

Assessing the Level of Cultural Factors and Academic Motivation among Female Secondary School Students in District Quetta, Balochistan

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ABSTRACT

Aim of the Study: The present study assessed the level of cultural factors (family culture, school culture, and community and social values) and the level of academic motivation among female students of Grades 9 and 10 in government girls' higher secondary schools in District Quetta, Balochistan.

Methodology: Using quantitative, cross-sectional survey design, targeted population of 7,254 female students enrolled in Grades 9 and 10 across 72 government girls' higher secondary schools in District Quetta. A sample of 364 students was drawn through a multistage sampling procedure, with the sample size determined from the Krejcie and Morgan (1970) table. Data were collected using a self-developed 40-item questionnaire with a five-point Likert scale, validated through expert review and pilot testing (overall Cronbach's $\alpha = .905$).

Findings: Students rated all three dimensions of cultural factors at a high level, with an overall mean of 3.87 (SD = 0.39). Academic motivation was also high (M = 4.00, SD = 0.52), reflecting perseverance, curiosity, classroom participation and commitment to improving academic performance. Family culture recorded the highest mean among the cultural dimensions (M = 3.95, SD = 0.49), followed by school culture (M = 3.86, SD = 0.47) and community and social values (M = 3.78, SD = 0.55), indicating that the family is the most immediate and strongly perceived cultural influence on these students' education.

Conclusion: The study indicates that the cultural foundations of educational motivation are already present among female secondary school students in District Quetta. They point to the value of sustaining and strengthening culturally supportive family, school and community environments in order to maintain positive educational attitudes among adolescent girls in a socio-culturally diverse and resource-constrained provincial context.

Keywords: Cultural Factors; Family Culture; School Culture; Community and Social Values; Academic Motivation; Secondary Education; Balochistan.

Article History

Received:
June 25, 2026

Revised:
August 21, 2026

Accepted:
August 26, 2026

Online:
August 30, 2026



1. INTRODUCTION

A key construct in educational psychology, academic motivation plays a pivotal role in understanding students' attitudes toward education, their efforts when faced with academic challenges, and their educational attainment. In general, it is recognized as the combination of internal and external factors that trigger, guide and maintain learning behaviours, such as students' willingness to do their tasks and attend school, and their interactions with teaching material (Ryan & Deci, 2020; Schunk et al., 2014). Students with academic motivational orientations are more active in school, demonstrate academic resilience and tend to perform better in the education system than students with less academic orientations (Howard et al., 2021). Motivation is especially vital during the secondary school level because it is also a turning point in which students make important decisions regarding continuing in school and future career paths.

While individual students' psychological processes influence their motivation, large numbers of studies have demonstrated that social and cultural factors affecting students' lives at home and at school also play a significant role in shaping motivation. Culture, defined as the shared beliefs, values, norms and behavioural expectations of a social group, helps students understand the purpose of education, what they want to do in it, and how to relate to it. (Hofstede et al., 2010) In all cultural systems, families and schools (and the community more broadly) send students constant messages about education. These messages in combination shape students' perceptions of the value of schoolwork and their willingness to put in effort.

This is typically the family, the closest cultural environment. From the beginning of school, children are surrounded by parental educational values, expectations, encouragement, communication and learning environment at home (Eccles & Wigfield, 2020). In a recent meta-analysis, it has been empirically verified that parental involvement is positively correlated with students' academic motivation in a broad spectrum of contexts (Özyıldırım, 2024). The school is another cultural context and the same significance. School culture is a set of values, norms, relationship dynamics and routine practices that influence the experience of learning on a day-to-day basis (Safdar, 2022; Deal & Peterson, 2016). Students who experience a sense of belonging and feel motivated within their educational environment are more likely to feel a strong sense of belonging within their schools and have high expectations, as well as a sense of trust, respect, fair treatment, and positive relationships with students and teachers (Zhao et al., 2023; Erdem & Kaya, 2024). A third motivating force comes from the wider community: prevailing social values, orientations and community attitudes towards education and, especially, girls' education, may bolster or impede the process of students' motivational development (Epstein, 2018).

It is particularly important to understand the level of cultural factors and academic motivation in Balochistan. The province is the largest out of all the provinces of Pakistan, but the educational performance is also the lowest in Pakistan. According to the national statistics 65 per cent of school-age children were out-of-school in Balochistan in 2021–22, the largest percentage among all provinces, and the gross intake ratio to Grade 1 balanced 46:61 per cent girls and boys, respectively (Pakistan Institute of Education, 2023). The percentage of adult female literacy in the province was 26 per cent in 2019-20, while the percentage of rural women was 18 per cent (Pakistan Bureau of Statistics, 2021). Limited provision, geographical dispersion and poverty and social norms are cited as the causes of gender inequity in access and participation in the provincial education sector plan (Government of Balochistan, 2020). The cross-over of gendered role expectations, family responsibilities and education aspiration has been captured in qualitative investigations conducted at the provincial level, which show that females experience a complex nexus of these stances (Anwar et al., 2022; Arif et al., 2025).

