

**Influential Factors of Educational Engagement in Kech, Balochistan, Pakistan: A
Quantitative Study with Gender Comparison**

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ABSTRACT

Although the world has acknowledged the role of education in influencing socioeconomic growth, it has been observed that there are huge gender gaps in the enrollment and completion rates of education in the remote parts of Pakistan. This is a quantitative research that examines variables that affect educational participation in Kech district, Balochistan, and specifically the gender gap. A stratified random sample of 300 students (150 female and 150 male) of the University of Turbat was surveyed on the five determinants of social and political environment, self-independence, family dynamics, ambitious aspirations and financial considerations using a questionnaire. Confirmatory factor analysis, testing of measurement invariance, t-tests, and multiple regression were used in the analysis of data. The tool proved to be very reliable (Cronbach 4 alpha =.892). These five factors were very important in both genders in terms of engagement. Regression showed that the strongest predictors were family dynamics (=.356, $p = .001$) and self-independence (=.298, $p = .001$) where 54.7% of the variance was explained. Significant gender differences emerged: female students rated self-independence ($t(285) = 4.23$, $p < .001$, $d = 0.49$) and family dynamics ($t(285) = 3.87$, $p < .001$, $d = 0.45$) higher, while male students rated financial considerations higher ($t(285) = 2.94$, $p = .004$, $d = 0.34$). To sum up, the sociocultural and economic factors influence the educational engagement in Kech, where the family relationships and self-independence are the key motivators. The existing gender differences require gender sensitive policies that take into consideration the family support systems and individual empowerment by realizing that male and female students are motivated differently.

Keywords: *education interest, gender disparity, Kech, Balochistan, Pakistan, quantitative study, tertiary education.*

INTRODUCTION

Background

Education is among the most effective tools in empowering an individual, economic performance, and transformation of society (Boichenko, 2021; Schultz, 1961). Its consequences go beyond the literacy learning to include better health outcomes, higher civic engagement, lower fertility and intergenerational mobility (Isaacs, 2013; Lawson et al., 2008). Education as a transforming power is notably high in the developing settings, and the level of educational achievement is strongly linked to reduction of poverty, gender equality, and sustainable development (Asadullah and Yeasmin, 2022; UNESCO, 2020).

In Pakistan, although the constitutionally guaranteed free education and a series of successive policy promises in terms of universal education access are in place, the educational gap remains wide across gender, geographic, and socioeconomic boundaries. The Pakistan Social and Living Standards Measurement Survey (Pakistan Bureau of Statistics, 2021) indicates that the national literacy levels are 62 percent among males and 45 percent among females, with discrepancies in rural and urban areas increasing the differences between them even further. The province of Balochistan has the largest gender gap, with women literacy rates being about 20 percentage points lower than men literacy rates- the largest gap in the various provinces in Pakistan.

In Balochistan, the area of Kech is a very problematic area in terms of educational development. Kech is geographically remote, has a low level of infrastructure, practices the traditional Balochi culture, and has tribal social organization, which traditionally limits the involvement of women in society (Alam, 2017; Junejo, 2020). Although provincial and national education expenditures are on the rise, however, the number of females enrolling in and completing Kech continues to be significantly lower than that of males, which demonstrates the complicated interdependence between the sociocultural, economic, and institutional factors.

The importance of educational engagement cognizance in this type of environment goes further than the policy-immediacy. Studies invariably show that educated women have better health outcomes, are more autonomous in decision making in households and inject more finances towards the education of their children, leading to virtuous circles of intergenerational development (Asadullah and Yeasmin, 2022; Psacharopoulos and Patrinos, 2018). On the other hand, the existence of gender gaps in education over time reduces economic growth, cyclical poverty, and achievement of larger development objectives (World Bank, 2021).

Problem Statement

Kech district demonstrates both sustained gender differences in education and where the rates of female enrollment and female enrollment are much lower than the male rates of education. These differences can be attributed to a complex interrelationship of sociocultural expectations, economic limitations, geographical limitations and institutional inadequacies. Nonetheless, the current evidence base has three major gaps:

To start with, there is a conspicuous lack of empirical research that could be applied to Kech district. Although research has been conducted on the education of women in other Pakistani settings (Alam, 2017;

Jepps et al., 2022; Junejo, 2020), no research has systematically investigated the education determinants in Kech, which constrains the policy design evidence base to the context.

Second, current research is mainly conducted on the female students alone; it does not compare the impact of determinants of educational engagement on male and female students. It is also important to learn these gender differences to develop gender-sensitive interventions which can deal with the specific barriers and motivators.

Third, the field of previous research in Balochistan has been heavily qualitative in nature offering a dense contextual understanding but with little extrapolation. There is no quantitative evidence that can be used to determine the strength of various determinants relative to each other and test hypothesized relationships.

The current paper fills these gaps by offering the initial massive quantitative evaluation of the factors that affect educational engagement in the district of Kech with a direct comparative analysis of male and female students.

Theoretical Framework

This study is grounded in two complementary theoretical perspectives: Human Capital Theory and Social Cognitive Theory.

Social Cognitive Theory (Bandura, 1986) is an extension of this economic point of view with a greater focus on the mutual relations between personal (self-efficacy, aspirations), behavioral (persistence, effort), and environmental (family support, sociocultural context) factors. The main idea in this structure is the triadic reciprocity: people are not passive receivers of the environmental factors but actors, the creators and the created of their settings. Self-efficacy beliefs - perceptions of one's ability to perform certain tasks is also very significant in education persistence. Students who have high self-efficacy beliefs have a stronger endurance, put more effort and effort and resilience to overcome obstacles.

The combination of these frameworks leads to the conceptualization of the educational engagement in this study being influenced by:

- Environmental factors (social and political environment, family aspects, money)
- There are personal factors (self-independence beliefs, ambitious aspirations).
- Behavioral (educational engagement) outcomes.

The process of gender socialization can have a systematic influence on the interaction of these factors, creating different approaches to education among the male and female students.

According to this combined framework, we will come up with five hypotheses:

H1: Educational engagement is positively related to the social and political environment.

H2: Self-independence has a positive effect on educational engagement.

H3: The family dynamics are positively related to the educational engagement.

H4: Aspirations of high goal make a positive contribution to the educational engagement.

H5: Financial factors have a positive effect on the engagement in education.

We also assume that male and female students have very different levels of strength in these relations, which is due to different experience in socialization and the opportunities structure.

Research Objectives and Questions

This paper is aimed at achieving three major goals:

1. To test the factors that affect educational involvement of students in the university in the Kech district, Balochistan, empirically.
2. To compare the difference between males and female students with regard to these factors.
3. To offer evidence-based and gender-sensitive policy and practice recommendations.

