

Academic Resilience Among Post Graduate Students in the Universities of Islamabad: A Comprehensive Assessment

Muhammad Abbas

PhD. Scholar,

Department of Educational Leadership and
Management, International Islamic
University Islamabad

Dr. Azhar Mahmood,

Associate Professor (Chairperson),

Department of Educational Leadership and
Management, International Islamic
University Islamabad

Muhammad Usman Hayat,

PhD. Scholar,

Department of Educational Leadership and
Management, International Islamic
University Islamabad

Received: 03-May-2024

Revised: 19-May-2024

Accepted: 24-May-2024

Abstract

Introduction: Mathematics plays a crucial role in the development of science and technology, and its importance is recognized at all educational levels. This study investigates the availability and utilization of mathematics facilities for the improvement and development of prospective teachers.

Methodology: This quantitative study targeted students from four universities in Islamabad and Rawalpindi. A questionnaire was distributed to 300 respondents, with 175 completed responses collected through proportionate random sampling. The questionnaire was validated by experts and its reliability confirmed using Cronbach's Alpha. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS).

Results/Findings: The findings revealed that most respondents strongly agreed that mathematical content knowledge

significantly impacts the learning and understanding of prospective teachers. Additionally, the study highlighted the importance of practice in learning mathematics and emphasized the need for curriculum-based instruction that extends beyond exam preparation.

Future Direction: *The study recommends developing a framework to address identified challenges, enhance mathematical content, improve pedagogical approaches, and ensure the availability of up-to-date facilities for prospective teachers.*

Keywords: *Mathematics, Prospective Teacher, Challenges, Facilities, Curriculum*

Introduction

The globe has seen advancements in the last ten years in a variety of sectors, including business, politics, journalism, information technology, healthcare, and education. Every place has gone through a process of transformation as a result of these developments. The educational field is one of the places where this significant change has taken place. In the global age, the educational industry is generally growing more dynamic (Mohammad, et al., 2024). However, in the current context, a multitude of factors, including poverty, a lack of positive parenting techniques, inadequate emotional support, pandemics, political violence, and natural disasters that have life-altering effects on individuals, families, and the future of all societies, are endangering the educational process worldwide. An integrated and worldwide science of resilience through evidence-based research is desperately needed in the face of dangers to students' academic careers in order to advise international and governmental officials on how to reduce risks and help students develop resilience. Academic resilience is the ability of a student to continue to be resilient in their academic and academic-related areas. (Rudd and associates, 2021).

Background of the Study

"Resilience" comes from the Latin word "resiliens," which meant "pliable or elastic" at first (Joseph, 1994). Webster's New Twentieth Century Dictionary of English Language (1958) defined resilience as "the ability to bounce or spring back after being stretched or constrained or regaining strength or spirit." The American Heritage dictionary defined resilience as "the ability to recover quickly from illness, change, or misfortune." Even though the word "resilience" is still often used in ordinary speech, its meaning varies depending on the situation.

Sarwar et al. (2010) examined the relationship between resilience and academic success in Gujranwala, Pakistan, among secondary school pupils. The results demonstrated that there was no

statistically significant correlation between the academic success and resilience of secondary school students. Furthermore, this study found that female students have higher resilience than male students. According to Parveen et al. (2021), a study assessed college instructors' resilience. The results demonstrated that most of the teachers possessed a high degree of resilience.

Statement of The Problem

The ability to overcome hardships and flourish in the face of obstacles during one's educational career is known as academic resilience. There are several obstacles that students must overcome in their academic careers. Building their academic resilience is aided by numerous external and internal variables. The purpose of the study was to evaluate postgraduate students' resilience. It was also intended to pinpoint the three components of academic resilience. The goal of the study was to determine university students' level of academic resilience.

Objectives of the Study

The research was conducted to achieve following objectives:

1. To find out the level of Perseverance among postgraduate students.
2. To investigate the level of Reflecting and adaptive Help-Seeking among postgraduate students.
3. To examine the level of Negative Affect and Emotional Response.

Research Questions

To attain its objectives this study attempts to answer the following research questions:

1. What is the existing level of Perseverance among postgraduate students?
2. What is the present level of Reflecting and adaptive Help-Seeking among postgraduate students?
3. To what extent of academic resilience is present in postgraduate students?

