

PERSONAL AND SOCIAL PROBLEMS FACED BY WOMEN IN GETTING HIGHER EDUCATION

Zoha Khalid^{*1}, Malaika Adil², Junaid Jalil³^{*1,2,3}Department Statistics, University of Peshawar, Peshawar, Pakistan¹zohakhalid242@gmail.com, ²malaikaadil165@gmail.com, ³junaid.jalil200@gmail.comDOI: <https://doi.org/10.5281/zenodo.22024030>**Keywords**

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Corresponding Author: *

Zoha Khalid

Abstract

The participation of women in higher education continues to lag behind in Pakistan and the disparity is particularly high in north western districts. The barriers faced by women in higher education attendance were discussed in this study, which was conducted specifically in Nowshera, Pakistan. The design of this study was a cross sectional survey type. Participants were 250 women who were selected for the study and were asked to fill out a closed-ended, self-reported questionnaire that included 17 items on perceived barriers to higher education and demographic characteristics. The Response rate achieved was 92%. Data was analysed using the frequency distributions, PEARSON'S chi-square test of independence, and cross-tabulations on SPSS version 20 data in which enrolment status (currently enrolled versus not enrolled) was the outcome variable. A quarter (23.6%) was participating in a higher education programme during the survey. Of the 16 factors tested, 12 were significantly related to enrolment status ($p < .05$): area of residence, father's occupation, fear of parents of an unsafe environment, poverty, preferred educational spending preference for son, early marriage, forced domestic work, misinterpreted religious teaching, unavailability of transport, family mindset, restrictions on co-education and shortage of female teachers. There were four factors not significantly related to enrolment status, which were; conservative cultural practices, belief that girls do not need to provide financial support, maternal education, and paternal education. The one at which it was really uneven was in rural areas; out of 81 rural respondents, only one was enrolled. Results show that the challenges of attaining higher education as a woman in this context are neither purely attitudinal, nor purely structural: social factors should not be overlooked, either, and that the series of challenges that should be addressed through policies includes ensuring safe environments, access to transportation, and availability of female staffed institutions.

Introduction

It has been widely acknowledged that higher education produces a variety of economic returns, and that these are not only the individual's, but are about the whole society. A global economy that is increasingly in the knowledge domain relies a lot on the size and

quality of a country's educated population (Klasen, 2002). If it's systematic loss from tertiary education, it's a capability issue for this nation, but with half of that population. If it's systematic loss from the tertiary education system, it's a capability issue for this nation of half that number. Now it is a critical mention that needs

to be made on Pakistan here as this will play a crucial role. That 50% of people are women and less are still in higher education is unfortunate. National figures have shown that the literacy level of girls is still less favorable than boys and Pakistan is falling further behind other countries' gender parity indices. According to Rashid and Mukhtar (2012), this continuing shortcoming is due to lack of adequate funding and lack of continuity in policy therefore public spending on education has been abysmal and the successive national education policies have not fulfilled the aims. But, if the number of enrollee(s) has grown, then improvement in quality and enrollee retention was not always brought about, adds Latif (2009). In this general sluggish system, the heaviest pressure is placed on the tertiary sector, the gross enrolment ratio has fluctuated around 10% in higher education while women participation, although progressing in the last 20 years, has not reached parity (Ali et al., 2015). Due to variations in social, cultural, economic, and educational circumstances, women's engagement and attitudes on gender roles may range significantly in Nowshera and other districts of Pakistan. (Jamal, 2016; Khan et al., 2022). The district for this study has been chosen as representative of this pattern. It encompasses a very urbanised administrative district and a broad rural hinterland, allowing for the integration of a variety of approaches to examine the relationship between the rural and urban, family arrangements and the provision of institutions which may shape and affect the investments women make in their education experiences. A considerable number of studies have been conducted to identify the barriers to girls' school enrolment in Pakistan but most of these studies have dealt with primary and secondary schools, have been qualitative in nature or have targeted country level figures to obscure district level variability. The extent of quantitative support at any individual level is limited and quantitative support for individual barriers and actual outcomes at tertiary level in Nowshera is limited. This study seeks to fill that gap.

