Relationship between Academic Resilience and Academic Performance of University Students

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Abstract
The main aim of this study was to analyze the relationship between academic resilience and student academic performance. The population of the study was bachelor final semester students from universities of Balochistan, Pakistan. Quantitative cross-sectional method was employed for this study. ARS30 was used to measure academic resilience. Academic performance of students was determined by their previous semester GPA. Ordinal Regression was used to investigate the relationship between resilience and performance of bachelor students. Results showed that there is a significant positive impact academic resilience on academic performance of the students.
Keywords: Academic Resilience, Academic Performance, Balochistan

Introduction
Resilience is defined as the psychological capacity to recover and adapt effectively in the face of adversity. It encompasses an individual's ability to rebound from difficult circumstances and navigate challenges that may appear insurmountable. Challenging situations are experienced by all individuals, and a large number of individuals go through tough events at some moment in their lives. As a result, it is very important to understand how to develop and strengthen resilience, as it plays a key role in helping people manage problems better while lowering unhealthy ways of handling stress and related responses (Cassidy, 2016). (Cassidy, 2016). Studies have shown evidence of psychological and behavioral interventions applied to strengthen resilience, leading to a decrease in signs related to mental health issues and fostering greater mental adaptability (Findyartini et al., 2021).

In the fields of education and educational psychology, resilience can be associated to education, institutional environment, and academic performance in several ways. As a result, it may act in a variety of ways, such as serving as a compensating mechanism that gives a student a sense of competence, allowing them to temporarily leave an unfavorable

environment, enabling them to make up for deficiencies, and serving as a motivating factor for further learning (Cassidy, 2016; Findyartini et al., 2021).

Academic resilience is identified as a dual-purpose force, acting both as a driver for attaining academic and personal objectives and as a provider of strategies to manage stress and anxiety experienced in the university setting (Cassidy, 2016). In the domain of education and academic activities, individuals face various challenges or risk factors, such as long-term illness, natural disasters, or financial hardships. These challenges not only hinder a student's educational journey but may also affect their progress in multiple areas (Alam et al., 2001).

Despite these challenges, certain factors, referred to as protective factors, significantly influence the academic success of resilient students. These elements aid in fostering positive adjustments and achieving successful results (Collin et al., 2019). Sustaining resilience can have widespread benefits for students, reducing their likelihood of experiencing depression or anxiety, which may positively influence their academic achievements and overall well-being both presently and in the future (Graner et al., 2018).

It is imperative to understand that university education, particularly in resource-limited settings is both demanding and stressful. Students' resilience levels can vary over time and are shaped by adaptive coping strategies and social support availability (Montas et al., 2021; Hasan et al., 2020). Numerous research studies highlight the connection between stress and burnout levels (Pitt., et al 2018; Allen., et al 2021). University students, particularly those in their final semesters, frequently face heightened burnout levels due to academic and professional demands. Academic resilience can be a significant factor which equips students to navigate the evolving challenges during their academic life. Resilience and its influence can have even significant impact for regions such as Balochistan where students often experience financial, institutional and psychological barriers that affect their academic and mental well-being.

In context of Pakistan, there is a little research about the effect of academic resilience on academic achievement, see for example, (Fatima & Nadeem (2022), however the existing research have primarily focused on other regions of Pakistan, leaving a gap of research examining the relationship between academic resilience and academic performance among university students specifically in context of Balochistan. Therefore, this study aims to fill this gap by examining the effect of academic resilience on academic performance of university students in Balochistan.

The findings of this study are of interest because students from this region often face significant challenges due to factors like poverty, limited access to quality education, poor infrastructure, and social instability which may leads to lower academic achievement (Noor et al., 2023; Liaqat et al., 2025) and a need for greater resilience to overcome these obstacles.

In this context, the main objective of this study is to analyze the effects of academic resilience on academic performance among university students enrolled in their final semesters in Balochistan. For this purpose, this study uses the Academic Resilience Scale (ARS-30) as the primary measurement tool (Cassidy, 2016; Graner et al., 2018; Ali et al., 2024).

