

Psychosocial Factors and Academic Outcomes Among Undergraduate Students: Evidence from Luawms, Balochistan

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Abstract

University students increasingly face psychosocial challenges that may undermine their academic outcomes, particularly in low-resource contexts where institutional support is limited. This study examines three psychosocial predictors of student performance at Lasbela University of Water, Agriculture and Marine Sciences (LUAWMS), Balochistan: anxiety, perceived social support, and life satisfaction. A cross-sectional quantitative survey design was used with undergraduate students (N = 263). Standardized self-report measures were employed, including the GAD-7 for anxiety (Spitzer et al., 2006), alongside validated scales for perceived support and life satisfaction. Academic outcomes were operationalized using self-reported CGPA (last semester) and two performance indicators (academic achievement and academic success). Bivariate correlations indicated that anxiety was negatively associated with CGPA ($r = -0.589$), whereas support and life satisfaction were positively associated with achievement and CGPA (support–CGPA $r = 0.723$; life satisfaction–CGPA $r = 0.813$). Regression analyses further showed that a one-unit increase in anxiety predicted a 0.65 decrease in CGPA ($\beta = -0.650$, $p < .001$), while life satisfaction predicted higher CGPA ($\beta = 0.846$, $p < .001$) and academic success ($\beta = 0.245$, $p < .001$), and perceived support predicted higher academic achievement ($\beta = 0.429$, $p < .001$). Findings highlight the dual importance of reducing distress and strengthening positive psychosocial resources to improve academic outcomes. Policy and practice implications are discussed for student support services and preventative interventions in Pakistani higher education.

Keywords: Anxiety, Social Support, Life Satisfaction, Academic Achievement, Cgpa, University Students, Balochistan.

Introduction and background

Higher education is a period of rapid transition in which young adults face increased academic workloads, new social environments, and decisions that shape future careers. These changes can support growth; however, they can also elevate distress and reduce students' capacity to concentrate, remember information, and sustain motivation. International evidence shows that psychological distress is common in university populations and has practical consequences for learning and performance (Sharp & Theiler, 2018; ACHA, 2022). In low- and middle-income countries (LMICs), constraints in institutional resources,

financial pressures, and limited access to mental health services may further intensify student vulnerability (Akhtar et al., 2020; Patel et al., 2007).

Within Pakistan, university students report moderate to high levels of stress, anxiety, and depressive symptoms, linked to academic overload, end-semester assignments, and perceived gaps in institutional support (Alias et al., 2020; Baloch et al., 2021). At LUAWMS in Balochistan, these pressures are amplified by contextual constraints such as limited facilities, broader socioeconomic stressors, and cultural norms that can restrict help-seeking. Such conditions make it essential to examine how psychosocial factors relate to academic outcomes in this setting, using locally generated evidence to guide student support policies.

Psychosocial functioning includes both risk factors (e.g., anxiety symptoms) and protective resources (e.g., perceived social support and life satisfaction). Stress theory suggests that persistent stressors can generate cognitive and physiological responses that undermine performance (Selye, 1975). Anxiety, for example, may interfere with working memory and attention through excessive worry and physiological arousal, reducing test performance and learning efficiency (Owens et al., 2012; Strongman, 1995). Meta-analytic evidence also indicates that psychosocial variables, including anxiety and stress, are meaningfully associated with academic outcomes across higher education settings (Richardson et al., 2012; Robbins et al., 2004).

At the same time, positive psychosocial resources can buffer risk and support persistence. Social support theory proposes that supportive relationships and perceived availability of help can protect individuals from stress effects and enhance coping (Putnam, 1993; Shao et al., 2020). For university students, perceived support from parents, teachers, peers, and even online networks can promote engagement, reduce distress, and improve achievement trajectories. In addition, life satisfaction reflects a student's overall appraisal of their life and university experience, and it is increasingly viewed as a relevant predictor of academic functioning, partly because it is linked to motivation, self-regulation, and resilience (Proctor et al., 2009; Angner, 2010). Empirical work

also shows that improving well-being may contribute to better academic outcomes, while distress tends to do the opposite (Regehr et al., 2013; Shapiro et al., 2008).

Despite increasing attention to student mental health globally, there remains limited published evidence from Balochistan on how specific psychosocial factors relate to concrete academic outcomes. Addressing this gap is important for designing prevention-oriented supports that are feasible for local universities. Therefore, this study focuses on three central predictors anxiety, perceived social support, and life satisfaction and examines their associations with CGPA and academic performance indicators among LUAWMS undergraduate students.

Research objectives

This study was designed to examine psychosocial predictors of academic outcomes among undergraduate students at LUAWMS, Balochistan. The objectives are as following.