1.1 Objectives of the study

The main aims of this study are: This study was done to achieve the following objectives: The proportion of females who are attending higher education in the study district at present. Identify personal and social problems that are affecting women to avoid going for higher education. To check whether or not they believe that any of the barriers are statistically significant given the situation of the present enrolments.

1.2 Research questions

What is the self and other-limiting factors women in the study district mention about higher education? Out of these obstacles, identify which ones are strongly related to if a women is attending a higher education programme or not.

1.3 Significance of the study

The results eliminate ambiguity over what is generally considered a barrier versus what actually constitutes a barrier by clearly linking the barriers to enrolment status instead of to barriers alone. There is, however, some actual practical point to this: almost any obstacle but one that helps nearly everyone is not the type of "target" that should be interfered with, while nearly anything that is very strongly correlated with the difference in enrolment is a "target". The results are expected to be supportive to the policy maker of Education Department of provinces, Semirural or Universities and Gender parity organizations with relation to education.

1.4 Conceptual framework

Obstruction is classified in this study at two levels: Personal barriers are those at individual/daughter and/or close family level which are poverty, early marriage, home duties and parental attitudes towards the daughter's education. Social barriers include institutional and community level barriers. Such as the community's culture on how women may be carried, how Islam is interpreted, restrictions on coeducation, women's transportation, etc, all are things that have been decided by the household and followed by the community and they have

been conflicting or intermingling between each other. The difference would be simply one of convenience, not one of absolutes; just a way of organizing the discussion without claiming that there are different causal pathways!

2. Literature Review

2.1 Higher education and national development

Higher Education Institutions (HEIs) are the producers of the professionals, researchers and administrators which are the means by which societies transform resources into capability. Nussbaum (2003), for his part, believes that education is a part of development, and not just its instrument, and that on a special level it is fundamental to most of the other capacities a person may have, especially with respect to women: For them, it is the precondition for a great deal of other capacities, and a denial of it forecloses upon a great deal of opportunities beyond the classroom. Such is the case of Tembon and Fort (2008) who conclude from a comparative literature review that investments that increase girls' educational attainment pay off in terms of improved health outcomes, reduced fertility, and higher household income. However, Unterhalter and Brighouse (2007) warn that the number of enrollments is not the best indicator of equality in education because access to a school she cannot go to or feel comfortable in, is not equality in any sense. The opposite side of the economic equation is presented by Klasen (2002) who demonstrates that gender parity in school attendance is correlated with faster aggregate growth, both directly and indirectly, on grounds related to investment and fertility, and the health of children. However, for the developing countries, the danger in excluding the tertiary sector from their economies is that the country is excluded from the knowledge economy. In Pakistan, for example, the development of higher education has been identified as weak-performing policy sphere with a sub-optimal policy focus since the inception of Independence and lower participation rates despite the increase in H.E institutions numbers (Memon, 2007 & Mehmood et al, 2018).

2.2 Women's higher education in Pakistan

Even though the overall picture shows that participation of females in higher education system has increased from around 37% of total enrolment in the year 2001 to around 47% in 2014, there are significant regional differences and gender parity is yet to be realized (Ali et al., 2015; Mehmood et al., 2018). University education does play some role in meeting the immediate needs of women's empowerment, especially in decision making within the household, as found by Malik and Courtney (2011), which further reinforces the need to regard tertiary education as an education policy challenge, as opposed to an extension of school enrolment initiatives. Empowerment requires education where the information gained contributes to transformative action, however (Stromquist, 2015), and Kabeer (2005) argues for the conditioning of gender equality goals to measurement.

Latif (2009) claims that the enrolment of girls has not improved evenly and quality and retention have been relatively neglected in these statistics. The challenges for women in continuing to higher education are not singular, but compound; for while one of the problems, such as financial pressures, may present itself in isolation, the burden of family obligation and family reluctance often follows. It is a combination that brings education to a close for women, reports Zamir (2013). However, Khurshid (2016) concludes a necessary precondition: education does not completely undermine gender relations. Educated female empowerment in rural Pakistan communities usually entailed a new role within rather than opposition to existing domestic norms, which enabled the rise of enrolment to coincide with the maintenance of domestic norms.