1.1 Problem Statement

In this context an empirical problem emerges. Policy documents and qualitative studies portray Balochistan as being educationally disadvantaged and culturally constrained for girls and it is assumed that the cultural support of girls in such context is going to be weak and their motivation to learn is going to be low. This assumption has not been directly tested. The level of cultural support that the female students of secondary school really receive, and their real level of academic motivation, hasn't actually

been measured in District Quetta, a district that brings students from diverse ethnic, linguistic and socio-economic backgrounds. In the absence of such base data, schools, parents and policymakers have no way of knowing whether cultural conditions that would facilitate educational motivation are lacking and must be established, or already exist but must be reinforced. The two implications for policy are very different.

1.2 Research Gap

Part of this question has already been addressed in existing research but not the full question. Researchers have focused on access, enrolment and retention of girls in education, and social and institutional barriers to their participation, without considering the girls' perspectives on their education (Anwar et al., 2022; Arif et al., 2025); and participation rates are reported in provincial and national documents without taking the standpoint of the girl. The research on academic motivation in Pakistan has been done primarily at the university level or in other provinces (Ullah et al., 2024; Yasmeen et al., 2024). However, what is lacking is a study which measures the level of the three cultural environments surrounding female secondary school students of Balochistan and the students' academic motivation along a single coherent framework from students' perspective. The present study is about to fill the lacuna.

1.3 Research Questions

The study was guided by two research questions:

RQ1. What is the level of cultural factors (family culture, school culture, and community and social values) among female secondary school students in District Quetta, Balochistan?

RQ2. What is the level of academic motivation among female secondary school students in District Quetta, Balochistan?

1.4 Significance of the Study

The study provides context specific evidence of cultural issues and academic motivation with female secondary school learners in an under researched educational context. It can provide teachers, school leaders, parents and policy makers with a clear view of the level of 'family culture', 'school culture', 'community culture' and 'social culture' perceived by the student and the level of 'motivation' in school, so that they can identify the area in which the students' perception is the strongest and the area that needs to be paid attention. The evidence can help in designing strategies for creating culturally supportive learning environment, supporting girls' learning and boosting academic motivation of students in Balochistan and similar socio-cultural settings.

2. LITERATURE REVIEW

2.1 Cultural Factors in Education

Educational institutions are influenced by culture inasmuch as they reflect students' perceptions of learning and their attitudes towards learning. Shared values, norms and expectations within a family, a school or a community are passed on to students and embedded in the values system that students use to evaluate the value of schooling (Hofstede et al., 2010). The influences at work in these areas are usually multi-faceted and research into the area often make a distinction between the immediate environments where a student lives and works directly - the home and the class room - and the wider social environment that encircles them. A review of empirical research in recent years also shows that there are no universal motivational patterns across all cultural and educational contexts, instead, the motivational outcomes of such contexts vary (Özyıldırım, 2024; Erdem & Kaya, 2024). This is precisely the reason culture-specific considerations should be evaluated in the context of specific educational contexts, and not taken from other contexts where they were evaluated.

2.2 Family Culture and Students Learning

Family culture is usually the most direct influence which educates students. The parental educational values and expectations, encouragement, information about schooling, emotional support and family educational environment, all of which influence students' motivation and engagement (Eccles & Wigfield, 2020). According to the results of a meta-analysis of studies conducted on parental involvement and academic motivation, a positive relationship has been found in various samples (Özyıldırım, 2024). The situation is a similar one in Pakistan. Several studies indicated that parental and institutional support is an important factor affecting students' language learning outcomes (Yasmeen et al., 2024) and that academic motivation among students with supportive backgrounds is found to be high (Ullah et al., 2024) in the case of tertiary-level students in Khyber Pakhtunkhwa. These studies collectively indicate that family culture is very important in the motivation and educational aspirations of students, especially in a collectivist society where the power of family in educating their children is high.

2.3 School Culture and Students' Motivation

School culture refers to the shared values, norms, relationships and practices that define students' experience of school (Deal & Peterson, 2016; Gruenert & Whitaker, 2015). Students' sense of belonging and their academic motivation tend to be stronger where the school is characterised by supportive teacher–student relationships, high academic expectations, fairness and an inclusive learning environment. This relationship is supported by empirical work. A sample of 1,417 students was studied, and school climate was found to directly predict achievement motivation and indirectly influence it via students' learning adaptability, with the indirect effect being larger when perceived teacher support was high (Zhao et al., 2023). There is also a positive relationship between school and classroom climate and academic results, as evidenced by a meta-analysis (Erdem & Kaya, 2024). The learning environment matters a great deal in the learning development of students, as shown by the evidence from Pakistani secondary schools (Khan et al., 2018) and in Balochistan, teachers' enthusiasm and the classroom environment created by the teachers are found to be related to students' motivation in learning (Khizar et al., 2026). In resource-poor areas, however, there can be disparities in the support that students in District Quetta receive for continued education at school, making it important to assess students' perceptions of their own schools (UNESCO, 2024; Government of Balochistan, 2020).