1. To examine the relationship between students' anxiety levels and their CGPA.
2. To examine the relationship between students' life satisfaction and their academic success.
3. To examine the relationship between students' perceived social support and their academic achievement.

Research questions and hypotheses

4. Does anxiety predict lower CGPA among LUAWMS students?
5. Does life satisfaction predict higher academic success?
6. Does perceived social support predict higher academic achievement?

Literature review

Research on university student outcomes increasingly recognizes that academic performance is not determined only by intellectual ability or study skills. Psychological correlates such as distress, coping, and well-being show meaningful relationships with grades, retention, and broader academic outcomes (Richardson et al., 2012; Robbins et al., 2004). In many contexts, psychosocial factors can become especially influential when academic environments are demanding and students face simultaneous social and financial stressors (Patel et al., 2007; Sharp & Theiler, 2018).

Anxiety and Academic Performance

Anxiety is among the most frequently reported mental health concerns in higher education, with notable prevalence among medical and general student populations (Shao et al., 2020). Anxiety is understood as a state of heightened arousal accompanied by worry and fear that may be triggered by academic evaluations, authority relationships, or uncertainty about future outcomes (Strongman, 1995; Spielberger, 2021). In academic settings, anxiety can manifest as test anxiety and persistent worry, which reduces working memory capacity and interferes with complex problem solving (Owens et al., 2012). Empirical work in university samples has repeatedly found negative associations between anxiety and achievement indicators, including grade outcomes (Al-Qaisy, 2011; Richardson et al., 2012). In Pakistan and comparable contexts, university students report exam-related anxiety and stress linked to high workload, limited resources, and perceived harsh teacher practices (Putwain & Symes, 2011; Baloch et al., 2021).

Social Support and Academic Achievement

In contrast, social support is widely conceptualized as a protective factor. Support may be instrumental (practical help), informational (guidance and advice), or emotional (empathy and care). In higher education, supportive relationships can strengthen academic persistence and reduce burnout by improving coping, help-seeking, and engagement (Robbins et al., 2004; Shao et al., 2020). At the institutional level, teacher and faculty support can affect students' learning behaviors and sense of belonging. In the LUAWMS context, perceived support includes family and teacher support, peer connections, and support accessed through social media networks, which can be especially important where formal counseling services are limited.

Life Satisfaction and Academic Functioning

Life satisfaction, as a component of subjective well-being, reflects an individual's global cognitive appraisal of life quality (Angner, 2010). Among youth and university populations, life satisfaction is linked to positive affect, resilience, and adaptive functioning (Proctor et al., 2009; Shapiro et al., 2008). Students with higher satisfaction may have stronger motivation, clearer goals, and greater persistence, supporting performance. Interventions targeting stress reduction and well-being such as mindfulness have been associated with improved functioning and reduced distress, suggesting that well-being can be enhanced through feasible programs (Shapiro et al., 2008; Regehr et al., 2013).

Given the existing evidence, a model that includes both distress (anxiety) and resources (support and life satisfaction) offers a balanced approach for understanding student performance in Balochistan. This study therefore focuses on the relationships of anxiety, perceived support, and life satisfaction with academic outcomes, as measured by CGPA, academic achievement, and academic success.

Methodology

Research design

A quantitative cross-sectional survey design was employed to examine the relationships between selected

psychosocial factors and academic outcomes. The study was conducted at Lasbela University of Water, Agriculture and Marine Sciences (LUAWMS), Uthal, Balochistan, Pakistan.

Population and Sampling

The target population comprised undergraduate students enrolled at LUAWMS across multiple departments and semesters. A purposive and stratified approach was used to recruit participants from relevant programs and semester groups, reflecting common approaches in survey research when a full sampling frame is not readily available (Prince & Das-Munshi, 2020; Nyimbili & Nyimbili, 2024). A total of 263 students participated in the study. Consistent with the demographic profile of the institution, male students constituted the majority of respondents, which has implications for the interpretation of gender comparisons (Clifton et al., 2008).

Instruments and measures

Validated measures were employed to assess psychosocial factors. Anxiety was measured using the Generalized Anxiety Disorder scale (GAD-7), a widely used brief screening instrument with established psychometric properties (Spitzer et al., 2006). The study also assessed perceived social support and life satisfaction using structured scale items consistent with prior work on student well-being (Proctor et al., 2009; Shao et al., 2020). Academic outcomes were measured using self-reported CGPA (last semester) and composite indicators of academic achievement and academic success, aligned with institutional grading and performance perceptions.