The research questions that the study will deal with include:

RQ1: What are the key factors that affect educational engagement in Kech, Balochistan university students?

RQ2: Which factors amongst them help predict educational engagement and how well does each factor predict educational engagement?

RQ3: Are there any statistically significant differences between the perceived effect of these factors by gender?

Significance of the Study

This paper contributes to the academic literature and debate on policies in a number of ways.

Theoretical Contribution: The study combines the Human Capital Theory and Social Cognitive Theory and provides a better framework of what constitutes the educational engagement in comparison to either of the two theories. These theories are further insighted by the explicit analysis of gender differences, which test the hypothesis of relationships being equal between gender groups or that there are different pathways.

Empirical Contribution: The research will be the first large-scale quantitative data regarding educational determinants in the Kech district, which will fill a gap in the literature in the region. The gender sample is balanced, and this can be strengthened to compare with each other.

Methodological Contribution: The tested instrument and the proven measurement invariance between genders offer a methodological base of the prospective research in similar settings.

Practical Contribution: The results come up with practical (gender-specific) educational policy and practice recommendations in Balochistan, which might be applied in other areas with comparable issues.

LITERATURE REVIEW

Overview and Synthesis Approach

This is a literature review that draws a synthesis of empirical studies of factors of educational engagement in developing settings, especially Pakistan and South Asia. Instead of a sequential review of literature, the

review is conducted thematically in relation to five factors that were found in the theoretical framework. To each of the factors, we compile the results of the studies and determine trends and inconsistencies and mention the differences between the genders when reported.

Social and Political Environment

Social and political environment refers to the attitudes of the community, cultural beliefs, policy frameworks and institutional arrangements that affect the education opportunities. The evidence of cross-national studies has always shown that facilitating educational participation is enabled by progressive social norms and supportive political structures and hindered by conservative attitudes and political disregard (Brock and Cammish, 1997; Lawson et al., 2008).

Alam (2017) performed a mixed-methods investigation in Gilgit-Baltistan and Balochistan in the Pakistani context and concluded that the main factors that determined the engagement of females in education were societal norms, the attitudes of teachers, and the community. The conservative cultural norms such as worries about gender mixing, limiting female movements as well as the attitudes towards education being a threat to family honor were always cited as a hindrance. Junejo (2020) has also reported the limitation of girls accessing secondary and higher education in Sukkur, Pakistan, by conventional cultural values, where parents were afraid of losing the reputation of their family.

On a macrolevel, Pakistan, National Education Policy (2009) and Balochistan, Education Sector Plan (2020-2025) contain the promises on gender parity, but the gaps in their implementation are still significant. In their cross-national survey of seven developing countries, Brock and Cammish (1997) found that government investment in the education of girls, especially infrastructure investment, teacher recruitment and the scholarship programs, formed one of the most significant predictors of educational participation among females. In remote regions such as the Kech however, these investments are not much.

Gender Differences: It has been indicated that female students might be more vulnerable to social norms and attitudes in the community in comparison to male students because they directly influence mobility and access (Asadullah and Yeasmin, 2022; Jepps et al., 2022). The male students on the other hand might be less constrained by normative factors on their participation in the education system, but they might be limited by the financial burden of contributing to the family revenue.

Self-Independence and Personal Motivation

The individual agency, self-efficacy beliefs and intrinsic motivation always predict educational persistence in both cultural settings. The Social Cognitive Theory is based on the beliefs about the self-efficacy of a person according to which Bandura (1986) explains that self-efficacy beliefs are the factors that significantly impact goal setting, the amount of efforts to be spent on achieving a goal, and perseverance in the case of failure.

This theoretical suggestion is based on empirical research. In their study on the engineering students in various European countries, Kolmos et al. (2013) reported mentorship, intrinsic motivation, and perceived professional significance as the motivational factors. In their research paper on the Malaysian public examination results, Nachiappan et al. (2012) discovered that the self-directed learning orientations with the academic self-efficacy had significant effects on academic performance, which were similar to those of the socioeconomic status.

The desire to become financially independent, the possibility to make own income and decrease the reliance on relatives, is a strong motivational force in South Asian conditions (Asadullah & Yeasmin, 2022). Women

students who view education as a means of economic liberation have more strength in fighting the structural impediments. This observation has been in line with the prediction of the Human Capital Theory which suggests that returns to education as perceived influences investment decisions.

The Human Capital Theory (Becker, 1964; Schultz, 1961) assumes that education is an economic choice, and human resources and families invest in education based on the cost-benefit analysis of the expected rewards. Education has been conceptualized as an investment which increases the productivity capacity, with returns in the form of better employment opportunities, better earnings, and better socioeconomic status. When applied to educational engagement, the Human Capital Theory suggests that the perceived returns to education such as economic independence, career advancement and social mobility are factors that predict education persistence. Gender variations in the perceived returns can be the reason behind the differences in engagement patterns because cultural settings influence anticipations of roles and opportunities that should be undertaken by men and women.

Gender Differences: It is argued that such meaning and significance of self-independence may vary according to gender. To female pupils residing in conservative settings, education is a way of gaining independence and getting rid of the conventional gender identity (Jepps et al., 2022). In the case of male students, self-independence can be also more closely related to the requirements of being a breadwinner and the family responsibility- education as a way of fulfilling and not avoiding gender roles. Such unique system of motivations can result in various educational engagement patterns.

Family Problems and Parental Intervention

The family is the nearest environment that has the greatest influence on educational paths, which is mediated by the impact of more structural variables. In their research on the attitudes of the Ghanaian women towards female education, Edjah and colleagues (2007) discovered that the level of education of women was a major determinant of their attitudes towards educating female children, which indicated that the educational values were intergenerational. This observation demonstrates the critical role of family educational culture in predicting the present engagement as well as serving as an intergenerational change agent.

The authors of the quantitative research by Jepps et al. (2022) investigated the participation of higher education by females in Multan, Pakistan, and found education levels of parents as the key predictors. Students whose parents had a higher education level especially the mother ones portrayed better education participation and expectations. The authors claimed that parents who are educated have more knowledge on the education paths, better networks and resources that would facilitate the education activities of children.

On the other hand, families that uphold the traditional gender roles can have an unequal provision of education to the male and female children. In an Ethiopian study, Biftu (2016) found that, because of the sociocultural practices within the family structures (such as early marriage, mobility restrictions and resource distribution in favor of the sons), the female students were systematically disadvantaged in the teacher education colleges. The extended family (grandparents, aunts, uncles) plays the role of secondary support or restraint, in some cases, opposing the attitude of parents (Aziato, 2016).