2.4 Community and Social Values

Community values and culture include the collective attitudes, norms and expectations that influence students' orientation to education – such as community appreciation of education, peers and influential beliefs/opinions about girls' education (Epstein, 2018). These influences are important especially when community attitudes are influential on decisions to send children to school. Research in secondary schools in Pakistan also shows that the perceived quality of education at the school level is related to community involvement (Nadeem et al., 2020; Safdar & Khan, 2020; Safdar et al., 2020). In Balochistan, community attitudes towards girls' education are found to be variable (not uniformly restrictive), with the qualitative study conducted in the tribal areas indicating honour-based sanctions and child marriage as active constraints on girls' education, whereas the study of rural schooling in the province suggests that culture is not always a negative influence and can be embedded in broader governance and development processes (Arif et al., 2025; Anwar et al., 2022). This mixed picture suggests that community and social values are an important aspect to be measured separately from the others.

2.5 Academic Motivation of Secondary School Students

Academic motivation is the internal/external processes that influence students to learn, persist in learning activities and striving for learning objectives (Schunk et al., 2014). Motivation in self-determination theory is influenced by intrinsic factors (interest and enjoyment) and extrinsic factors (rewards and recognition) and environments that promote autonomy, competence and relatedness result in more lasting motivation (Ryan & Deci, 2020). Self-determination research is summarized in a meta-analysis that

shows that more autonomous forms of motivation are related to better academic outcomes (Howard et al., 2021). In general, academic motivation tends to be moderate to high for secondary and tertiary students as indicated in descriptive studies, which also include Pakistan (Sakan, 2023; Ullah et al., 2024). The existing provincial studies provide evidence of supportive teacher and classroom environments are linked to increased motivation, though there is limited evidence specific to female students in Balochistan. This is the reason it is important to conduct a descriptive analysis of academic motivation for female secondary school students in District Quetta (Khizar et al., 2026).

2.6 Theoretical Framework

The study is guided by Bronfenbrenner's Ecological Systems Theory that posits that human development occurs as a result of the interaction between the individual and a series of nested environmental systems (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006). The microsystem is made up of the experiences in which a student is directly involved, primarily the family and the school; the mesosystem involves the interaction between the microsystems; and the exosystems and macrosystems are the broader community and the cultural norms that influence them. This model offers the structuring principle of the three cultural dimensions measured here. The two microsystems are the family culture and the school culture, which the student lives with and faces every day, and the more remote cultural layer is the community culture and social values that indirectly reach the students. The theory also leads to a testable expectation that the perception of a family and school environment should be more salient and more consistent than community influences because the proximal environments have more compelling and more continuous relationship to students' lives.

The framework is completed with two motivational theories. According to Self-Determination Theory, supporting cultural contexts contribute to internalised and more enduring motivation (Ryan & Deci, 2020), and the needs for autonomy, competence and relatedness are fundamental for the motivation to persist. The Expectancy-Value Theory (Eccles & Wigfield, 2020) outlines the elements of motivation, which include students' expectations for success and value placed on a task, such as its perceived value for future objectives. The three theories are combined in this study's conceptual model of three ecological levels of culture influencing students' academic motivation. This study does not test the causal paths between these variables, but only measures the levels of each set of variables.

2.7 Summary and Research Gap

The literature has shown that both the family and the school/community environment have an impact on students' academic motivation and that the impact of these environments is different depending on the context. It also outlines that Balochistan has extremely challenging learning environment for girls. What it does not offer is a measured indication of the province's secondary school female students' perceptions of these cultures and their drive to engage in them. The present study provides that descriptive baseline data for District Quetta.

3. METHODOLOGY

3.1 Research Design

This study adopted the quantitative, cross sectional survey method to determine the levels of cultural factors and academic motivation of female secondary school students. A survey design was considered appropriate since the aim was to collect standardised data across a large, representative sample, at one specific moment in time (Creswell & Creswell, 2018; Cohen et al., 2018).

3.2 Population and Sample

The target population was 72 government girls higher secondary schools in District Quetta, Balochistan with 7254 female students in Grades 9 and 10. The Krejcie and Morgan (1970) table for finite populations was used to determine the sample of 364 students. The sampling procedure used was a multi-stage sampling technique; the schools were sampled first, then the sample was allocated proportionate to grade

level within the schools, and students were randomly selected within the grade. The achieved sample comprised 199 Grade 9 students (54.7%) and 165 Grade 10 students (45.3%), of whom 207 (56.9%) were from urban schools and 157 (43.1%) from rural schools.