Data collection procedure

Data were collected using a structured questionnaire administered to students during the academic term. Participation was voluntary and based on informed consent. Students were informed about the purpose of the study, confidentiality procedures, and their right to withdraw without penalty. Given the sensitivity of mental health topics, the study followed ethical principles for minimizing distress and ensuring anonymity (Patel et al., 2007).

Data analysis

Data were analyzed using descriptive statistics, Pearson correlation analysis, and simple linear regression models. Descriptive statistics were used to summarize participant characteristics and the central tendencies of psychosocial measures. Pearson correlations examined bivariate associations between psychosocial factors and academic outcomes. For the selected objectives, separate regression models were estimated to quantify the predictive relationship.

Limitations and bias control

As self-report questionnaires were used, response bias and social desirability are potential concerns. Cross-sectional data also limit causal inference. Additionally, sampling from a single university constrains generalizability to other contexts in Pakistan. These limitations are considered in interpreting findings and in recommending future longitudinal research (Sharp & Theiler, 2018; Richardson et al., 2012).

Results

Descriptive results

Students at LUAWMS reported moderate levels of distress indicators in the broader dataset, consistent with evidence that university populations frequently experience psychological burden (Sharp & Theiler, 2018; ACHA, 2022). In the constructs relevant to the current objectives, average perceived social support

was in the upper range ($M = 2.95$, $SD = 1.062$), indicating that many students reported access to supportive resources from parents, teachers, and peers. Life satisfaction and academic outcome indicators showed strong positive associations with perceived support in subsequent analyses.

Table 1: Descriptive analysis

Variable	Mean	Std. Deviation	Min–Max
Anxiety Level	2.61	0.891	1–4
Life Satisfaction	2.82	0.944	1–4
Perceived Social Support	2.95	1.062	1–6
Academic Achievement	3.57	0.683	1–4
CGPA	3.83	0.983	1–5

Correlation analysis

Table 2 presents bivariate correlations between psychosocial factors and academic outcomes. Anxiety demonstrated a strong negative association with CGPA ($r = -0.589$), suggesting that higher anxiety aligns with lower semester grades. Social support and life satisfaction were positively related to performance indicators: support showed a strong positive association with CGPA ($r = 0.723$) and academic achievement ($r = 0.667$), while life satisfaction was positively associated with CGPA ($r = 0.813$) and academic success ($r = 0.813$). These patterns are consistent with models in which distress undermines performance and psychosocial resources support academic functioning (Richardson et al., 2012; Robbins et al., 2004).

Table 2: Pearson correlation matrix for key study variables

Variables	Anxiety	Support	Life Satisfaction	Academic Achievement	CGPA	Academic Success
Anxiety	1.000	-0.633	-0.683	-0.546	-0.589	-0.332
Support	-0.633	1.000	0.867	0.667	0.723	0.397
Life Satisfaction	-0.683	0.867	1.000	0.755	0.813	0.457
Academic Achievement	-0.546	0.667	0.755	1.000	0.833	0.957
CGPA	-0.589	0.723	0.813	0.833	1.000	0.641
Academic Success	-0.332	0.397	0.457	0.957	0.641	1.000

Regression analysis

To address the three selected objectives, simple linear regressions were estimated separately for each predictor–outcome pair.

Objective 1: Anxiety and CGPA

As shown in Table 3, anxiety significantly predicted CGPA ($p < .001$). This indicates that a one-unit increase in anxiety score was associated with a 0.65 decrease in CGPA.

Table 3: Regression of CGPA on Anxiety Level

Predictor	B	Std. Error	t	p
Constant	5.524	0.152	36.298	<.001
Anxiety Level	-0.650	0.055	-11.766	<.001

Objective 2: Life satisfaction and academic success

Table 4 indicates that life satisfaction significantly predicted academic success ($p < .001$). Students reporting higher satisfaction with their university life tended to report stronger academic success outcomes.

Table 4: Regression of Academic Success on Life Satisfaction

Predictor	B	Std. Error	t	p
Constant	2.632	0.088	29.940	<.001
Life Satisfaction	0.245	0.030	8.293	<.001

Objective 3: Social support and academic achievement

Table 5 shows that perceived support significantly predicted academic achievement ($p < .001$). This suggests that supportive environments are associated with higher achievement levels in this sample.

Table 5: Regression of Academic Achievement on Perceived Support

Predictor	B	Std. Error	t	p
Constant	2.309	0.093	24.850	<.001
Support Level	0.429	0.030	14.453	<.001

Discussion

This study contributes context-specific evidence on psychosocial predictors of academic outcomes among undergraduate students at LUAWMS, Balochistan. Overall, findings support a dual-pathway interpretation: distress (anxiety) is associated with worse academic outcomes, while positive psychosocial resources (life satisfaction and perceived support) are associated with better outcomes. These results align with broader international evidence that psychological correlates are meaningful predictors of university performance (Richardson et al., 2012; Robbins et al., 2004).