Gender Differences: There is constant evidence that females have more family-related restrictions compared to male students and male students might get more instrumental support (Jepps et al., 2022). It is not that simple, however: families might spend much money on the education of their sons as the economic investment when considering the education of daughters to be not that important. These subtle gender peculiarities should be studied in a context-dependent way.

Ambitious Aspirations and Career Orientation

Ambitious aspirations, which can be described as a clear declaration of the set objectives in educational achievements and career plans, have always correlated with educational persistence. In the study, Kolmos et al. (2013) established that students whose career goals were clear showed high educational commitment and persistence especially where advanced educational credentials were necessary in their goals. The desire to join professional careers especially in traditionally male professions triggers motivation orientations that provide motivation even in the long run.

The study by Lawson et al. (2008) showed positive relations between career aspirations and education performance with the ambitious aspirations producing greater income, better job opportunities, and lower fertility rates, which are results that support long-term educational investment. This result is in line with Human Capital Theory which emphasizes on perceived returns to education.

In Pakistan, as the career environment of women is changing, younger women are registering career and economic goals as the greatest education motivation (Asadullah and Yeasmin, 2022). The fulfillment of these dreams, however, relies upon the environment of his family, institutionalization, and the labor market opportunities, which is usually unfavorable to women compared to men.

Gender Differences: It has been argued that ambitious intentions do not work in the same way with male and female students. In the case of the male students, the professional ambitions are associated with traditional breadwinners and can be supported by the family more. In the case of female students, their high ambitions can be incompatible with the traditional gender norms, and they will need to be more self-reliant and strong-willed (Jepps et al., 2022).

Financial Factors

Among the most recurrently reported impediments to education in developing nations, economic constraints may be identified. Direct expenses, tuition, transport, uniforms, supplies, can be so prohibitive to the low-income families, especially when added to the opportunity costs of time and labor of the students. Lawson et al. (2008) approximated that the multiplier effect of any financial barriers to schooling on economic growth, health, and fertility outcome warranted the investment of the government in financial support programs.

Conditional cash transfers and scholarship programs are some of the best policy tools of alleviating financial constraints in South Asia. Basing their study on the Chinese female university students, Dynarski (2003) discovered that the use of specific financial support had a substantial positive impact on the educational results, especially in the situation when the target population received information and counseling services. The institutional response to the affordability barrier in Pakistan is the Ehsaas Undergraduate Scholarship and Balochistan Education Endowment Fund, but is limited in remote areas such as Kech.

Gender Differences: Financial barriers Gender differences are recorded. The families with limited resources can focus on male children education instead of female children education because they view male education as more profitable (Asadullah and Yeasmin, 2022; Jepps et al., 2022). Nonetheless, the flow of this impact can be different, depending on the context: in one place, the families can spend a lot of money on the education of daughters as a way of increasing the chances of getting married; in another, the education of sons is an economic investment. These dynamics are context-dependent and need to be investigated by the researcher.

The gap in research that this study will contribute is as follows:

The above review demonstrates that there are three critical gaps in the literature, which include:

1. *Geographic Gap*: There is no empirical research on systematic study of the educational determinants in Kech district, Balochistan. The available studies are done in different contexts of Pakistan (Gilgit-Baltistan, Sukkur, Multan) that vary in terms of culture, economy and institutional settings.

2. *Methodological Gap*: Previous studies in Balochistan have used qualitative designs primarily, which have given a good understanding of the context however with low generalization. There is a paucity of quantitative evidence that can determine relative strength of various determinants, as well as, test hypothesized relationships.

3. *Gender Comparative Gap*: Most of the research only discusses the female students and does not allow the comparison of how the determinants vary according to gender. These differences are critical in the designing of the gender-sensitive interventions.

This paper fills these gaps by presenting the first quantitative study on a large scale to determine the factors affecting the level of educational engagement in Kech district directly comparing male and female students.

METHODOLOGY

Research Design

The survey design adopted was a quantitative, cross sectional survey design. Such a design is suitable in cases when the aim of a research is to study the relationships between variables based on the analysis of numerical data (Creswell, 2014) and to prove or reject the hypotheses that are premised on theoretical concepts. The cross-sectional method enabled an effective data collection on one occasion, which gives a picture of the phenomena of interest.

Population and Sampling

The target population of the study included students of M.A. and B.Ed. courses in the Department of Education in the University of Turbat, Kech district, in the academic 2022-2023 year. The main public higher education institution in the area that will provide a suitable sampling frame to investigate the educational engagement in Kech district is the University of Turbat.

However, The determination of the sample size was done using Cochran formula (1977) of finite population:

$$n = (Z^2 * p * q * N) / (e^2 * (N-1) + Z^2 * p * q)$$

Where:

- $Z = 1.96$ (95% confidence level)
- $p = 0.5$ (maximum variability)
- $q = 1-p = 0.5$

- $e = 0.05$ (5% margin of error)
- $N = 400$ (total enrolled students across programs)

This came out to give a minimum required sample of 196. In order to facilitate the subgroup analysis (male and female comparisons) with sufficient power, there is the risk of non-response, and to obtain sufficient statistical power in order to detect gender differences, the target sample was defined as 300 students (three-quarters of the entire population).

Sampling Procedure: It involved the use of a stratified random sampling. The stratification of the population was made on the basis of gender (male, female), and program (M.A. Education, B.Ed.). Each stratum was randomly chosen in terms of the size of the stratum:

Stratum	Population	Sample	Sampling Fraction
Female - M.A.	100	75	75%
Female - B.Ed.	100	75	75%
Male - M.A.	100	75	75%
Male - B.Ed.	100	75	75%
Total	400	300	75%

The stratified design was used to guarantee sufficient representation of both sexes as well as both programs, which could allow making meaningful comparisons between genders and also increase the external validity.

Research Instrument

Instrument Development: A self-administered questionnaire that was designed to collect data in this study was used. The questionnaire will consist of two parts:

Section A: Demographic (age, gender, enrolled in the program, cumulative GPA, residence, etc.)

Section B: 22 Likert-scale items (1 = Strongly Disagree, 5 = Strongly Agree) that were spread out in five thematic subscales:

Subscale	Items	Sample Item	Source
Social and Political Environment	5	"Community attitudes in Kech support higher education"	Adapted from Alam (2017)
Self-Independence	5	"I pursue education to achieve financial independence"	Adapted from Kolmos et al. (2013)
Family Dynamics	4	"My family encourages my educational pursuits"	Adapted from Jepps et al. (2022)
Ambitious Aspirations	4	"I have clear career goals that require higher education"	Adapted from Kolmos et al. (2013)
Financial Considerations	4	"Financial constraints affect my educational decisions"	Adapted from Lawson et al. (2008)

Educational Engagement (Dependent Variable): Educational engagement was measured in the form of a composite score of all the 22 items. It is a multidimensional conceptualization of educational engagement that is conceptualized in the theoretical framework, including cognitive (perceived value of education) dimension, affective (motivation, aspirations) and behavioral (persistence, effort) dimensions.