3.3 Research Instrument

The tool used was a structured self-administered questionnaire which was developed by the researcher for this study. It was not constructed from an already published scale. The items were designed by the researchers based on the constructs and indicators identified in the literature reviewed in step 2, namely parental educational values and support for family cultural values (Eccles & Wigfield, 2020); shared norms, relationships and expectations for school culture (Deal & Peterson, 2016; Gruenert & Whitaker, 2015); community attitudes and peer influence on family cultural values (Epstein, 2018); and intrinsic and extrinsic regulation for academic motivation (Ryan & Deci, 2020; Schunk et al., 2014).

There were two parts to the questionnaire. Demographic data was gathered in Part One. In Part Two consisted of 40 items and measured four constructs: Family Culture (10 items), School Culture (10 items), Community and Social Values (10 items) and Academic Motivation (10 items). This was measured on a five point Likert scale from Strongly Disagree (1) to Strongly Agree (5). The instrument was expert vetted to achieve content validity and was piloted before data collection. The reliability was satisfactory, with a Cronbach alpha of .905 for the total 40-item scale and a range of .737 to .815 for the subscales.

3.4 Ethical Considerations and Informed Consent

All the educational authorities and principals of the schools involved in the study had to give formal permission to carry out the study. Since the respondents were school students, the purpose of the study was explained to the school administration and the students in a simple language and informed consent was taken from the students before administration. Students were made aware that there were no consequences for their participation or lack thereof and could drop out at any time without facing any repercussions.

Confidentiality and anonymity were ensured for the respondents. The questionnaires did not have names, roll numbers or any identifying information on them and only aggregate data was reported. The researcher collected the completed questionnaires after they were given out and kept in a safe place. Questionnaires were completed with the students in person by the researcher during school hours with permission from the school administration and without disruption to the school's teaching hours. There were no incentives given and no personal sensitive information collected.

3.5 Data Analysis

The analysis of data was done by SPSS Version 26. Demographic characteristics of the respondents were described in terms of frequencies and percentages, while means and standard deviations were calculated for the responses to the items and constructs in terms of the cultural factors and academic motivation. Mean scores were interpreted using equal intervals across the five-point scale: 1.00–1.80 very low, 1.81–2.60 low, 2.61–3.40 moderate, 3.41–4.20 high, and 4.21–5.00 very high. Since the study was descriptive in nature and the research questions were related to levels rather than relationships, no inferential tests were used.

4. RESULTS

Table 1: *Demographic Profile of Respondents*

Variable	Category	Frequency (f)	Percentage (%)
Age	13 years	44	12.1
	14 years	126	34.6
	15 years	119	32.7
	16+ years	75	20.6
Class Level	Grade 9	199	54.7
	Grade 10	165	45.3
Locality	Urban	207	56.9
	Rural	157	43.1
Total		364	100.0

The demographic data of the respondents is shown in Table 1. Of the 364 participants, 54.7% were enrolled in Grade 9 and 45.3% in Grade 10. The majority (56.9%) of the students had been attending urban schools, while the remainder (43.1%) had been attending rural schools. The age groups of the respondents were the secondary school students ranging from 14–15 years which is the usual age of secondary school students in the study area.

Table 2: *Item-Wise Descriptive Statistics for Family Culture*

S#	Statement	M	SD	Level
1	My family considers education important for girls.	3.91	0.86	High
2	My parents encourage me to continue my studies.	3.61	0.92	High
3	My family motivates me to work hard in school.	4.08	0.88	High
4	My parents discuss my studies with me.	3.91	0.86	High
5	My family provides me time and support for study at home.	4.16	0.76	High
6	My family believes that education can improve my future.	3.78	0.90	High
7	I receive appreciation from my family when I perform well in studies.	3.71	0.91	High
8	My family's values encourage me to take my education seriously.	4.06	0.85	High
9	My parents expect me to do well in school.	4.17	0.78	High
10	My home environment supports my learning.	4.13	0.85	High
Overall	Family Culture	3.95	0.49	High

Table 2 indicates that all the subscale items for Family Culture were rated high. The most salient features for the students' family environment were related to parental expectations and academic support at home, with the greatest item means of 'My parents expect me to do well in school' ($M = 4.17$, $SD = 0.78$) and 'My family provides me time and support for study at home' ($M = 4.16$, $SD = 0.76$). Generally, high ratings were also given for items "My home environment supports my learning" ($M = 4.13$) and "My family motivates me to work hard in school" ($M = 4.08$). The lowest was the item 'My parents encourage me to continue my studies' ($M = 3.61$, $SD = 0.92$) which was still in the high range. The overall Family Culture mean score is 3.95 ($SD = 0.49$), indicating students generally felt their family environments were supportive to their education.