2.3 Economic barriers

Poverty is the one common thing that is blamed most often as the major stumbling block in improving the position of girls' education. Transportation, uniform, books and stationery

are also significant costs even for the cost that may be paid as subsidy, particularly for low-income families (Khalid and Mukhtar, 2002). Household resources are often limited, and when that's the case, allocation is often and disproportionately directed to sons. This is explained as a rational and yet an unfair response to the differing expected values, namely, a father's income goes to his own family, a mother's income goes to her husband's family. Alderman & King (1998) justify this as a rational but nevertheless an unfair answer to the differing expected values, where the earning wishes of a father are expected to be met within his own family whereas the earning wishes of a mother are expected to be met within her husband's family. This logic has been tested in Pakistan by Aslam (2009) who triangulated with the result being a shortfall in the returns from the labour market to entirely explain the gender gap, suggesting a need for preference and norm-based explanations.

One final economic motive is that of a girl's time opportunity cost. The other poor households do benefit from the girl's unpaid domestic labour, including child-care, care for the ill household member, home work etc., and the hours she puts into study reduces her contribution to this labour by her family members. (Song et al., 2006). Sathar and Lloyd (1994) showed that inequalities in the Pakistani family are not only inter-familial; there is inequality between different people of the same family by birth order and differently educated among the siblings.

2.4 Socio-cultural and religious barriers

Every issue of the Pashtun society is placed on an everlasting agenda of the society. Khan and colleagues (2014) provides a social structure in which women's mobility is closely supervised and in which family honour is significant for a woman's mobility of her daughter/widows. Jamal' (2016) Delphi study in the north-western region of Pakistan revealed that there are other factors besides not liking education that are influencing fathers' lack of desire to send their daughters to school: the safety of the school, the reputation of the school and the availability of male teachers

and support staff. From the study in South Waziristan, it was found that the main challenges are Pashtunwali, poverty, distance, lack of female teacher and government negligence as suggested by Passama et al. (2022).

The involvement of religion is mentioned at times in these discussions and the literature is fairly homogeneous in distinguishing between doctrine and practice. Religious constraints on girls' education can be said to be a misinterpretation of the teaching of the Islam religion as it is argued by Hakim and Aziz (1998) and Bangash et al. (2020) that the constraints that are imposed on women attending school are actually rationalized and claimed to be customary practice. Bangash et al. (2020) particularly highlight examples of this type of logic within Pakhtun culture that block women's access to a higher education.

The likelihood of a girl being able to return to school after marrying significantly falls and when girls do marry, it is less likely that married families will go to the effort of sending their mothers to continued schooling than their non-married families (Ara 2012, Field & Ambrus 2008, Purewal & Hashmi 2015). Field and Ambrus (2008) show a similar relationship in a similar South Asian context that for every year delayed marriage, there is an education level gained. Further they argue that there seems to be a convergence between the importance fathers attribute to education for their daughters given that it is known to have no impact on stopping their daughters from being marriageable, whereas the potential economic gain comes second, as demonstrated by Purewal & Hashmi (2015).

2.5 Institutional and infrastructural barriers

There are many examples of the use of mobile and transport in the literature. Small (Shaukat & Pell, 2015) colleges are effective sizes that catch female students without any other reliable and separate means of transportation to the college, long or unsupervised trips are perceived to be threats to personal safety and family honour (Khan et al., 2022). It is evident that the decisions of girls entering institutional education

are more strongly influenced by the availability of nearby institutions than in rural Pakistan where Lloyd et al. (2005) had previously found this to be the case regarding the decisions of boys to enter institutional education. This indicates that geography of provision is not a gender neutral factor impacting on participation, but in fact is a gendered factor. Alam (2017) has found a similar trend in GIBT. Despite positive attitudes at the household level, HEIs situated in district centres help the rural female leaving them structurally disadvantaged. Siddiquah and Salim (2017) also reveal that the facilities and support provided for students, once they enter the higher education institutions, is a continuing concern for students from Pakistan. Limits include availability of course are women teachers. Unless a single-sex one is undertaken, there is likely to be a vicious circle of not enough women who are capable of working with the courses offered to ensure there is enough women's enrolment for the single sex provision (Khan et al., 2022). The one resistance in particular is co-education. Then there are mixed-sex institutions; for conservative households, these are not acceptable (Mehmood et al., 2018) and some writers argue that while challenging to scale, giving an immediate gain in the enrolment of girls as compared to co-educational institutions.