Academic Resilience

The ability to manage pressure, stress, or setbacks in an academic environment is known as academic resilience. Academic resilience has received less attention than general or life resilience, despite a substantial corpus of study on the subject. Students' "ability to deal effectively with academic setbacks, stress, and study pressure" is how it is defined in the academic setting. The limited studies that have been done on academic resilience to date have mostly dealt with extreme underachievers and members of ethnic minorities (Mena, 2011).

People with resilience have the mental fortitude to handle stress and adversity. It is the mental reserve of strength that people can draw upon to get through difficult situations without crumbling (Ahmed, Ahmed & Buriro, 2023). According to psychologists, those who possess resilience are better able to deal with hardship and move on from difficult experiences. Resilience, according to Richardson et al. (2012), is the ability to deal with traumatic, stressful, or difficult life experiences in a way that provides the individual with more coping and protective abilities than they had before the disruption that the event causes (Ahmad, et al., 2024).

Academic resilience is the ability of students to perform well academically in spite of hardship. It describes academic success in the face of a demanding or tough learning environment (Mihir et al. 2016). Resilience in the academic setting is generally defined as a student's capacity to effectively navigate obstacles, demands, and difficulties in the classroom (Rehan, et al., 2024). It can also be described as the increased likelihood of succeeding in a variety of life endeavours, even in the face of unfavourable circumstances brought on by early experiences and surroundings. These students continue to perform well even in the face of stressful situations and circumstances that increase their likelihood of performing poorly academically or, worse still, of dropping out of school (Alva, 2013).

Throughout their academic career, students will inevitably encounter a variety of challenges and tasks that require a high level of cognitive and/or motor skills (such as failing tests, having conflict with peers or professors, and facing embarrassing situations) (Ahmed, 2018). Thus, one of the key markers that can explain early school dropout, lack of advancement, and, in more severe situations, disruptive behaviour in the classroom is pupils' poor ability to adapt and overcome failure (Arif, 2017).

Review of Literature

The term "resilience" was first used by Werner (1971) to characterize a study of children with behavioural issues. A typical developmental pattern was discovered in one-third of these children, despite their impoverished upbringing. We called these children "resilient." Its root word is resilience, which is derived from Latin and literally means "to bounce back." In the research publications, resilience was characterized in two different ways at least. One could consider it a personality trait or a skill. While Wolin (2013) described resilience as a psychological trait and the capacity to deal with and overcome adversity, Higgins (2012) defined it as a process of healing and growth. According to Luthar et al. (2012), resilience is a process of ongoing positive

adjustment in the face of major obstacles that enables people to learn from their experiences while facing risks. After resilience was first seen as an individual characteristic (Masten et al., 2014), it was later understood to be a complex phenomenon resulting from the interaction of protective factors and adversity (Benard, 2014). Worsley (2016) defines resilience in the face of adversity as a continuous process of resource discovery and skill development. Researchers have developed innovative tactics and therapies meant to promote resilience as a result of this viewpoint (Imran, et al., 2023).

Fallon (2010) examined the relationship between academic success and resilience in the face of various risk factors in children, with a specific emphasis on Latino students from low-income families enrolled in urban high schools. 150 low-income Latino high school students and 47 instructors from three different Chicago charter high school campuses were included in the study's sample (Khan, Hussain & Ahmad, 2023). Teachers were asked to rate the academic optimism of the school through surveys, and children were asked to rate their academic performance, overall resilience, family involvement, and school engagement. Surprisingly, the study found strong correlations between kids' academic resilience and schools' academic optimism, even after controlling for personal and familial protective variables (Imran, Sultana, & Ahmed, 2023).

Jenni (2010) examined the connection between abuse and academic achievement in emotionally dysregulated children. Measures of emotional dysregulation and academic achievement were compared in a group of maltreated kids (n = 158). Academic resilience and the absence of emotion dysregulation were found to be significantly correlated by a linear regression study. Academic resilience was also associated with late adolescence, placement stability, and race. The resilience and academic achievement of Gujranwala, Pakistani secondary school pupils were studied by Sarwar et al. (2010). The study's sample consisted of 127 secondary students—52 boys and 75 girls. The data was gathered using the Resilience scale. The findings revealed no connection between academic resilience and success that was statistically significant (Imran, Zaidi, & Rehan, 2024).