Table 3: Item-Wise Descriptive Statistics for School Culture

Item	Statement	M	SD	Level
1	My teachers encourage me to do my best in studies.	3.61	0.92	High
2	I feel respected in my school.	3.82	0.90	High
3	My school environment is supportive for learning.	4.01	0.81	High
4	My teachers treat students fairly.	3.94	0.85	High
5	I feel comfortable asking questions in class.	4.21	0.74	Very High
6	My school encourages girls to continue their education.	3.59	0.88	High
7	Good academic performance is appreciated in my school.	4.01	0.84	High
8	My school provides a positive atmosphere for study.	3.90	0.85	High
9	The discipline in my school helps me focus on my studies.	3.70	0.89	High
10	My teachers inspire me to work hard.	3.85	0.88	High
Overall	School Culture	3.86	0.47	High

Table 3 indicates that from ten School Culture items nine of these items were in the high range, with one item, “I feel comfortable asking questions in class”, being in the very high range ($M = 4.21$, $SD = 0.74$). This indicates that students' classrooms were psychologically safe and participatory. Factors that showed relatively strong scores reflected institutional support and recognition, such as “My school environment is supportive for learning” ($M = 4.01$) and “Good academic performance is appreciated in my school” ($M = 4.01$). The two lowest rated items were: My school encourages girls to continue their education ($M = 3.59$) and My teachers encourage me to do my best in studies ($M = 3.61$). Both are in the high range but the order in which they appear suggests that in these schools, the lesser of the two factors in the school culture in terms of support for girls' continuing education in school is the institutional support and the direct motivational practice of the teachers. The mean score (3.86 , $SD = 0.47$) represents a high degree of school cultural support perceived.

Table 4: Item-Wise Descriptive Statistics for Community and Social Values

Item	Statement	M	SD	Level
1	People in my community think girls' education is important.	3.79	0.91	High
2	My community encourages students to succeed in education.	3.85	0.91	High
3	Social values around me support my school learning.	4.05	0.87	High
4	Local traditions in my area allow girls to continue education.	3.62	0.89	High
5	My friends encourage me to take interest in studies.	3.92	0.88	High
6	Girls who study well are respected in my community.	3.75	0.93	High
7	Community attitudes in my area positively affect my motivation to learn.	3.48	0.89	High
8	I feel social support from people around me for my education.	3.77	0.89	High
9	The values of my society encourage academic success.	3.75	0.87	High
10	My surroundings make me feel that education is worthwhile.	3.79	0.86	High
Overall	Community & Social Values	3.78	0.55	High

Table 4 shows that all ten Community and Social Values items were rated at a high level. The highest item mean was recorded for “Social values around me support my school learning” ($M = 4.05$, $SD = 0.87$), indicating that students generally felt the social values around them were consistent with their schooling. “My friends encourage me to take interest in studies” ($M = 3.92$) and “My community encourages students to succeed in education” ($M = 3.85$) were also rated positively, highlighting the supportive role of peers and the wider community. The lowest-rated items were “Community attitudes in my area positively affect my motivation to learn” ($M = 3.48$, $SD = 0.89$) and “Local traditions in my area allow girls to continue education” ($M = 3.62$). These results suggest that while social values are perceived positively in general, students are more reserved about specific traditional attitudes and about the direct motivational effect of community opinion, which is consistent with the cultural diversity of District Quetta. With an overall mean of 3.78 ($SD = 0.55$), this dimension operates at a high level, though slightly below Family Culture and School Culture.

Table 5: *Summary of Descriptive Statistics for Cultural Factor Dimensions*

Variable	N	Min	Max	M	SD	Level
Family Culture	364	2.50	4.90	3.95	0.49	High
School Culture	364	2.60	5.00	3.86	0.47	High
Community & Social Values	364	2.20	5.00	3.78	0.55	High
Cultural Factors (Overall)	364	2.90	4.80	3.87	0.39	High

As shown in Table 5 the respondents' perception was at a high level for all three dimensions of cultural factors and the overall composite cultural factors. The family culture showed the highest mean ($M = 3.95$), whereas the School Culture and Community and Social Values were 3.86 and 3.78 respectively. Overall Cultural Factors (C Factors): $M = 3.87$ ($SD = 0.39$). The theoretical order of the three dimensions—most proximal being the family and most distal being the community environment, the latter of which is the most varied from one locality to the next—was reasonably well supported by the ratings. Based on the above results, it can be inferred that the cultural factors among the female secondary school students of District Quetta in all the three dimensions are at high level, which answers the RQ1.