2.6 Gap in the literature

The current literature has three aspects that limit the present work. First, studies of the Pashtun context are mostly qualitative, and have a limited generalisability. With regards to the literatures of a quantitative nature, it is pointed out that research literature is focused on school enrolment rather than tertiary enrolment. Third, when barriers to enrolment, in the form of perceived, have been explored, they have been associated with women's attitudes in general, rather than with whether or not they help to explain enrolment. The present study is an answer to all three which made use of an inferential design between district level tertiary enrolment figures.

3. Methodology

3.1 Research design

Quantitative design - enquiry & cross sectional. The research aims in this study focused on how perceived barriers are distributed across a given population at a particular time point and the relationship between perceived barriers and status of enrollment, thus justified the use of this design.

3.2 Study setting and population

The study was conducted in Nowshera, Pakistan. The group of women was divided in two groups, women with higher education age (approximately 17-23 years old) and the women who were not enrolled in the higher education institutions (urban and rural localities) across the district.

3.3 Sample size and sampling technique

A margin of error of 5% was established for a 95% confidence level, a sample size of 250 was determined. The respondents were targeted from educational institutions and residential areas throughout the district. As no complete sampling frame of the targeted population of females was available, a purposive non-probability convenience sample was used and deliberate attempts were made to select routinely both urban and rural localities and enrolled and non-enrolled women to ensure coverage and variation in the outcome variable. A questionnaire was sent out to 272 females with only 250 female questionnaires returned, 92%.

3.4 Research instrument

Data were gathered from a structured self-administered questionnaire which was divided into two sections and had 17 closed-ended statements. Section A measured demographic and household characteristics including enrolment status, location, involvement of fathers in educational services, level of formal education for fathers and mothers and father's occupation. In Section B the twelve statements concerned with potential obstacles to women's higher education were answered in dichotomous fashion (yes/no). The items were designed based

on barriers most commonly reported in the Pakistani literature (Bangash et al., 2020; Mehmood et al., 2018; Shaikat & Pell, 2015) and were checked for face and content validity by experts in the relevant field. Prior to administration the instrument was piloted with small sample of respondents with minor changes to wording.

3.5 Data collection procedure

Data were collected in person. Prior to answering the questions, participants were informed about the objective of this study, and when necessary, they received help with the wording of the items. Respondents were assured that the data was not gathered as a part of any assignment or requirement and would be used only for academic purposes, and responses were kept confidential to the extent that the respondents agreed to participate in the study. All participants signed informed consent, which took the form of oral consent.

3.6 Variables

Currently enrolled was chosen as the dependent variable, which was employed as a binary variable (1 = currently enrolled in a higher education programme, 0 = not currently enrolled). Each of the four demographic and household factors and the twelve perceived barriers above was represented by a dichotomous dichotomous factor and treated as a dichotomous categorical variable.

3.7 Data analysis

The questionnaires were checked for completeness, coded and entered in the IBM

SPSS Statistic 20. There was a two-stage analysis. A descriptive statistics was constructed with frequencies and percentages and also bar charts were constructed for each variable. To assess association between each of the independent variables and enrolment status, inferential analysis was carried out by using cross tabulation and chi square test of independence. All tests were so conducted using one degree of freedom and a criterion of $\alpha = .05$. For each test, the assumption of a minimum count of 5 was checked; in all of the analyses the number of cells with less than 5 observed counts equaled the number of cells with less than 5 expected counts. Therefore, the chi-square statistic was appropriate for each test. Each 2 x 2 table had Fisher's Exact Test and the continuity correction computed and gave the same results.

3.8 Ethical considerations

This study did not involve any intervention and no identifying data was gathered. Attendance was optional and could be stopped at any time. Respondents were informed of the purpose of the study and the intended use of the data before they gave their consent.