Instrument Adaptation and Validation: Items were based on previously tested instruments that were applied in previous research of educational engagement in a similar setting (Alam, 2017; Jepps et al., 2022; Kolmos et al., 2013). Cultural context adaptations to the cultural context of Kech consisted of:

Simplification of the language to make it clear and at the same time retain the construct validity.

- Simplifying language for clarity while maintaining construct validity
- Replacing culturally specific examples with locally relevant ones
- Ensuring items were comprehensible to students from diverse educational backgrounds

Two subject-matter experts (education researchers who has expertise on Balochistan) and one methodological expert (quantitative methods specialist) reviewed the adapted instrument. There were minor changes, which were made on the basis of their feedbacks, such as the rewording of three items to make them simpler and the inclusion of one item to the family dynamics subscale.

Validity and Reliability

Content Validity: An expert review would have been used to establish its content validity as outlined above. All the reviewers found the instrument to be sufficiently addressing the constructs of interest.

Construct Validity: Evaluated with the help of the confirmatory factor analysis (CFA) via AMOS Version 26. Multiple indices were used to assess the model fit, which included chi-square (χ^2), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Acceptable fit was defined as $CFI \geq .90$, $RMSEA \leq .08$, $SRMR \leq .08$ (Hu & Bentler, 1999).

Measurement Invariance: To provide the valid gender comparisons, the measurement invariance across gender was checked in terms of multi-group CFA framework. The assessed invariance was configural (equal form), metric (equal factor loading), and scalar (equal intercepts) invariance. The support of invariance was made when 8 CFI = .01 between nested models (Cheung and Rensvold, 2002).

Internal Consistency Reliability: (Cronbach alpha) was used to evaluate the full instrument and each sub scale individually, by the whole sample and gender. Acceptable reliability was taken to be the .70 mark (Nunnally, 1978).

Data Collection Procedure

The 300 random students of the University of Turbat were given questionnaires through the assistance of institutional ethical approval of the University of Turbat (Approval No. UOT/EDU/2023-024) within regular classes. The data were collected during a period of three weeks (February 15 -March 7, 2023) due to the schedules of the classes.

Informed Consent: The participants were provided with the information on the purpose of the study, procedures, confidentiality, and their rights as the participants in the study. The informed consent was received in form of a written consent before the administration of questionnaires. The participants were clearly told that they had the right to quit any time with impunity.

Data Collection Protocol: The questionnaires were given out in normal classes. The researcher had the presence of the research project but never interfered with responses. The questionnaires were filled and fitted into an envelope, which was sent directly to the researcher. This was done to reduce the bias in responses and promote confidentiality.

Response rate: Out of the 300 questionnaires that were distributed, 287 were returned with the full questionnaire thus making the response rate of 95.7. The 13 questionnaires that were not filled in were not analyzed. The data analysis showed that missing data was not systematic (Little MCAR test 2, 48, 52.34, $p = .312$) and were missing randomly.

Ethical Considerations

There were ethical standards that were strictly followed during the research:

Informed Consent: The informed consent was written in all the participants.

Voluntary Participation: The participants were made aware of their right to back out at any given time without any repercussion.

Anonymity: Coded questionnaires ensured anonymity of the respondents; no data was collected.

Confidentiality: Data were kept in a secure place that was not accessible to any other party but the research team.

According to the study, it was approved by the Institutional Review Board of the University of Turbat.

Data Analysis

The IBM SPSS Statistics and AMOS were used to analyze the data. Below, analytical procedures, assumptions and significant levels are outlined.

Descriptive Statistics: End of line statistics of demographic variables and subscale scores, were calculated disaggregated by gender: frequencies, percentages, means, and standard deviations.

Confirmatory Factor Analysis and Measurement Invariance: CFA was done by using maximum likelihood estimation. The 4 measures (χ^2 -test, CFI, RMSEA and SRMR) were used to assess model fit. Multi-group CFA with sequential constraints was used to determine the measurement invariance.

One-Sample t -tests: One-sample t -tests were run against the scale midpoint (3.0) to establish whether the mean scores of each factor in both male and female students were significantly different than neutral. This method will examine the perceptions of the respondents on how each factor affected them regarding educational engagement in a positive way or not.

Independent Samples t-Tests: The independent samples t-tests were to be used to compare the mean scores of men and women in each of the factors. The d was found as the measure of the effect size with the d= 0.20 marked as small, 0.50 medium and 0.80 large (Cohen, 1988).

Pearson Correlation: Pearson product-moment correlation was calculated to determine the relationship that exists between factors.

Multiple Regression Analysis: Multiple regression was done to determine the relative predictive power of each factor upon the educational engagement. The estimates of separate models were made on the full sample and by gender.

Assumption Testing:

Normal: Evaluated by Shapiro-Wilk tests and Q-Q plots. The values of skewness and kurtosis were acceptable (+2 skew, +7 kurtosis; Curran et al., 1996).

As a measure of linearity: Evaluated using scatterplots of the residues versus the predicted values.

Homoscedasticity: The test is the Breusch-Pagan one.

Multicollinearity: It was checked by using variance inflation factor (VIF), where VIF below 10 is acceptable (Hair et al., 2010).

Significance Threshold: The analyses were done with a significance threshold of $p < .05$ (two tailed). All significant findings are reported by providing the effect sizes.

Power Analysis: Post-hoc power analysis with G*power 3.1 showed that at N = 287, the study had the power of 0.95 to reject H0 with $f^2 = .15$ and $\alpha = .05$, which is more than the traditional recommendations of sufficient power (Cohen, 1988).

RESULTS

Descriptive Statistics

Table 1. Demographic Characteristics of Sample (N = 287)

Characteristic	Category	Total (N=287)	Female (n=143)	Male (n=144)	P
Age (years), M (SD)		22.63 (2.28)	22.48 (2.31)	22.78 (2.25)	.255
Program, n (%)	M.A. Education	143 (49.8%)	71 (49.7%)	72 (50.0%)	.956
	B.Ed.	144 (50.2%)	72 (50.3%)	72 (50.0%)	
CGPA, M (SD)		3.62 (0.41)	3.58 (0.42)	3.66 (0.39)	.092
Residence, n (%)	Urban	112 (39.0%)	58 (40.6%)	54 (37.5%)	.590
	Rural	175 (61.0%)	85 (59.4%)	90 (62.5%)	

The sample ranged in age from 19 to 28 years ($M = 22.63$, $SD = 2.28$). There were no notable differences in terms of gender in terms of age, program distribution, CGPA or residence and this shows that stratification and random sampling were achieved. The average in CGPA was 3.62 ($SD = 0.41$) and 72 percent of the respondents scored above 3.50, indicating that the sample was of high-achieving students as per the enrollment distribution patterns of universities.