Table 6: *Item-Wise Descriptive Statistics for Academic Motivation*

Item	Statement	M	SD	Level
1	I am interested in learning new things in school.	4.21	0.81	Very High
2	I complete my classwork on time.	3.76	0.89	High
3	I study seriously to achieve good marks.	4.00	0.85	High
4	I feel motivated to attend school regularly.	4.03	0.84	High
5	I try hard even when my schoolwork is difficult.	4.24	0.80	Very High
6	I want to continue my education in the future.	3.99	0.86	High
7	I participate actively in classroom activities.	4.13	0.87	High
8	I feel happy when I do well in my studies.	3.90	0.90	High
9	I make effort to improve my academic performance.	4.11	0.89	High
10	My studies are important for my future goals.	3.58	0.88	High
Overall	Academic Motivation	4.00	0.52	High

Table 6 shows that the respondents' academic motivation was at a high level overall ($M = 4.00$, $SD = 0.52$). Two items achieved very high scores: “I try hard even when my schoolwork is difficult” ($M = 4.24$, $SD = 0.80$); and “I am interested in learning new things in school” ($M = 4.21$, $SD = 0.81$). High ratings were also given to active classroom participation ($M = 4.13$) and working hard to do better in school ($M = 4.11$). “My studies are important for my future goals” ($M = 3.58$, $SD = 0.88$) was the lowest rated item, which although was still in the high range, was the only item that had a rating that was clearly less than the construct mean. The results are responsive to RQ2 and indicate that academic motivation of female secondary school students of District Quetta was high as evidenced by high perseverance and curiosity and comparatively low connecting present study with future goals.

5. DISCUSSION

The first research question was about the perception of the female secondary school students about the extent of cultural factors in District Quetta. The results indicate that the three dimensions family culture, school culture and community and social values were at a high level with an overall composite mean of 3.87. This pattern makes sense in the context of Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006). The theory would suggest that proximal systems would have a more immediate and more consistent impact than distal systems and that is what the rank order here reflects (family, school, community). The result is also significant on its own: the female students in the province which has been described in policy documents continuously as an educationally underprivileged province, report a cultural ecology that is broadly supportive (Government of Balochistan, 2020; Pakistan Institute of Education, 2023).

Family Culture obtained the highest mean ($M = 3.95$), which agrees with the central position of family in the collectivist societies where the educational values, expectations and aspirations are mostly negotiated within the family (Hofstede et al., 2010). The item scores reveal content in this pattern: the items with the highest scores were parental expectations ($M = 4.17$), home study support ($M = 4.16$) and the home learning environment ($M = 4.13$) – implying that families in District Quetta are not simply verbally engaged in their daughters' schooling. This aligns with the results of a meta-analysis, which indicated that parental involvement is positively linked to academic motivation in different contexts (Özyıldırım, 2024) and with evidence in Pakistan which found parental and institutional support affects the academic outcomes of secondary students (Yasmeen et al., 2024). It is less at ease with the policy sentiment on Balochistan that families are the key barriers to girls' education. One possible reason for the discrepancy is selection, as the respondents were girls who had progressed to Grade 9 or 10, and families who have taken the support of a daughter to that level might be different from those whose daughters were not supported to that level, dropping out of school or not enrolling at all.

School Culture also was high ($M = 3.86$). The most notable individual finding was the extremely high score for psychological safety within the classroom, "I feel comfortable asking questions in class" ($M = 4.21$). This is important because climates that promote participation and decrease fear of failure are linked to higher achievement motivation both in large-sample evidence (Zhao et al., 2023) and in meta-analysis (Erdem & Kaya, 2024). However, two were at the bottom of the subscale, namely, institutional encouragement of girls' continuation in education ($M = 3.59$) and direct motivational prompting from teachers ($M = 3.61$). The difference between a very high score for classroom openness and relatively lower scores for both items indicates that the schools are performing well to establish a comfortable learning environment, but less well in regard to deliberate and targeted practices that promote girls' progression. Considering such as actionable and not hard-to-change features, there are provincial research studies revealing that teacher enthusiasm and classroom environment play a significant role in students' motivation (Khan et al., 2018; Khizar et al., 2026).

The lowest of the three means was for Community and Social Values ($M = 3.78$), but this mean was still in the high range. Again, this is in line with the ecological model as it has a more indirect and less homogenous effect on students. The two lowest items are informative: local traditions that allow girls to continue their education ($M = 3.62$) and the perceived direct motivational effect of community attitudes ($M = 3.48$). This, coupled with the relatively high score for general social approval of education ($M = 4.05$), indicates that students make a distinction between an overall sense of social support for education (which they perceive as high) and specific traditional norms in relation to girls' continuing education (of which they are more wary). This is consistent with qualitative evidence from Balochistan, where norms of honour and early marriage have been documented as acting as constraints in the tribal areas (Arif et al., 2025), and with the argument that community attitudes across this province are not consistently restrictive (Anwar et al., 2022). District Quetta has an urban and rural mix of catchments as well as a mix of ethnic and linguistic groups and a mix of socio-economic groups; this is the sort of district in which such variation would be expected.