4. Results

4.1 Enrolment status and household characteristics

Out of 250 respondents, 191 (76.4%) were not in a higher education program at the time of the survey while 59 (23.6%) were in such a program. Table 1 provides a short overview of the sample's household characteristics and demographics.

Table 1. Table 1 gives the demographic and household characteristics of the respondents (n = 250 participants).

Variable	Category	Frequency	Percent
Current enrolment	Not enrolled	191	76.4
	Enrolled	59	23.6
Area of residence	Urban	169	67.6
	Rural	81	32.4
Paternal education	Not educated	75	30.0
	Educated	175	70.0

Variable	Category	Frequency	Percent
Maternal education	Not educated	36	14.4
	Educated	214	85.6
Father's occupation	Government service	210	84.0
	Private/business	40	16.0

Approximately two-thirds of respondents lived in urban localities. Reported parental education levels were high, with 70.0% of fathers and 85.6% of mothers described as educated, and 84.0% of fathers were in government service.

4.2 Perceived barriers to higher education

Table 2 shows the percentage of respondents who agree with the 12 barrier statements. While the

level of agreement was quite high generally, there were three significant themes: girl's role and need to contribute to household finances (92.8%); conservative cultural traditions (90.4%); and mindsets within families (79.2%). The lowest level of agreement, but still significant, was for early marriage 45.2%.

Table 2. Respondents' agreement with perceived barriers to women's higher education (N = 250)

Perceived barrier	Agree (n)	Agree (%)
Family believes girls need not earn for the household	232	92.8
Conservative cultural customs restrict women	226	90.4
Family mindset	198	79.2
Co-education restricts women's higher education	190	76.0
Parents' fear of an unsafe environment	176	70.4
Lack of female teachers in single-sex institutions	165	66.0
Son preference when fees cannot be afforded	162	64.8
Misinterpreted religious knowledge	153	61.2
Unavailability of transport	152	60.8
Forced domestic work	139	55.6
Poverty	142	56.8
Early marriage	113	45.2

4.3 Linkage between social factors of household and enrolment

Area of residence. For 169 urban respondents 58 (34.3%) were enrolled and 1 (1.2%) of 81 rural respondents were enrolled. The association was significant, $\chi^2(1, N = 250) = 33.24, p < .001$.

Father's occupation. Enrolment was 19.0% among daughters of government employees (40 of 210) and 47.5% among daughters of men in private employment or business (19 of 40), $\chi^2(1, N = 250) = 15.09, p < .001$.

Paternal education. Enrolment was 18.7% among daughters of fathers with no education and 25.7% among daughters of educated fathers.

The association was not significant, $\chi^2(1, N = 250) = 1.45, p = .229$.

Maternal education. The rate of daughter enrolment for girls with an uneducated mother was 25.0%, and 23.4% for educated mothers. The correlation was not statistically significant ($\chi^2(1, N = 250) = 0.05, p = .831$).

4.4 Association between perceived barriers and enrolment

The detailed chi-square analyses results for the sixteen independent variables are given in Table 3.

Table 3. Chi-square tests of association with current enrolment status (df = 1, N = 250)

Independent variable	χ^2	p	Decision
Area of residence	33.24	< .001	Significant
Father's occupation	15.09	< .001	Significant
Parents' fear of an unsafe environment	158.10	< .001	Significant
Poverty	58.85	< .001	Significant
Son preference when fees cannot be afforded	127.70	< .001	Significant
Early marriage	77.06	< .001	Significant
Forced domestic work	57.05	< .001	Significant
Misinterpreted religious knowledge	44.78	< .001	Significant
Unavailability of transport	45.58	< .001	Significant
Family mindset	14.21	< .001	Significant
Co-education restricts women's higher education	156.20	< .001	Significant
Lack of female teachers	134.90	< .001	Significant
Paternal education	1.45	.229	Not significant
Maternal education	0.05	.831	Not significant
Conservative cultural customs	1.40	.238	Not significant
Family believes girls need not earn	1.68	.195	Not significant

Twelve of the sixteen variables were significantly associated with enrolment status at $\alpha = .05$; four were not.

4.5 Direction of the significant associations

Inspection of the cross-tabulations reveals that there are twelve significant relationships, only two of which have the same pattern and that the pattern is significant for interpretation.