The connection between family communication patterns and academic resilience has been studied (Jowkar et al. 2011). A multi-stage cluster random sample approach was used to select 656 pupils from various Iranian high schools, 297 boys and 309 girls. The study's instruments were the Family Communication Patterns scale (FCP) and the Youth Development Module scale (RYDM).

Simultaneous multiple regression analysis was used to examine family communication patterns and academic resilience. The results showed that "talk" strongly positively predicted community/high, school/high, home/high, peer care, and meaningful links between the school and the community. Furthermore, meaningful school/community contacts were strongly positively correlated with compliance, and it was significantly negatively correlated with high community and home care. The study's findings underscored the importance of family communication, particularly with regard to children (Phulpoto, Oad, & Imran, 2024).

Cassidy (2015) investigated the relationship between academic self-efficacy (ASE) and academic resilience. A total of 435 British undergraduate students participated in the study. The Academic Resilience Scale-30 (ARS-30) and the General Academic Self-Efficacy Scale (GASE) were used as measurement instruments. Academic resilience was significantly predicted by academic self-efficacy, which also had a correlation with it. In reaction to vicarious adversity, students showed greater academic resilience than when faced with personal pain (Hussain, et al., 2023).

Zuill (2016) investigated the connection between resilience and academic success in fifty-one foster children from Bermuda who were enrolled in public schools in Bermuda. The participants' academic development was measured using accomplishment scores and grade point averages (GPAs). In order to evaluate the relationships, this study used multiple regression analysis in a non-experimental correlational approach. There was a statistically significant positive correlation between resiliency and reading achievement, but no correlation was found between resiliency and GPA or resiliency and math achievement.

Casey (2018) investigated the association between school-based resilience-building strategies and academic achievement and resilience levels among male African American secondary school students. The study included 107 male students from four high schools in a southwest North Carolina school district. The Child and Youth Resilience Measure-12 and the Healthy Kids Resilience Assessment (HKRA) were used to collect data (Constantine et al., 1999). The study's findings showed a connection between attitudes toward resilience-building techniques and academic resilience.

Academic resilience of graduate and postgraduate international students was compared by Bala (2020). 500 international students were chosen by judgment sampling from five Punjabi and Chandigarh universities (Hafeez, Iqbal, & Imran, 2021). The results of the study demonstrated

that, with regard to their ability to withstand academic setbacks, international graduate and postgraduate students differed significantly. Research indicates that international postgraduate students lack the intellectual rigor of graduate students. This may be the case because, having recently graduated from high school, students are more likely to be academically resilient in their early years of college since they are more accustomed to taking their studies seriously. However, students sometimes have a propensity to become reckless and overconfident in the post-graduation era, which weakens their academic resilience.

Rachmawati et al. (2021) investigated the relationship in the classroom between resilience, self-efficacy, and social support. 315 Indonesian middle school students in the seventh grade from Malang City participated in the study as a sample. The self-efficacy, social support, and academic resilience scales were used to collect the data. The results of the study showed a strong relationship between social support, self-efficacy, and academic resilience.

Wulandari (2021) conducted a study on the influence of self-efficacy and self-esteem on the academic resilience of undergraduate students in Jakarta. 455 students were selected for the study using convenience sampling, 234 of whom were male and 221 of whom were female. The results of the study demonstrated that students' feelings of self-worth and self-efficacy have a significant impact on their academic resilience in Jakarta (Imran & Akhtar, 2023). This report suggests that A-accredited universities should continue enhancing and expanding the skills of their students by adding programs to enhance soft skills to their lecture courses. Children that have strong academic resilience and self-efficacy abilities can therefore mature into better people (Ali, et al., 2023).

Academic Resilience Scale (Ars30)

The academic resilience scale is a newly devised resilience tool that assesses resilience within the highly particular context of academic performance. The ability to maintain and succeed academically in the face of numerous challenges is known as academic resilience. The multifaceted concept of academic resilience concentrates on the behavioral, affective, and cognitive aspects of the challenges encountered in academic pursuits. A story describing a major academic struggle serves as the foundation for the academic resilience scale. Respondents must rate their likelihood on a scale of 1 to 5, where 1 represents a high likelihood and 5 represents a low likelihood (Imran, et al., 2023). One of the following three categories applies to the item on the scale:

Reflection and Adaptive Help-Seeking • Negative Affect and Emotional Reaction • Perseverance
An individual must score low on the third criteria and high on the first two in order to be considered very resilient. This scale has been shown to have a good level of internal consistency, and there is a strong positive correlation between resilience scores and academic self-efficacy. Although it can be applied in different situations, this resilience scale is suitable for use in academic settings.