The second research question was what is the academic motivation reported by these students? The result was high ($M = 4.00$, $SD = 0.52$) and two items were at the very high level. This discovery is significant for two reasons. First, it does not confirm the idea that the student in a resource-poor provincial context will be low motivated. Second, it is congruent with the descriptive work conducted in other parts of Pakistan, which shows high academic motivation among students in other similarly under-resourced areas (Ullah et al., 2024), and international descriptive research that shows moderate academic motivation among secondary students (Šakan, 2023).

The top rated item “I try hard even when my schoolwork is difficult” ($M = 4.24$) has to do with persistence in the face of difficulty. This type of sustained effort is indicative of more internalised regulation within Self-Determination Theory and meta-analytic evidence has shown that autonomous motivation is positively associated with academic outcomes (Howard et al., 2021). The second very high item, ‘I am interested in learning new things in school’ ($M = 4.21$), also taps curiosity, and is similarly related to deeper involvement. These findings, combined with the RQ1 finding on psychological safety in the classroom, paint a consistent picture: those students who feel comfortable asking questions in class also report feeling comfortable persisting and exploring. The co-occurrence is what one would expect from the theoretical framework, but with the current design, it is not possible to determine that the one causes the other.

It is important to note that the lowest rated motivation item contains a qualification. The lowest mean in the subscale was obtained by “My studies are important for my future goals” (3.58). Situated Expectancy-Value Theory (SEVT) states that engagement is not only dependent on success expectations but also on how valuable the students find a task, such as usefulness for future achievements (Eccles & Wigfield, 2020). Many of these young people appear to have low scores on this item, indicating that they are focused on the present education rather than developing a vision of the future education or employment. This is plausible in a provincial context wherein participation rates decline significantly beyond the secondary level and where there may be fewer local examples of women with education who are engaged in the workforce (Government of Balochistan, 2020; Pakistan Bureau of Statistics, 2021). It also highlights the role of career guidance as a practical answer as utility value is one of the components of motivation which can be modified.

The responses to RQ1 and RQ2, as a whole, provide a cohesive response. In District Quetta, the girls in secondary schools feel that their surroundings, both at home and school, and the community, are favorable and that they are highly motivated in their studies. Both the two sets of descriptive findings align with the expectations of the two theories: Ecological Systems Theory (Bronfenbrenner & Morris, 2006) and Self-Determination Theory (Ryan & Deci, 2020), which both suggest that students in supportive contexts across multiple systems will exhibit higher levels of intrinsic motivation and academic persistence. It is important to note, however, that the relationship between cultural factors and motivation was not tested in this study but levels only were measured. The correlation findings in this report are correlation and do not prove causation and would take another design to prove.

One additional difference with the broader literature is worth noticing. Balochistan is the poorest educational province in Pakistan, with 65 per cent of children of schoolgoing age out of school and a fifteen percentage point gender gap in school enrolment (Pakistan Institute of Education, 2023). The present results do not disagree with those statistics, as these refer to different populations. This study refers to girls who have reached grade 9 or 10; system level statistics refer to all children, including those who never enrolled or have left early. It is reasonable to conclude that within the group of girls who stayed in the system, cultural support and motivation are strong and the challenge for the province is not the motivation of girls who do – it is getting girls to enter the system in the first place.

6. CONCLUSION

The present study was designed and conducted to determine the extent of the cultural variables and academic motivation of the female students of Balochistan, District Quetta government girls higher secondary schools. The three dimensions of cultural factors were seen as being present at a high level, with family culture having the highest mean ($M = 3.95$), followed by school culture ($M = 3.86$) and community and social values ($M = 3.78$). The composite of the overall cultural factors was 3.87, and academic motivation was also high ($M = 4.00$) and perseverance and intellectual curiosity were very high. To the two research questions put forward, the study concludes, therefore, that the socio-culturally complex and educationally constrained environment in which they study is not a factor to limit the level of culture or academic motivation among these students; rather, both these factors are high.

The direction of this pattern is the practical aspect. In District Quetta, the cultural underpinnings for educational motivation are already established and policy and programme efforts are more likely to be effective in strengthening and building on this momentum than in creating a base from scratch. Three distinct areas of weakness were identified in an otherwise positive portrait: the impact of community attitudes on motivation; institutional encouragement of girls' further education; and students' perceptions of the relationship between what they are studying now and what they want to study next. Intervention is most evident in the data on these three rather than cultural support in general.

7. IMPLICATIONS

7.1 *Theoretical Implications*

The results have three implications for theory. They provide first empirical data, in a context rarely studied, in favour of the ecological hypothesis that proximal systems are perceived more strongly and more uniformly than distal ones. The ordering here – family above school, and school above community – with the larger standard deviation ($SD = 0.55$) for community and social values as compared to school culture ($SD = 0.47$), is what Bronfenbrenner's model would predict and is reported here as measured rather than assumed (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006).