Material and Methods

This research was conducted among university students in their final semesters across various institutions in Balochistan. Ethical approval was obtained from the respective institutional review boards. No personally identifiable information about students, such as names, serial numbers, parental details, or addresses, was included in the dataset. Participant confidentiality was strictly upheld. Additionally, informed consent was obtained, and demographic information was collected from all participants.

This study employed a correlational design utilizing a quantitative analytical framework. Data collection targeted final-year university students across multiple disciplines. Information was gathered via Google Forms, subsequently transferred to an Excel sheet, and analyzed using SPSS software, version 25. The ARS-30 questionnaire, designed to assess various dimensions of academic resilience, measures students' specific adaptive cognitive-affective and behavioral responses to academic challenges. This instrument is pre-validated, demonstrating strong internal reliability (Cronbach's Alpha = 0.70) and construct validity. The performance of students was determined on the basis of their previous semester CGPA. The sample for the study consists of 650 students. The questionnaire was disseminated via email to the respective class groups.

Results and Discussion

Descriptive Statistics

Table 1 provides a summary of the demographic characteristics of the participants. The majority of respondents were aged between 20-24 years, with a gender distribution of 60% females and 40% males. The mean age was 22.3 years (SD = 1.5).

Table 1

Demographic Characteristics

Characteristic	Category	Frequency	Percentage (%)
Age	1	616	94.77
	2	11	1.69
	3	11	1.69
	4	12	1.85
Gender	Female	337	51.85
	Male	Remaining	48.15

The ARS-30 scores ranged from 4 to 9, with a mean score of 4.28 .2 (SD = .48). Academic performance, measured via self-reported CGPA, ranged from 2.5 to 4.0, with a mean of 2.45 (SD = 0.82). Higher ARS-30 scores were observed in students reporting higher CGPA. Table 2 presents the mean and Standard Deviation along the Cronbach's Alpha for the ARS-30.

Table 2

Means, Standard Deviation, and Cronbach's Alpha

Sr. #	Variables	M	SD	Cronbach's Alpha
1	Academic Achievement	2.35	0.82	
2	Academic Resilience	4.28	0.48	0.70

Correlation Analysis

A strong positive correlation was observed between academic performance and academic resilience score (ARS-30), i.e., r = 0.93. This finding indicates that higher resilience levels are associated with improved academic outcomes. Factors of perseverance and reflective adaptation showed stronger positive correlations with academic performance, while a weaker positive correlation was observed for the factor of negative affect.
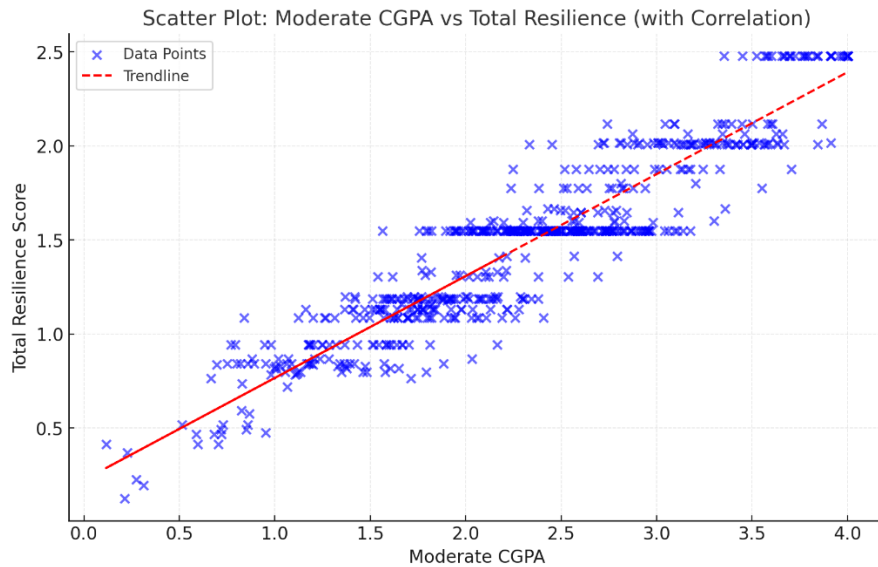

Figure 1

Regression Analysis

Table 3 presets the results of ordinal regression between resilience and student performance. Goodness-of-fit statistics indicate an acceptable model, although the Pseudo R-Square values (Cox and Snell = 0.007, Nagelkerke = 0.009) suggest a small proportion of variance in academic performance is explained by resilience. The regression analysis shows that resilience significantly predicts academic performance (β=0.141, p=0.025). The positive beta coefficient (β=0.141) demonstrates that for every one-unit increase in resilience, academic performance improves proportionately. This relationship is statistically significant, with $p < 0.05$.