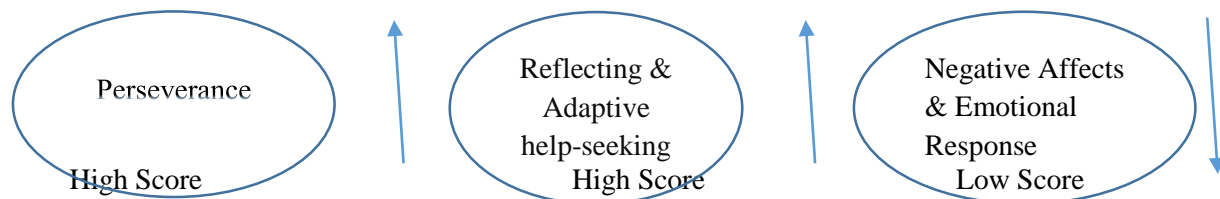
Hypothesis

Descriptive statistics were used to meet the research goal of assessing postgraduate students' levels of academic resilience. In order to accomplish the research goal, the following null hypotheses were developed for the examination of the origins of academic resilience among postgraduate students.

- H₀ 1. The three factors of academic resilience are not significantly correlated.
H₀ 2. The internal factors of academic resilience are not significantly correlated.

Conceptual Framework

Students' academic resilience was investigated using Academic Resilience Scale (ARS-30) by Simon Cassidy (2016). This scale has three factors; Perseverance, Reflecting and Adaptive Help-Seeking and Negative Affects and Emotional Response.



If the students gain high score in two factors perseverance and reflecting & adaptive help-seeking and gain low score in the factor negative affect and emotional response, they are considered highly resilient.

Methodology

In order to meet its goals, this descriptive study used a quantitative methodology. The population of this study consisted of postgraduate students from universities in Islamabad City, both public and private. Using a straightforward random selection procedure, 196 students were chosen at random from the population to make up the sample (Imran, Zaidi, & Khanzada, 2023). Information was gathered from respondents using a five-point Likert scale self-report questionnaire. The Academic Resilience Scale, as used by Cassidy (2016), served as the research instrument. It included thirty things in all. We obtained consent via email to utilize the

questionnaire. To evaluate the instrument's dependability in the local environment, it was piloted. After receiving approval from the relevant universities, data were gathered from the postgraduate students. There were 216 surveys given out to teachers in total. The response rate was 91% since 196 fully completed surveys were returned out of them.

Results

Exploratory factorial analysis

Table 1 shows the correlation between each item and the total score of the scale, which was in the range of 0.67 and 0.83. These results led to keeping all items since the item-test correlation was higher than the cut-off point set at 0.30. Fayers et al. (2000). Cronbach's global alpha value was 0.82. In addition, exploratory-factor analysis supported the existence of two factors, showing a saturation factor ranging from 0.61 to 0.80.

Table 1. Correlations between each item and total scale score.

Items	Item-Test Correlation	Alpha If Item is Removed Saturation	Cronbach's Factor of Each Item with Its Factor
1	0.67**	0.83	0.68F1
2	0.76**	0.83	0.72F1
3	0.75**	0.83	0.75F1
4	0.70**	0.82	0.80F1
5	0.80**	0.83	0.69F1
6	0.81**	0.83	0.72F3
7	0.75**	0.82	0.73F3
8	0.68**	0.83	0.67F1
9	0.72**	0.83	0.72F1
10	0.69**	0.83	0.69F1
11	0.80**	0.83	0.63F1
12	0.81**	0.82	0.7F3
13	0.74**	0.83	0.72F1
14	0.79**	0.83	0.80F3
15	0.81**	0.83	0.70F1
16	0.83**	0.83	0.69F1
17	0.75**	0.82	0.64F1