Confirmatory Factor Analysis and Measurement Invariance

Full Sample CFA:

The hypothesized five-factor model was accepted by confirmatory factor analysis. Model fit indices indicated acceptable fit: $\chi^2(199) = 412.56$, $p < .001$; CFI = .93; RMSEA = .065 (90% CI [.056, .074]); SRMR = .052. The factor loadings were all above .55 and all subscales were found to exhibit satisfactory composite reliability (0.75).

Measurement Invariance between Genders:

Multi-group CFA indicated the support of measurement invariance between gender:

- Configural invariance: CFI = .91
- Metric invariance: $\Delta\text{CFI} = .006 (\leq .01)$
- Scalar invariance: $\Delta\text{CFI} = .008 (\leq .01)$

These findings indicate that the instrument has similar measures of the same constructs of male and female respondents and valid gender comparisons can be drawn.

Reliability Analysis

Table 2. Internal Consistency Reliability (Cronbach's α)

Subscale	Items	Full Sample (N=287)	Female (n=143)	Male (n=144)
Social and Political Environment	5	.824	.821	.827
Self-Independence	5	.851	.858	.844
Family Dynamics	4	.812	.819	.805
Ambitious Aspirations	4	.789	.792	.786
Financial Considerations	4	.835	.841	.829
Full Instrument	22	.892	.897	.887

The subscales were all above the .70 level and the complete instrument had a high level of reliability (.892). The gender subsamples had similar coefficients of reliability.

One-Sample t-Tests (Against Scale Midpoint)

The one-sample t-tests were used to determine the differences between the means of each of the factors and the scale midpoint (3.0) to determine whether there is a significant difference between the mean scores of the factors and the scale midpoint (3.0).

Table 3. One-Sample t-Test Results by Gender (Test Value = 3.0)

Factor	Gender	M	SD	t	df	p	Cohen's d	95% CI
Social/Political	Female	3.32	0.84	4.56	142	<.001	0.38	[3.18, 3.46]
	Male	3.24	0.81	3.55	143	.001	0.30	[3.11, 3.37]
Self-Independence	Female	3.61	0.79	9.25	142	<.001	0.77	[3.48, 3.74]
	Male	3.23	0.85	3.25	143	.001	0.27	[3.09, 3.37]
Family Dynamics	Female	3.52	0.74	8.37	142	<.001	0.70	[3.40, 3.64]
	Male	3.21	0.79	3.19	143	.002	0.27	[3.08, 3.34]
Ambitious Aspirations	Female	3.38	0.81	5.60	142	<.001	0.47	[3.25, 3.51]
	Male	3.26	0.78	4.00	143	<.001	0.33	[3.13, 3.39]
Financial Considerations	Female	3.34	0.93	4.37	142	<.001	0.37	[3.19, 3.49]
	Male	3.62	0.88	8.45	143	<.001	0.70	[3.48, 3.76]

All the five factors showed a mean score that was much higher than the midpoint of the scale of both female and male students (all $p < .01$) which validated H1-H5. The effect sizes were small, medium to large ($d = 0.27$ to 0.77), which demonstrates the differences that are practically significant as compared to neutral.

Patterns according to Gender: The female students had better average score on self-independence (3.61 vs. 3.23), family dynamics (3.52 vs. 3.21), and ambitious aspiration (3.38 vs. 3.26). Male students had more mean on the consideration of finances (3.62 vs. 3.34).

Gender Comparisons

Table 4. Independent Samples t-Tests Comparing Male and Female Students

Factor	Female M (SD)	Male M (SD)	Mean Difference	t(285)	p	Cohen's d	95% CI of Difference
Social/Political	3.32 (0.84)	3.24 (0.81)	0.08	0.84	.401	0.10	[-0.11, 0.27]
Self-Independence	3.61 (0.79)	3.23 (0.85)	0.38	4.23	<.001	0.49	[0.20, 0.56]
Family Dynamics	3.52 (0.74)	3.21 (0.79)	0.31	3.87	<.001	0.45	[0.15, 0.47]
Ambitious Aspirations	3.38 (0.81)	3.26 (0.78)	0.12	1.42	.157	0.17	[-0.05, 0.29]
Financial Considerations	3.34 (0.93)	3.62 (0.88)	-0.28	-2.94	.004	0.34	[-0.47, -0.09]

There were great gender differences as regards to three factors:

Self-Independence Female students gave this factor a much higher rating than their male counterparts ($t(285) = 4.23$, $p < .001$, $d = 0.49$).

Family Dynamics: Female students rated this variable much higher than male students ($t(285) = 3.87$, $p < .001$, $d = 0.45$).

Financial Considerations: This factor was rated by male students much higher as compared to female students ($t(285) = 2.94$, $p = .004$, $d = 0.34$).

There was no gender difference that was found to be significant in the aspects of social and political environment and ambitious aspirations.

Correlation Analysis

Table 5. Pearson Correlations Among Factors (Full Sample, N = 287)

Factor	1	2	3	4	5
1. Social/Political	—				
2. Self-Independence	.428**	—			
3. Family Dynamics	.401**	.452**	—		
4. Ambitious Aspirations	.312**	.468**	.334**	—	
5. Financial Considerations	.245**	.387**	.291**	.394**	—

Note: ** $p < .01$

All the factors have significant positive correlations ($r = .245$ to $.468$, $p = .01$), which means that they are measuring different but related constructs. Self-independence was showing the least associations with other factors and it is possible that this factor is the core mechanism exposing environmental factors to educational involvement.

Multiple Regression Analysis (Full Sample)

The predictive power of each of the factors was determined by performing multiple regression to determine which ones had a relative predictive power in regards to educational engagement. There were no assumptions violations (tests):

Normal distribution: Shapiro-Wilk test is not significant ($W = .987$, $p = .124$); skewness and kurtosis are not of significant concern.

Linearity: Scatter plots were linear.

Homoscedasticity: Breusch-Pagan test non-significant ($\chi^2(5) = 7.23$, $p = .218$).

Multicollinearity: VIF values were between 1.32 and 1.87, which is far below the mark of 10.