Pattern A — females who were not enrolled were more likely to report barriers. The women who did not attend higher education were significantly more likely to indicate the item as a barrier to getting to the University compared to those who attended higher education on four items:

- Parents feel like the school was not a safe environment: 90.6% of non-enrolled respondents (173/191) said so vs. 5.1% of enrolled respondents (3/59).
- 83.8% non-enrolled (160 of 191) answered that there should be a preference for sons, while only 3.4% enrolled (2 of 59) agreed to this.
- Co-education restrictions: 94.8% of the non-enrolled respondents (181 of 191) said they did support co-education restrictions while 15.3% of the enrolled respondents (9 of 59) said they did.

- Lack of female teachers was endorsed by 85.3% of non-enrolled (163 of 191) but 3.4% of enrolled persons (2 of 59).
- Poverty - 70.2% of respondents who were not enrolled (134 of 191) endorsed poverty compared with 13.6% of enrolled respondents (8 of 59).

These are the factors which most clearly distinguish the females of higher education from the females who are not so educated.

Pattern B — a type of barrier that is mentioned more frequently by enrolled women. The relationships were reversed for five items, with enrolled women being by far most likely to were the factor a problem and non-enrolled women divided or mostly disagreeing:

- Early marriage, which 94.9% (56 out of 59) of enrolled respondents say it is okay to practice while only 29.8% (57 out of 191) say the same for non-enrolled respondents.
- Forced domestic work — endorsed 98.3% of enrolled Respondents (58 out of 59) and 42.4% of the non-enrolled Respondents (81 out of 191).

- Misinterpreted the knowledge of what is religious: 98.3% of enrolled and 49.7% of those not enrolled responded positively. Unavailability of transport (98.3% of all enrolled respondents (58 out of 59) compared to 49.2% of those who were not enrolled (94 out of 191)).
- Unavailability of transport (98.3% of all enrolled respondents (58 out of 59) compared to 49.2% of those who were not enrolled (94 out of 191)).
- Family mindset - 96.6% of enrolled respondents (57 out of 59) agreed compared to 73.8% of non-enrolled respondents (141 out of 191).

This second pattern suggests that the challenges that enrolled women identified are known challenges that constrain other women to enrol and may well include challenges the enrolled women faced but were able to overcome: the challenges they attribute to other women facing would be the Pattern A factors for non-enrolled women but may be in addition to challenges the enrolled women faced and successfully surmounted. These two patterns are statistically significant, have different substantive meanings and, if interpreted as arising from a single mechanism, would represent a miss-reading of the data.

4.6 Non-significant associations

There was no significant association with enrolment for four factors. There was no difference between the enrolled and non-enrolled women in parental education in this sample. Almost everyone agreed with conservative cultural customs (90.4%) and that girls don't need to work for the family (92.8%), providing little variation to use in order to differentiate between the two groups. This is a ceiling effect, rather than a lack of relevance, that their non-significance should be interpreted as.

5. Discussion

5.1 The gap between rural and urban areas

However, the most striking response to the question is that, in contrast to one-eighth of the women who are enrolled, none of the extremely

small sample of rural residents indicated that they are. This is a higher gap than average of most national aggregates and has been reflected in other evidence that the enrolments of females in the rural area are lower than district and provincial averages on average (Khan et al., 2022; Lloyd et al., 2005). This is one reason that gives credence to a supply-side explanation. As is the case with higher education institutes in most of the province, these institutes are concentrated in the urban centre, and as indicated by the survey, the distance of a household to these institutes in the rural area is strongly associated with not attending a higher education institute, as it always jeopardizes that safety and appropriateness necessary to make a trip to the higher education institute. Distance, transport and safety are not discrete barriers but an integrated barrier that is encountered by rural families.