18	0.73**	0.83	0.61F2
19	0.69**	0.83	0.73F3
20	0.67**	0.82	0.69F2
21	0.71**	0.83	0.65F2
22	0.68**	0.83	0.71F2
23	0.80**	0.83	0.68F3
24	0.81**	0.83	0.62F2
25	0.73**	0.83	0.64F2
26	0.83**	0.82	0.68F2
27	0.72**	0.82	0.72F2
28	0.75**	0.83	0.73F3
29	0.70**	0.83	0.75F2
30	0.82**	0.82	0.68F1

Note: F1 = perseverance; F2 = reflection and adaptation of the search for help; F3 = negative affect and emotional response; ** $p < 0.01$.

Data Analysis

196 postgraduate students who answered the Academic Resilience Scale -30 (ARS-30) questionnaires participated in this study. A five-point Likert scale (1–5) served as the basis for the responses: 1 denotes likelihood, 2 vague likelihoods, 3 neutralities, 4 somewhat unlikely, and 5 unlikely. The year of study and gender were noted at the time of data collection. To increase the validity of the responses, signed agreement was sought from each study participant, and data collection was done in an anonymous manner. The International Islamic University's ethics committee granted the current study ethical permission in Islamabad.

Gender-wise distribution:

Figure 1 illustrates the gender distribution of the 195 study participants, revealing that 120 were male students and 75 were female. Due to the low ratio of female to male schooling in Pakistan and the reluctance of female participants to participate in such surveys, the number of male participants exceeded that of female participants.

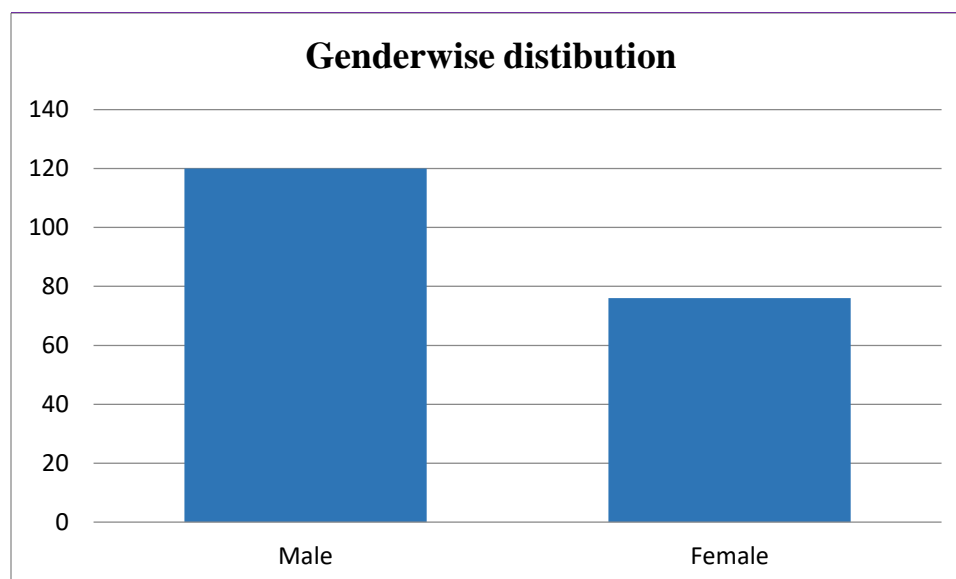


Figure 1: Gender-wise distribution

Year of Study:

The study participants' distribution by year is shown in Figure 2. The bulk of study participants were in their first year of a PhD program (27%), followed by MS first-year students (26%). In the current survey, there were 24% and 23% of students from MS second year and PhD last year, respectively.