Table 6. Multiple Regression Results (Full Sample, N = 287)

Predictor	B	SE	β	t	p	95% CI
(Constant)	1.187	0.156		7.61	< .001	[0.88, 1.49]
Social/Political	0.092	0.058	0.109	1.59	.113	[-0.02, 0.21]
Self-Independence	0.247	0.069	0.298	3.58	< .001	[0.11, 0.38]
Family Dynamics	0.328	0.072	0.356	4.56	< .001	[0.19, 0.47]
Ambitious Aspirations	0.108	0.065	0.118	1.66	.098	[-0.02, 0.24]
Financial Considerations	0.087	0.056	0.104	1.55	.122	[-0.02, 0.20]

Note. * $R^2 = .547$, Adjusted $R^2 = .525$, $F(5, 281) = 22.36$, $p < .001$ *

The regression equation was found to be statistically significant, $F(5, 281) = 22.36$, $p = .001$ with 54.7 percent of the variance in educational engagement being explained. Some other independent predictors that came out included family relationships ($\beta = .356$, $p < .001$), and self-independence ($\beta = .298$, $p < .001$). Social and political environment ($p = .113$), ambitious aspirations ($p = .098$), and financial considerations ($p = .122$) did not reach statistical significance in the multivariate model indicating that they influence educational engagement via family dynamics and self-independence.

Gender-Specific Regression Models

Female and male subsamples were estimated separately using regression models to determine whether there is a difference in patterns of predictors between the genders.

Table 7. Multiple Regression Results by Gender

Predictor	Female (n = 143)		Male (n = 144)	
	β	p	β	p
Social/Political	0.112	.187	0.098	.234
Self-Independence	0.345	< .001	0.241	.008
Family Dynamics	0.412	< .001	0.298	.001

Ambitious Aspirations	0.124	.142	0.107	.198
Financial Considerations	0.089	.301	0.121	.147
R ²	.584		.502	
Adjusted R ²	.549		.464	
F	15.24	< .001	13.87	< .001

The model described 58.4% variance to female students. Family dynamics ($s = .412$, $p = .001$) and self-independence ($s = .345$, $p = .001$) were both significant predictors, but family dynamics were stronger predictors, as compared to the male representation.

In the case of male students, the model described 50.2 percent variance. Other significant predictors were family dynamics ($\beta = .298$, $p = .001$) and self-independence ($\beta = .241$, $p = .008$) although the predictors did not have huge effects as in the case of female students.

Summary of Findings

The analyses produced six principal findings. Initially, all five factors exhibited substantial positive correlations with educational engagement in bivariate analyses for both genders, thereby corroborating H1–H5. Second, family dynamics and self-independence were identified as the most significant independent predictors in the multivariate analysis. Third, the five-factor model accounted for more than half (54.7%) of the variance in educational engagement. Fourth, there were big differences between the genders. Female students rated self-independence and family dynamics higher, while male students rated financial concerns higher. Fifth, models tailored to gender exhibited greater predictive efficacy for female students ($R^2 = .584$) compared to male students ($R^2 = .502$). Sixth, family dynamics exhibited more pronounced predictive effects for female students ($\beta = .412$) compared to male students ($\beta = .298$).

DISCUSSION

Interpretation of Findings

The present work presents the qualitative evaluation of the factors affecting educational engagement in Kech district, Balochistan, in the first large scale, specifically, the gender differences. The results confirm as well as elaborate the available literature, providing contextual and gender sensitive evidence on policy formulation.

Family Dynamics as the Predictor of the most power

Family dynamics proved to be the best predictor of educational engagement in general ($\beta = -.356$, $p = .001$) and in both the male and female subsamples. The discovery is consistent with the vast amount of previous literature that proves that the most proximate factors affecting the educational results are parental support, educational value, and decisions regarding resource allocation (Edjah et al., 2007; Jepps et al., 2022; Biftu, 2016). The Kech example highlights the significance of family in making educational choices and this is

the power of this influence in the Kech scenario, especially in areas where the institutional support might be lacking.

It was notable that the family dynamics were more effective among female students ($r = .412$) compared to male students ($r = .298$), which is in line with the gender difference result that female students rated family dynamics higher. This trend implies that in the traditional cultural setting of Kech, where gender roles are still relevant, the family support is especially important to female students who would overcome structural barriers to education. In the case of female students, family approval can be not only a material source (money, allowing to study) but also a psychological source (confirmation of their educational goals by cultural norms). This explanation falls in line with the Social Cognitive Theory that focuses on environmental forces that determine individual aspects and actions (Bandura, 1986).

Self-Independence as an important Motivational Drive

The second strongest predictor was self-independence ($r^2 = .298$, $p < .001$), though the ratings of female students were higher significantly. This observation confirms the Human Capital Theory that predicts the returns to education be perceived to motivate investment decisions (Becker, 1964; Schultz, 1961). This is indicated by female students having more positive ratings of self-independence ($M = 3.61$ vs. 3.23 , $d = 0.49$), which implies that education to women in Kech is not only an investment in future income but a way to basic personal freedom escape of traditional gender roles, financial freedom and more life options.

The qualitative studies in similar situations support this interpretation. In one of the studies by Asadullah and Yeasmin (2022), the expression of educating as becoming someone, gaining identity, respect, and agency as opposed to domestic responsibilities, is captured by female students in conservative South Asian contexts. The significance of the gender difference ($d = 0.49$) indicates that this motivational structure may not be some personal trait but a societal trendy reaction to gender restriction. In the case of male students, on the other hand, education can be a form of easier economic investment that is consistent with the traditional breadwinner role and generates lower differentiation in self-independence ratings.

Gender Disagreement on Financial considerations

The rather surprising but crucial observation is that male students rated the aspect of finances much higher in comparison with female students ($M = 3.62$ vs. 3.34 , $d = 0.34$). This trend is opposite to some previous studies indicating that women education is limited by financial means more than by other factors (Asadullah and Yeasmin, 2022; Jepps et al., 2022). It can be interpreted in a number of ways.

To begin with, it is possible that the families in Kech are more interested in male schooling as an investment in the future household income, and it places more financial strain on male students who internalize the breadwinner ideals. Male students can be more conscious of the family economic pressures when the same is addressed to the sons but not daughters. Second, the female students are less likely to know about the financial situation in the family when financial issues are regarded as the prerogative of the male family members. Third, female students that have already defied the obstacles to entry into the university could be a small sample of female students who are either better supported financially by their family or more resilient, and thus might not accurately reflect financial barriers in the overall female population.