5.2 Safety, mobility and institutional form

Of all the items, parents concern over an unsafe environment had the largest chi-square value - and was followed by the items associated with co-education and female teachers in the survey. These three effects can be considered as a cohesive effect: Families don't protect themselves against their daughters' education but they do protect themselves against their daughters' education in institutions they feel are unsafe and/or inappropriate. This is very similar to Jamal (2016) who found that Pashtun fathers' resistance was not an unconditional but took on a conditional nature, and Khan et al.'s (2014) understanding of mobility and honour in Pakhtun social structure. Khan et al. (2022) and A. Y. Khan et al. (2022) have stated that the issue/situation of harassment cannot be overlooked and needs to be considered in all decisions a family makes when taking their child to and from school. The policy implication is immediate; in its specificity (how knowledge and/or strategies are used to enhance student outcomes) is rather unusual. Only interventions which tackle attitudes and most clearly the offer of the institution, those you could find in the real world, such as provision for segregated transport

on fixed routes, separation (single-sex) of schools, women teachers/administrative staff, single-sex campuses, provision of accommodation in hostels etc. are likely to move enrolment.

5.3 Economic barriers and household allocation

The poverty of the households was strongly associated with non-enrolment, as did son preference, with 70.2% and 83.8% respectively of non-enrolled respondents agreeing with these statements. There is support from the literature on household allocation (Alderman & King, 1998; Aslam, 2009): where resources are limited to education all sons are allocated first. The result also points to the fact that it is not the tuition alone which they were encountering as costs but the transport and materials as well. (Khalid & Mukhtar, 2002) The direction of the occupation result is unexpected anew with the father. Daughters of men in private employment/business were significantly more likely to be enrolled (47.5%) compared to daughters of government employees (19.0%). The most likely explanation - which is not necessarily an economic one - is that the sample may be weighted with government employees more highly than other groups; those employed in the private sector and business may be in more secure occupations which are not necessarily as income-earning as those associated with business ownership and trading (which are, however, predominately found in the urban centre). Since occupation was only described as either absent or present, and no grade or income was given, the question cannot be addressed here and is used as a working hypothesis for future research.

5.4 Parental education

The lack of any significant relationship between parents' schooling and enrolment runs in contrast to a large body of research which finds that parental education is one of the strongest indicators of daughters' schooling (Hashmi et al., 2008; Song et al., 2006). There are two possible explanations. Two explanations are suggested. The measure was very basic ("educated", "not") and included none of the nuances found in the

academic spectrum, such as the difference between having five years of primary education versus a university degree, a difference which the literature correlates with participation in tertiary programs – something that was seen as educating daughters. Second, the rates were high with only 70.0% and 85.6% of fathers and mothers, respectively, being reported, thus the power of the test was limited. The result should thus not be interpreted as a rejection of the already settled finding but as one that is inconclusive.

5.5 Religion and custom

The result of 61.2% respondents knowing misinterpreted religious knowledge is consistent with the literature which differentiate between the religious knowledge and local practice (Bangash et al., 2020; Hakim & Aziz, 1998). What people were saying was that religion does NOT prevent women's education, they were saying that religious language is used to justify restrictions not arising out of a belief in religion. This, in turn, has implications for campaigning design in that religious scholars can take on the challenging of such justifications with a different locus of authority than secular campaigns. The overwhelming consensus (90.4%) was on the conservative cultural customs, which had no association with enrolment. This does not mean that customs are irrelevant, but rather that as a background condition, customs has the effect of sponsoring all respondents with variation in enrolment as a result of more specific and more variable factors identified in section 4.5.

5.6 Interpreting the two response patterns

The finding of the relationship and differences between Pattern A and Pattern B in section 4.5 is the most methodologically important findings of the study and has not received much comment in related Pakistani surveys. All age groups of women enrolled were significantly more likely than non-enrolled women to mention barriers to higher education, including early marriage, domestic work, transport and family mindset. Another interpretation of this is that people who are enrolled are more aware of the challenges

they have had to face, and another is that higher education increases awareness of the structural constraints in general. The lack of direct indication of the barriers that would affect any particular respondent from the cross-sectional perception data means that perceptions of barriers are partly a function of educational experience. Future research in this field would be enhanced if respondents were questioned about their own experience, and not women in general.

5.7 Comparison with previous studies

The results are similar to the barriers reported by Shaukat and Pell (2015) for female university students and Mehmood et al. (2018) in the context of the National barriers, which is similar to the qualitative report of Khyber Pakhtunkhwa provided by Khan et al. (2022) and Jamal (2016). The study's contribution is more to order the barriers by their statistical affiliation with enrolment, which enables barriers with high statistical affiliation to enrolment – residence, safety, co-education, female staffing and poverty – to be separated from those with high statistical affiliation but not discrimination – meanings to self-reliance and purely subjective matters.