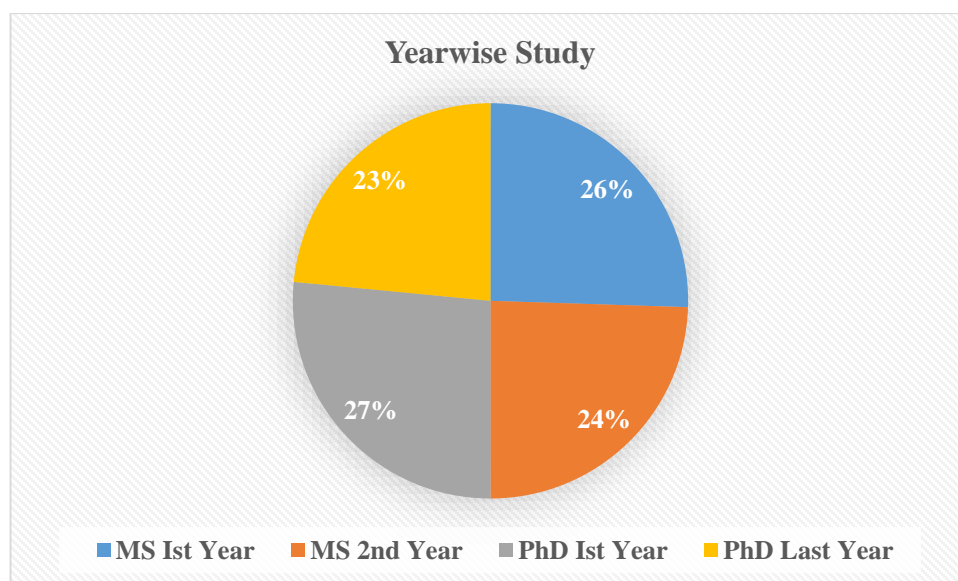


Figure 2: Year-wise distribution of study participants

Descriptive statistics:

Table 1 displays the calculated mean values and standard deviations for each of the 30 items on the ARS-30. Greater agreement with the relevant statement is indicated by

higher scores on a scale of 1 to 5, and vice versa. The whole mean and standard deviation of the 30 ARS-scale elements were added up to determine the global ARS score.

Table 1: Mean± Standard deviation of 30 item on ARS-30

Items in the ARS-30	Mean±SD
I would rethink my career objectives, utilize the scenario to motivate me, and refuse to accept the tutor's criticism. I would also use it to better my work.	1.71±0.88
I would probably become irritated and start to believe that my chances of succeeding in college were slim. I would also definitely view the circumstance as a challenge.	1.79±0.93
I would try not to think negatively, I would consider the circumstance as temporary, and I would put in a lot of effort.	1.74±0.81
Items in the ARS-30	1.79±1.01
I would rethink my career objectives, utilize the scenario to motivate me, and refuse to accept the tutor's criticism. I would also use it to better my work.	1.79±0.96
I would probably become irritated and start to believe that my chances of succeeding in college were slim. I would also definitely view the circumstance as a challenge.	4.31±0.88
I would try not to think negatively, I would consider the circumstance as temporary, and I would put in a lot of effort.	4.45±0.88
Items in the ARS-30	1.73±0.86
I would rethink my career objectives, utilize the scenario to motivate me, and refuse to accept the tutor's criticism. I would also use it to better my work.	1.82±0.9
I would probably become irritated and start to believe that my chances of succeeding in college were slim. I would also definitely view the circumstance as a challenge.	1.72±0.8
I would try not to think negatively, I would consider the circumstance as temporary, and I would put in a lot of effort.	1.75±0.92

Factor Analysis:

Eigen values for all three factors are above 1, indicating that there are three valuable factors for extraction, according to a scree plot analysis. However, Eigen values are thought to be less specific criteria because they may overestimate the factors that can be retained (Field, 2013). Factors 1, 2, and 3 are also present at the point of inflection. Furthermore, the samples are deemed sufficient based on the KMO value of 0.960 (Kaiser, 1970). Field (2013) notes that the Bartlett's test of sphericity ($\chi^2 = 3.755E3$, $df = 435$, $p < 0.000$) indicates that component analysis can be performed on correlations between several variables.