This observation underscores the need to have gender sensitive financial aid policies which consider the difference in perceptions and experience of financial constraints. The programs developed without considering gender disparities will fail to capture the unique financial stresses of male students or how the family financial status affects the education path of female students.

Effects of Mediation: The failure to predict with Multivariate Models with Social Environment and Financial Factors.

Social and political environment, ambitious goals and financial factors showed considerable bivariate relationships with educational involvement but failed to reach statistical significance in multivariate analysis. This trend creates a mediating effect: these variables affect the engagement in education indirectly by the force of family processes and independence.

Take into consideration social and political environment. Attitudes and social norms in the community can influence the engagement in education mainly not directly but through the influence on family attitudes. A family that attaches importance to education might cushion the students against negative attitudes in the community; on the other hand, a family which espouses community conservative norms may strengthen the barriers. This reading conforms to the ecological systems view (Bronfenbrenner, 1979), whereby the mediation of the influences of distal contexts (community norms) by proximal processes (family interactions) is involved.

Equally, self-independence beliefs can be the mediating factor to ambitious aspirations. It is also important that students who have high career aspirations hold on to the fact that they have the ability to reach their aspirations-self efficacy beliefs that will bring persistence. Ambitious goals can be yet to be realized without self-independence. This meaning concurs with the point of Social Cognitive Theory that self-efficacy is a key mediating factor between goals and outcomes (Bandura, 1986).

Theoretical Implications

These results substantiate the use of the Human Capital Theory and Social Cognitive Theory in learning about the issue of educational engagement in gender disparity setting. Human Capital Theory is right in its perception of returns to education as motivational forces (economic independence, career advancement) and the Social Cognitive Theory describes the interaction of these perceptions with environmental supports (family dynamics) and individual factors (self-independence) to determine behavior.

The fact that family processes mediate the impact of more general social and economic factors implies that the next generation of theoretical development should be more caregiving about the mediation processes as opposed to their direct effects. The fact that the model predicts female students ($R^2 = .584$) more than male students ($R^2 = .502$) indicates that the factors under analysis might be more effective in terms of excluding the experiences of male students, where the educational engagement is less dependent on family support and personal agency due to gender constraint. The educational participation of male students can be affected by other issues that are not reflected by the existing model, which could be peer influences, labor market, or economic pressures of the family.

The gender variations, also indicated, indicate that gender should be taken as a moderating factor in the theoretical models of educational engagement. The mechanisms by which family relationships and self-sufficiency affect educational participation seem to be different in both male and female students, where female students have greater effects in both scenarios. This has both a theory development and intervention design implication.

Comparison of the research with the previous studies

The results are consistent with the existing studies in Pakistani and South Asian settings and expand it in significant aspects. As Alam (2017) and Junejo (2020) were able to highlight, the social norms and the family attitude became essential. Nevertheless, the quantitative method used in the current research allows

assessing the relative predictive power, which shows that family processes are stronger than the social environment, which would be impossible in a qualitative study.

As stated by Jepps et al. (2022), education engagement was predicted by parental education and family support. The current research builds upon these results by proving that these impacts have gender variations, and family issues are more vital in female students. This effect of moderation between genders has not been reported in earlier studies on education in Pakistan.

The result which indicates that self-independence is a predictor of education engagement, especially in female students, is in line with the qualitative results of Asadullah and Yeasmin (2022) on the motivations of female students in South Asia. The current research offers the quantitative data on this trend and indicates its statistical significance after having controlled the other variables.

The fact that the gender difference in financial considerations is unexpected, and male students rank it higher than female students is contrary to some previous studies (e.g., Asadullah and Yeasmin, 2022), and needs additional research. This can be due to context-specific variables in Kech such as economic arrangements that can generate financial strains on male students or methodological variations such as dissimilar awareness of family funds.

Practical Implications

For policy maker

The high predictive value of family dynamics especially among female students implies that policies which are narrowly laid down to concentrate on infrastructure or scholarships although needed are not adequate. Additional investments such as parents education programs, intergenerational dialogue programs and awareness campaigns of the society are necessary. The provincial and district governments are advised to think about conditional support programs, which would involve both financial aid and requirements of family involvement which may include parent workshops or school-family partnership contracts.

The fact that male students attach more importance to financial factors, implies that any financial aid program is to be tailored to gender specific needs. This can comprise special assistance to low-income male students, and initiatives that can deal with the unique financial strain on the female students (e.g., transport expenses, secure housing).

For Educational Institutions

Self-independence is important, especially among female students hence universities should invest in such programs that promote student agency and self-efficacy. Self-independence can be enhanced by mentorship programs that relate students, particularly the females, with professional role models, career counseling service, and leadership development programs. The University of Turbat must think of opening a student support center that would provide academic counseling, financial advice as well as psychological support with gender sensitive programs that meet the unique needs of male and female students.

For Community Stakeholders

The results highlight that the attitude of the community towards education is not a fixed impediment but can be changed with the help of a strategic intervention. The social norms can be changed slowly by involving the local leaders, religious scholars and role models in the advocacy of education. The organized initiatives that will involve women of education and family of school-going girls in dialogue will help to

make the tangible outcomes of education visible and strengthen the support of the education of females on the community level. In the case of male education, community educational programs emphasizing on the successful male professionals can enhance the desire to learn.

Unexpected Findings and Alternative Explanations

Why Could not Multivariate Models Predict Why Did Ambitious Aspirations Not Predict?

The non-significance of ambitious aspirations in the multivariate models even though significant correlation was established between the two variables needs explanation. One of the interpretations is that aspirations are mediated by self-independence -students might have ambitious goals but they do not have self-efficacy beliefs to achieve them. The given interpretation is in line with the Social Cognitive Theory according to which self-efficacy is an intermediate between the goal and action (Bandura, 1986).

Alternate hypothesis: Measurement problems. The ambitious aspirations subscale might be measuring goal content (what students want to accomplish) instead of goal commitment (how much they strive to accomplish objectives). The next research in the field must make the difference between these constructs.

Why Multivariate Models Not Predicted by Social and Political Environment?

The fact that the social environment was not significantly significant in multivariate models implies that its impacts are mediated by family processes- the community attitudes are the things that determine the educational engagement as they impact the family support. This explanation conforms to the ecological systems theory (Bronfenbrenner, 1979) and proposes that community-level interventions that are aimed at changing the attitudes of the community may have to be supplemented by family-level interventions to have an impact.

Alternative explanation: Social desirability bias could have influenced the answers to the social environment items and minimized the variability and weakened relationships.

Why Does the Model Have More Explanation of Female Students?