6. Conclusion

This study explored some personal and social barriers towards higher education in females in Nowshera, Pakistan. Only less than a quarter of the 250 women surveyed were in a higher education programme (and no women in rural areas).

Out of the 12 factors tested, 6 factors were significantly associated with enrolment status – “area of residence”, “father’s occupation”, “parents’ fear of environment to be unsafe”, “poverty”, “son prestige in an expenditure on education” and “early marriage”. Enrolment status effect was demonstrated significantly for 6/12 factors namely: “area of residence”, “father’s occupation”, “parents’ fear of an unsafe environment”, “poverty”, “son prestige in spending on education” and “early marriage”. The relationship between different types of education (educational level of both fathers and

mothers) or related conservative cultural traditions and belief that girls don’t need to work to earn was not robust enough to be considered significantly related to enrolment.

It is a pattern whereby exclusion in this district is generated both through absence of direct opposition to women’s schooling and due to complex interplay between geographical location, institutional structure and household economy. When the institution is remote or male dominated or has no female staff or can only be accessed by unsafe means of transport, families give in when they don’t consent. When limited resources are required to be distributed between a sons and a daughter, the family consents when the institution is not available. These are factors that can be directly affected or influenced by policy.

6.1 Recommendations

For provincial government and education authorities

1. The choice of women’s degree college establishment in the tehsils of rural area in the study district should be given priority over enhancing the capacity of existing degree colleges in urban areas.
2. Ensure provision of subsidised, segregated transport provision on fixed routes to urban and rural based areas, as transport and safety concerns were found to be most strongly associated to non-enrolment.
3. Support female teacher recruitment in greater numbers and recognise and provide teacher service incentives to post to single-sex rural schools, so as to eliminate the vicious circle that perpetuates a shortage of female teachers which in turn leads to a shortage of teachers that would produce females as staff.
4. Implement need-blind reward for sending one or more children of higher education age to schools and colleges by introducing room rent/stipend to cover transport and materials; this involves

fixing a standard as a benchmark for decent living.

For institutions and civil society

5. Provide hostel accommodation for students from the rural area and specially provide female wardens for the hostel as an alternative to the daily journey of students.
6. Openly differentiate customary restrictions to women education, that are defended on religious grounds from the Islamic teaching on women education, in cooperation with religious scholars.
7. Conduct focused community awareness raising on the economic consequences of parents' marriage to daughters' education—with fathers and male heads of households, and not only mothers.

For higher education institutions

8. Take into account Saturday school and/or satellite schools, and accredited distance learning for women who cannot attend school every day because of domestic responsibilities.

6.2 Limitations

There are four caveats to the findings. I would like to highlight the first disadvantage, which mentioned that sampling was non-probability convenience sampling in one district and thus the results of this study are not generalizable to district and Pakistan as a whole. Secondly, the design is cross sectional – Associations that are reported are association and direction of causality is not established. Thirdly, all barriers items were dichotomous and dealt with general women instead of personal experiences of the respondent, as section 5.6 will show, which lead to varying interpretations. Fourth, some of the binary variables (e.g., father's occupation and the education of the fathers and mothers) are deprived of analytic information they may have valuable.

6.3 Directions for future research

Future research should use probability sampling in several districts or catch-hold areas, measure education level and family income on continuous scales with multiple categories and use multivariate models (e.g., binary logistic regression model) so as to estimate the independent impact of each factor, after accounting for the influence of other factors, and separate the effect of the respondent's own experience from his/her perception of the situation with respect to women in general. A longitudinal study of women from higher secondary to tertiary education or tertiary education or none at all would be a better study however.

Declarations

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Conflicts of interest. The author(s) declare no conflict of interest.

Ethics approval. The study was conducted in accordance with institutional ethical guidelines. Verbal informed consent was obtained from all participants, and no identifying information was collected.

Data availability. The dataset analysed during the current study is available from the corresponding author on reasonable request.

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