Figure 3: Scree plot analysis of ARS-30 items

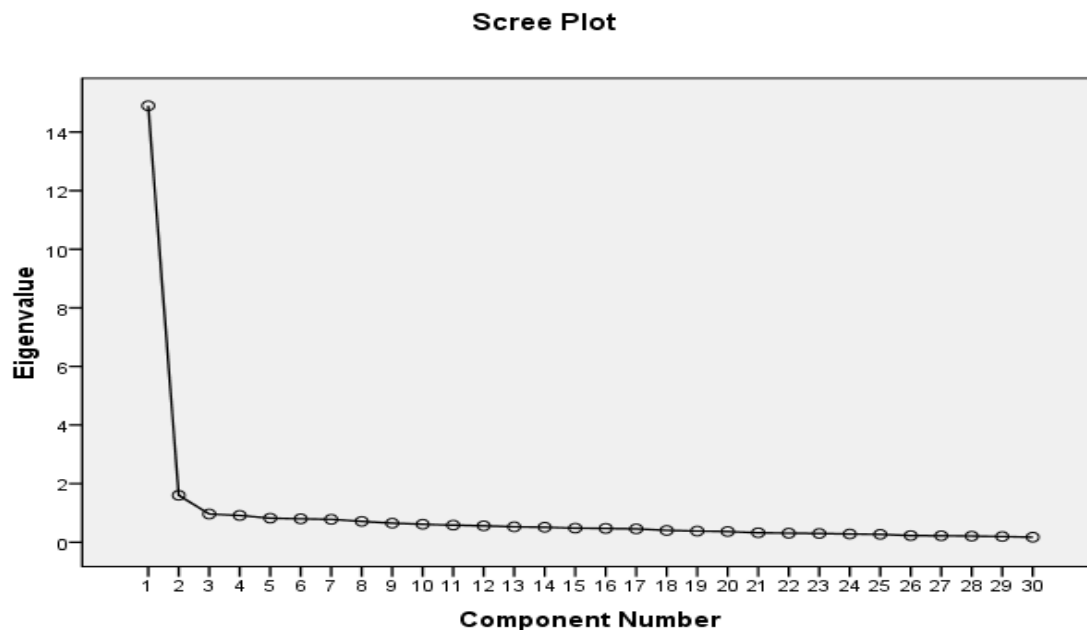


Table 2: KMO and Bartlett's test of sphere city *KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.960
Bartlett's Test of Sphericity	Approx. Chi-Square	3.755E3
	Df	435
	Sig.	.000

Table-3 Eigenvalues, percentage of explained variance, inter-factor correlation and factor-total correlations for ARS-30

	Eigenvalue	Percentage explained variance	Inter-factor correlations		
			Factor-1	Factor-2	Factor-3
Factor-1	14.89	49.657	-	-	-
Factor-2	1.603	5.342	0.71	-	-
Factor-3	.963	3.209	0.41	0.41	-

Findings

1. The study discovered that 25% of pupils had moderate resilience and 75% had low resilience overall.
2. There was a strong correlation found between the internal and external resources of academic resilience and the total academic resilience of the pupils.
3. The majority of students scored highly in the third component, which is Negative Affect and Emotional Response, but poorly in the first two, Perseverance and Reflecting and Adaptive Help-Seeking.

Discussion

Students are seen as the key players in the educational process. Present-day theories have also increased in significance, and student-centered learning has replaced teacher-centred learning in the educational process. Students who possess academic resilience are better equipped to handle the various challenges and obstacles they encounter throughout their academic tenure. Academic resilience is extremely important at the postgraduate level because this is when students' mettle is put to the test. They are required to do independent study as well as entirely separate assignments. Studies have shown that by creating a supportive environment for their students, teachers can assist kids in learning coping mechanisms for adversity (Arif & Mirza, 2017). The goal of this study was to evaluate postgraduate students' academic resilience. The association between three components of academic resilience was also examined in the study. It was discovered that the majority of the pupils who responded lacked resilience. The results of this study showed that persistence was the most important component of academic resilience, while negative affect and emotional response were the least important.

According to the current study, postgraduate students at Islamabad's public and private universities have poor levels of academic resilience since they are not aware of this crucial potential within. The trait known as perseverance enables someone to keep trying despite obstacles, setbacks, or resistance. Hence, persistence is a quality that all successful students must possess because success in anything requires unwavering zeal and focused work. Students that are persistent recognize the importance of perseverance, develop their ability to solve problems, and take ownership of their own academic success.

According to the current study, adaptive help-seeking and reflecting involve a series of interpersonal, metacognitive, and cognitive activities that optimize the efficiency and effectiveness of support for task accomplishment and ensuing independent learning. Effectively calibrating task difficulty, determining that aid is necessary, formulating a request for assistance, and approaching a target person are all skills of optimally self-regulating learners. We might conclude that reflecting and adaptive help-seeking are social interaction processes that are impacted by social and academic objectives. (Newman, 2011). The study demonstrated that postgraduate students are not capable of adaptively seeking assistance.