There are a number of reasons that can be explained. First, the issues studied can be more applicable to the educational involvement of female students than male students. The participation of male students could be affected by other factors which are not included in the model like peer pressures, labour market environment or family economic needs. Second, the female students can be more variable in their experiences, which will give more robust statistical relationships. Third, males students can be characterized by a high level of measurement error or social desirability bias, which weakens relationships.

Limitations

There are a number of limitations that should be mentioned

Limitations in Samples: The sample was limited to the existing students of the University of Turbat and no one outside of school was included in the sample since their views and experiences might not be similar. The results might not be applicable to the students of other institutions and levels of education.

Limitations of design: The cross-sectional design cannot be used to make a causal conclusion. Although the theoretical framework implies that relationships are directional, there are other possible causal

relationships. There is a need to have longitudinal research to determine the sequencing of time and causal flow.

Measurement Limitations: The self-report data can also have social desirability bias especially when sensitive constructs like family dynamics and financial considerations are involved. Although anonymity procedures alleviated this issue, there might be certain bias.

Generalizability Limitations: The researchers only examined one institution within the Kech district. The results might not be extrapolated to other districts in Balochistan and other areas in Pakistan due to high diversity in terms of cultural, economic, and institutional contexts.

Scope Limitations: The research explored five factors that were based on the theoretical relevance and previous studies. The other factors that might have been of significance such as the quality of the teachers, the influence of peers, the climate in the institution and the condition of the labor market were not evaluated.

Future Research Directions

This study creates a number of directions through which future research can be developed.

Longitudinal Studies: A longitudinal research that follows students in secondary school through until the higher education level would be able to create causal networks and define critical stages of transition where interventions can be applied. This kind of research might prove the hypothesis of predicting future educational involvement by the use of family dynamics and self-independence.

Mixed-Methods Research: To bring light to the mechanisms that may drive the quantitative relationships that are observed in this case, especially to the gender differences, qualitative interviews with students, parents, and community leaders may be helpful. What is the reason why female students value self-independence and family relations more? So, what is the meaning of self-independence in the Kech context? What is the educational investment decision making process by families?

Comparative Research: Comparative research between the districts in Balochistan would be able to establish situational conditions that modify the relationships found in Kech. What are the impacts of economic conditions, development of infrastructure or implementation of policies on the educational determinants?

Intervention Studies: Intervention research that would examine the impacts of certain programs (family engagement, mentorship, gender-sensitive financial aid programs) on the results of education would be evidence-based to make causal inferences and offer practical recommendations.

Extended Factor Sets: Future studies ought to address other factors that were not covered in this study as they could explain the left over variance in the educational engagement especially among the male students. The peer influences, relationships between teachers and students, institutional climate and labor market expectations are the areas that should be investigated.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The paper presents the results of empirical research that educational participation in the Kech district, Balochistan is determined by a combination of interplaying aspects, but family relations and self-autonomy

are the strongest direct predictors of it. Five-factor model accounted more than half (54.7) of variance in educational engagement which was congruent with the theoretical basis of integration of Human Capital Theory and Social Cognitive Theory.

There are also great gender differences, which show that female students are more motivated by the goals of self-independence and support of relatives, whereas male students are more concerned with financial aspects. The gender-specific models were more predictive among female students (58.4) as compared to male students (50.2) indicating that the factors under consideration are a better predictor of the experiences of female students, perhaps due to the fact that the educational activities of female students are more dependent on family support and personal agency in the context of gender constraint.

Policy and practice implications These findings have significant policy and practice implications. The effective interventions should have gender-sensitive and holistic approaches to both structural and individual-level barriers, as well as involve families as the collaborators in the educational progress. Nevertheless, much still needs to be done, the data proves that both male and female students in Kech are highly motivated, aspirational and able to achieve academic success in case the enabling family environment is provided to them.

Contributions

Theoretical Contributions: The present research proves the usefulness of the combination of Human Capital Theory and Social Cognitive Theory to study the issue of educational engagement. The results confirm the hypothesis that mediation between the impacts of more general social and economic influences is carried out through family dynamics, and that gender moderates the intensity of associations between determinants and engagement.

Empirical Contributions: The paper offers the first quantitative study (in large scale) of educational determinants in the Kech district which fills an important gap on the literature in the region. The equal gender sample allows conducting a comparative analysis that has never been offered before.

Methodological Contributions: The instrument that has been validated and is shown to be measuring invariance between genders offers a methodological basis to the future studies conducted in similar situations.

Practical Contributions The findings produce gender-sensitive recommendations on the educational policy and practice in Balochistan that can be applied to other areas of similar concerns.

Recommendations

As a Government and Policy Maker

1. Enhance family involvement policies: Design and establish the programs that inform the parents on the advantages of education, overcome the barriers of cultural differences, and support the family level. Since family dynamics are more predictive of female students, special attention of such programs should be given to the families of girls. Think of conditional support programs which makes them blend financial aid with family engagement conditions.
2. Increase gender-sensitive financial support system: expand the amount of funding on scholarships and conditional cash transfer. Since male students value financial considerations higher, it is important to make sure that financial aid programs among male students consider their own

financial strains. In the case of female students, family engagement should be used in combination with financial support in order to help reach maximum effectiveness.

3. Invest in transportation systems: Deal with the mobility limitation by providing secure means of transportation, especially among the female students, who have to commute to learning institutions.
4. Adopt gender-responsive education policies: District-level education plans should have targets and accountability strategies that will be used to improve the educational performance of both sexes, and especially, the gender gap in Kech.

In case of University and Institutional Administration

1. Create gender-sensitive mentorship schemes: Design mentoring schemes with both female students and male students having professional female and male role models respectively. This is because self-independence is especially significant to female students and must be developed clearly.
2. Establish an extensive student support center: Have a full-fledged student support center that offers academic counseling, financial advice, psychological counseling, and career development programs, with a student specific programming.
3. Improve pedagogies: Implement gender-sensitive education among the teaching staff so that the classroom setting is gender-neutral and free of gender discrimination, which facilitates the involvement of both male and female students in teaching.
4. Hire and maintain a diverse faculty: Proactively hire female faculty members whose visibility as role model can have a great impact on the educational desires and self-efficacy of the female students.

In the case of Community and Family Stakeholders

1. Establish community awareness: Conduct campaigns on the need to change sociocultural norms that have discriminatory patterns of educating male and female students.
2. Establish education programs among parents: Conduct workshops and community meetings where they are informed about the long-term returns of investments in the education of sons and daughters. Highlight the particular advantages of female education to the families and the communities.
3. Encourage intergenerational communications: Arrange planned programs between educated women in the community with parents of school-going girls, and successful male professionals with parents of school-going boys, showing real life results of continued education.

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