Anxiety and CGPA

Anxiety showed the strongest negative association with CGPA and remained a significant predictor in regression analysis. This pattern is consistent with cognitive-interference explanations in which worry reduces working memory capacity and disrupts attention during learning and examinations (Owens et al., 2012). The LUAWMS findings are also comparable to studies reporting that anxiety is linked to lower academic performance among university students (Al-Qaisy, 2011) and to evidence that distress is prevalent during the university transition period (Patel et al., 2007; Sharp & Theiler, 2018). In the local context, anxiety may be reinforced by examination pressure, authority dynamics with teachers, and limited access to structured academic counseling. Research on classroom “fear appeals” suggests that teacher practices can increase student worry rather than improve motivation, depending on how messages about performance consequences are communicated (Putwain & Symes, 2011). Therefore, academic support and teacher training that reduce unnecessary fear-based communication may indirectly support performance by lowering student anxiety.

Life satisfaction and academic success

Life satisfaction significantly predicted academic success, supporting the view that well-being is not only a desirable outcome but also a performance-relevant resource. Youth well-being research suggests that life satisfaction is associated with adaptive functioning, meaning that satisfied students may sustain motivation, manage setbacks, and engage more consistently with learning tasks (Proctor et al., 2009). In

contexts where students face multiple external stressors, life satisfaction may capture students' sense of progress, belonging, and perceived life control, which can translate into stronger persistence. Evidence from intervention research also suggests that improving well-being through stress-reduction and mindfulness approaches can reduce distress and strengthen functioning (Shapiro et al., 2008; Regehr et al., 2013). While the current study is cross-sectional and cannot confirm causal effects, it offers a strong rationale for institutional initiatives that improve student experience, including academic advising, campus engagement activities, and supportive learning environments.

Social support and academic achievement

Perceived social support predicted academic achievement, reinforcing the protective role of supportive relationships in academic functioning. Support can enhance coping by providing emotional reassurance, practical help, and informational guidance. Among Chinese medical students, social support has been linked to lower depression and anxiety and better coping (Shao et al., 2020), and meta-analytic evidence indicates that social and motivational factors predict college outcomes (Robbins et al., 2004). In LUAWMS, students reported relatively high support, including from teachers and parents, which may mitigate distress and promote engagement. Importantly, the correlation results suggest that support and life satisfaction are also negatively related to distress indicators, implying a buffering pattern consistent with stress-protection frameworks (Selye, 1975; Sharp & Theiler, 2018).

Practical implications

From a practical perspective, the findings suggest that student performance may be improved through combined strategies: reducing anxiety risk while strengthening support and well-being resources. Universities can consider low-cost screening and referral pathways using brief measures such as the GAD-7 (Spitzer et al., 2006), alongside peer mentoring, faculty advising, and structured academic skills support. Evidence from stress-reduction interventions suggests that targeted programs can reduce distress in university populations (Regehr et al., 2013). At the same time, broader student-experience initiatives that increase belonging and satisfaction may yield performance benefits (Proctor et al., 2009). In Pakistan, where mental health stigma and limited clinical resources remain barriers, embedding psychosocial supports within academic structures (e.g., learning centers, mentoring systems) may be especially feasible.

Limitations and future research

The study has limitations that should be considered when interpreting results. First, self-report measures may introduce response bias, and students may under-report distress due to stigma. Second, cross-sectional design limits causal inference and cannot determine whether psychosocial factors precede academic outcomes or vice versa. Third, the sample was drawn from one institution, and findings may not generalize to other universities or provinces. Future research should consider longitudinal designs that track psychosocial and academic changes across semesters (Prince & Das-Munshi, 2020), and should include broader institutional samples to strengthen generalizability. Additionally, qualitative studies could explore the mechanisms through which support and satisfaction influence learning behaviors in Balochistan, including culturally shaped help-seeking patterns and the role of family expectations.

Conclusion

This study examined three psychosocial predictors of academic outcomes among LUAWMS undergraduate students: anxiety, life satisfaction, and perceived social support. The results indicate that anxiety is a significant negative predictor of CGPA, while life satisfaction predicts higher academic success and perceived social support predicts higher academic achievement. Together, these

findings reinforce that student performance is shaped by both psychological risk and protective resources. For LUAWMS and similar institutions, strengthening campus support systems and student well-being initiatives, while addressing anxiety-related academic barriers, may contribute to improved academic outcomes and healthier student development.

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