Table 3
Summary of Regression Model

Statistic	Value
Goodness-of-Fit	
Pearson Chi-Square	95.302
Significance (Sig.)	.061
Deviance Chi-Square	76.519
Significance (Sig.)	.366
Pseudo R-Square	
Cox and Snell	.007
Nagelkerke	.009
McFadden	.005
Parameter Estimates	
Variable	**Estimate**
Resilience	0.141

Discussion

The results suggest that resilience is a vital mechanism in achieving academic success. The distinct environment of Balochistan, characterized by limited resources and socio-economic challenges, highlights the importance of these resilience factors. The present study aligns with a significant body of literature that highlights the critical role of resilience in academic performance across diverse contexts. Academic resilience, defined as the capacity to adapt academic outcomes (Martin & Marsh, 2006; Masten et al., 1990). In our study, resilience emerged as a significant predictor of academic performance among final-semester university students in Balochistan, with specific contributions from perseverance and adaptive coping strategies.

The findings of this study are consistent with those of previous research. For instance, Khalaf (2014) found a strong positive relationship between resilience and academic achievement among Egyptian university students. Similarly, Wang et al. (1994) emphasized resilience as a crucial factor in overcoming environmental challenges and achieving academic success. These findings corroborate the results of current study, which highlight resilience as a foundational mechanism enabling students to maintain high academic performance despite socio-economic and institutional barriers.

In line with studies such as Cengiz & Peker (2022), who adapted the ARS-30 for the Turkish context, the findings in this also underscore the importance of fostering adaptive help-seeking behaviors and persistence among students.

The present was focused specifically on final-semester students in Balochistan which is among the most underdeveloped region of the county, in this context the findings of this study help in obtaining important and unique insights into resilience in a resource-limited context. Studies by Fatima & Nadeem (2022) and Mwangi et al. (2015) on Pakistani and

Kenyan students respectively, further support the argument that resilience operates as an important determinant of academic success in socio-economically constrained settings. However, the variation in ARS-30 scores across regions, as noted by Elnaem et al. (2024), who suggested that cultural and contextual factors significantly influence and impact student resilience.

Conclusion and Recommendation

This study confirms a strong positive correlation between academic resilience and academic performance among final-semester university students in Balochistan. Furthermore, ordinal regression analysis between academic resilience and academic performance of student confirmed that the academic resilience has a significant positive impact on academic performance of final semester students. These findings underscore the statistical significance of resilience-building strategies to strengthen the student's mental capabilities and achieve better academic success.

Implications of the Study

The findings of this study have import implication. For instance, institutional support systems, such as counseling, peer mentoring, and resilience training programs needs to be initiated and recognized as essential for fostering resilience among students. Academic institutions such and universities should prioritize these interventions to mitigate the impact of various mental and behavioral barriers on student outcomes.

Recommendations

The practical implications of these findings are far-reaching. Institutions should prioritize resilience building interventions, such as structured workshops on adaptive coping strategies and peer mentoring programs. Similar initiatives have proven effective in enhancing resilience and academic outcomes, as demonstrated by intervention studies like the Penn Resiliency Program (Gillham et al., 2007) and the Psychosocial Structured Activities (PSSA) program (Ager et al., 2011). Moreover, leveraging insights from positive psychology, as advocated by Seligman & Csikszentmihalyi (2000), can further aid in developing tailored interventions to strengthen resilience among students.

Limitations and Future Research

A significant limitation of this study is its focus on a single region, which may limit the generalizability of the findings. Additionally, the small sample size necessitates caution in interpreting the results. Future research should expand the scope of this study by including longitudinal designs and larger, more diverse populations to validate these findings. Future research should aim to expand the scope of this study by including larger, more diverse populations and exploring the longitudinal impacts of resilience on academic and professional success.

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