-based educational discrimination increases due to disparities in socio-economic status and orthodox mindset and attitudes of the people. Consistent with these findings, the current study also found socio-economic status shapes cultural factors, which in turn exacerbate gender-based educational discrimination among female students. Specifically, lower socio-economic status is often associated to more traditional or restrictive cultural attitudes, which contribute to unequal treatment of female students in terms of access, support, and opportunities in education (Khan & Saeeda, 2016).

As Sulla et al. (2025) noted, the worldwide gender education gap is still 36.7%, with economic disparity playing a crucial role in perpetuating this inequality between males and females. Additionally, Pakistan is also facing the problem of gender inequality in education and the unfair distribution of educational resources and opportunities (Khan & Asmatullah, 2023).

The present study revealed that low socio-economic status increases educational discrimination among females in higher educational institutions.

Eldred et al. (2014) examined that women are disproportionally disadvantaged when it comes to accessing educational literacy. Correspondingly, Zulfiqar and Ella (2024) supported that the social system, the traditional family values and conservative cultural system hinder the women's right to education. Moreover, family's socio-economic status is also one of the key factors that tends to negatively affect the female education (Afzal, Muhammad, & Zunaira, 2024). The study by Khan et al. (2024) revealed that educational discrimination among Muslim women is strongly associated with a low socio-economic background.

Manzoor et al. (2025) suggested that socio-economic class discrimination is deeply rooted in the cultural aspects of society and is closely associated to gender-based educational discrimination. Concurrently, Nazirullah and Ullah (2025) also argued that young mothers face socially and culturally embedded challenges that lead to gender-based discrimination in accessing education, as prevailing norms often expect women to remain at home and focus exclusively on their maternal roles. Consistent with these findings, the present study also found that socio-economic status contributes to gender-based educational discrimination among female university students, with cultural factors acting as mediator in this relationship.

CONCLUSION

The present study found that socio-economic status and cultural factors are strongly associated with the gender-based educational discrimination among female university students. The findings concluded that low socio-economic status negatively influences gender- based educational discrimination among female students, while cultural factors play a mediating role in this relationship. In addition, the families with higher socio-economic status are less influenced by the traditional cultural and social practices that discourage female education. As

a result, these families are more likely to support their daughters and provide them with opportunities to pursue education. In this study, the statistical model of cultural factors was a significant negative mediator for gender- based educational discrimination among female students, accounting for twenty-eight percent (28%) variation in the outcome.

RECOMMENDTAIONS

It is recommended that there is a need to create awareness among university teachers and students regarding the significance of female education to minimize gender-based educational discrimination at university level. Policymakers should organize targeted workshops and training sessions on gender equality in education, specifically addressing the barriers faced by female students at institutions like KUST. Additionally, outreach programmes should be designed to engage families, particularly those from socio-economically disadvantaged backgrounds, to challenge cultural stereotypes that hinder female education. Families must be encouraged to actively support their daughters' educational aspirations, recognizing that educated women contribute significantly to national development and play a vital role in shaping future generations.

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Conflict of Interest
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Ethics and Permissions
Ethics approval was taken from Kohat University of Science and Technology, Kohat, Pakistan.
Data Sharing and Availability
The corresponding author has agreed to share data upon request.
Authors' Contribution
The conception and design were conducted by Nazirullah; data collection, refinement, statistical analysis, and interpretation were carried out by Dr. Jan Alam; drafting and critical revision for important intellectual content were done by Asif Mahmood, along with incorporating reviewer comments and writing the literature review. All authors approved the final version of the manuscript.

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