Second, findings suggest that Ecological Systems Theory and Self-Determination Theory, theories that were largely developed in Western settings, explains a pattern that is familiar in a conservative, collectivist and resources constrained provincial context. A pre-requisite relational analysis of the framework would be required to test this claim but the combination of high perceived contextual support and high reported persistence and curiosity are consistent with the self-determination account of internalisation (Ryan & Deci, 2020) and can be taken to suggest reasonably good travel of the framework.

Third, there is a theoretical refinement to be pursued - the divergence of the two lowest scoring items with the rest of the instrument. The students differentiated generalised social values on education and the specific norms for girls to pursue education, as well as current involvement and future usefulness. Both distinctions suggest that composite measures of “cultural support” and “motivation” might mask theoretically important internal variation, and that the distinction between interest value and utility value in the EWT is particularly relevant in situations where girls' future course of study is less clear (Eccles & Wigfield, 2020).

7.2 *Practical Implications*

For parents and families, the high family culture scores validate that families in District Quetta are already engaged meaningfully with their daughters' learning. Schools should not assume it does not exist, but should foster it, via carefully organized family-school connections, parent awareness sessions and regular updates about student progress so that the family environment is maintained and enhanced.

The extremely high rating for classroom psychological safety is an asset that must be guarded for school leaders and teachers through further professional development on inclusive, respectful and participatory pedagogy. These are the factors with the lowest scores, which represent the most obvious areas for school

improvement: teacher motivational encouragement and for girls-specific institutional support. There is a need for explicit programmes in schools to support girls' continuation in education and for support for teachers in the practices that motivate pupils, such as constructive feedback, recognition of achievement and conveying high expectations.

The trend of mostly positive social values and more reserved scores for traditional attitudes and their direct motivational impact show an opportunity for community participation. The specific normative barriers identified by students may be addressed by awareness activities, making educated local women visible as role models, engaging in dialogue with community leaders and using the media appropriately. With the rural–urban nature of the sample, this type of work is likely to be most required in rural catchments.

The data has two implications for the Government of Balochistan's policy makers. Structured career guidance should be added at the secondary stage, as the least motivating item was that of the connection between current learning and future aspirations. Community engagement on girls' education must be considered as part of a provincial education policy, as is done in the sector plan around addressing demand side barriers (Government of Balochistan, 2020).

8. LIMITATIONS AND FUTURE DIRECTIONS

These results should be interpreted in the light of some limitations. First, the study was limited to a set of government girls' higher secondary schools of District Quetta and thus the findings were not generalisable to other districts of the province as well as private schools and other provinces. Second, the cross sectional design provides perceptions at one moment in time and does not provide evidence of the change of cultural factors or motivation over the course of schooling. Third, the data are self-reported and thus may suffer from the social desirability bias in which the respondent reports a more positive perception than he or she actually has. Fourth, the study was limited to only female students in Grades 9 and 10; male students, younger students and higher secondary students were not surveyed. Fifth, and significant for interpretation, the sample includes girls who stayed to secondary school, and thus the findings refer to the part of the female population at school-age who are in school because of the support and motivation of the culture.

These limitations could be overcome in future research in several ways. Future studies could utilize a longitudinal design to measure how students' culture factor levels and academic motivations vary over academic years. Qualitative research, such as interviews, focus groups and classroom observation, would be useful to understand how and why cultural influences happen, especially the normative elements that were ranked at the bottom of the list by students. It would be useful to conduct comparative research between urban and rural districts and between the public and private sectors to ascertain to what extent these results are locally specific. Including out-of-school girls in the studies would account for the selection problem above. Lastly, because the current research was conducted as levels, rather than relationships, a correlational or regression design would be appropriate to test hypotheses regarding the relationship between the three cultural dimensions and academic motivation, and between academic motivation and academic achievement.

Acknowledgments

The authors sincerely acknowledge the participants who generously gave their time to participate in the survey for this study. The authors acknowledge the use of Grammarly for grammatical improvement. All content refined using this tool was critically evaluated and appropriately reviewed by the authors. The authors take full responsibility for the accuracy, integrity, and originality of the content presented in this article.

Authors Contribution

Maimoona Gul contributed to the study design and data collection. Dr. Mazhar Gul drafted the manuscript and revised it. Prof. Dr. Umar Ali Khan and Dr. Faiz ul Hassan Shah proofread and supervised the research work. All authors read and approved the final manuscript.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Funding Source

The authors received NO funding to conduct this study.

Data Availability Statement

The survey data generated and analyzed for this study are not publicly available and will not be deposited in any repository, to protect the confidentiality and anonymity of participants, who were assured that no identifying information would be shared beyond the research team. The quantitative data set in this paper may be made available by the corresponding author upon reasonable request.

Ethical Approval

The study has been done under the current ethical guidelines followed by Gomal University considering human participants. We confirm that the study was conducted in line with the ethical standards of the Declaration of Helsinki and all participants took part voluntarily after being informed about the purpose of the research, their right to withdraw, and the confidentiality measures in place. No identifying details have been included in the manuscript.

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