Additionally, this study revealed that pupils' significant reactions to negative affect indicate a lack of academic resilience. Anxiety, sadness, fear, wrath, guilt and shame, impatience, and other

unpleasant emotions are typical variances that together constitute the wide idea of negative affect, which can be summed up as feelings of emotional discomfort (Watson, Clark, & Tellegen, 2012). A subjective experience, a physiological reaction, and a behavioral or expressive response are the three separate parts of an emotional response, which is a complex psychological state. A significant and highly significant component of university students' education is their emotional response.

Conclusion

It is concluded that most of the students have low level of academic resilience. The current research indicated that postgraduate students have low level in two factors: Perseverance and Reflecting and Adaptive Help-Seeking. Students have low scores in perseverance and reflecting and adaptive help-seeking while they have high score in the third factor which is negative affect and emotional response. This also show that most of the students have low level of resilience.

Recommendations and Significant Applications

The following recommendations are made for various stakeholders, including educational institutions, higher education, policy makers, university students, and teachers, in light of the study's significance and the result reached.

1. Appropriate occasions, such as seminars, workshops, capacity building, and refresher courses, can be planned to showcase and hone resilience skills. Furthermore, learning these abilities might be included in the curriculum for incoming students.
2. Building closer bonds between people can also help increase academic resilience. Events like yearly dinners, official and informal dialogue sessions, mentorship programs, and public forums for discussing work-related issues could be beneficial in this context.
3. Students' positive interactions with one another and the eradication of mutual complaints can both foster academic resilience.
4. The administration of the university should also make an effort to support the students, especially the ones with challenging backgrounds.
5. Students' reading habits and constructive conversations can also raise their degree of academic resilience.
6. By becoming conscious of their feelings, the pupils can also strengthen their intellectual resilience. To increase their academic resilience, they ought to acquire emotional intelligence.

References

- Arif, I. (2017). The efficacy of an intervention program in promoting academic resilience among students who face the possibility of failing in secondary school. 39(1), 251-264, Bulletin of Education and Research.
- Academic resilience among international graduate and postgraduate students: a comparative study Bala, P.
- D. Bates (2010). A fifth of students at Cambridge received a therapy referral. taken from.
- Feinmann, C., Gowers, S., Berney, T., Black, S., Checinski, K., Crome, I., & Walden, C. (2003). Students' Mental Health in Postsecondary Education.
- Westling, B. E., Ekselius, L., & Andersson, G.; Carlbring, P.; Bohman, S.; Brunt, S.; Buhrman, M. (2006). A randomized trial using phone calls in addition to internet-based cognitive behavior therapy was conducted to treat panic disorder remotely. 2119–2125 in American Journal of Psychiatry, 163(12).
- L. V. Casey Jr. (2018). A study of African-American male students' academic resilience in secondary education (doctoral dissertation, University of North Carolina at Charlotte).
- Cassidy, S. (2015). The importance of academic self-efficacy in helping pupils develop resilience. Psychology's frontiers, 6, 1781.
- Cassidy, S. (2016). A novel multidimensional construct measure is the Academic Resilience Scale (ARS-30). Psychology's frontiers, 7, 1787.
- Barkham, M., Connell, J., and Mellor-Clark, J. (2007). Students using university counseling services and their CORE-OM mental health norms are compared to an age-matched primary care population. 35(1), 41-57; British Journal of Guidance & Counselling.
- Bradley, M., Barkham, M., Cooke, R., Bewick, B. M., & Audin, K. (2006). measuring, keeping an eye on, and controlling first-year university students' psychological health. 34(4), 505–517, British Journal of Guidance & Counselling.
- Machin, D., and P. M. Fayers (2000). Evaluation, Analysis, and Interpretation of Life Quality Chichester, England.
- Kaur, S., and Mallick, M. K. (2016). Learning environment's impact on senior secondary school pupils' academic resilience. Journal of Multidisciplinary Studies in the Humanities, Rupkatha, 8(2), 20–27.
- Best, K. M., Garmezy, N., and A. S. Masten (1990). Development and resilience: Insights from the study of kids who endure hardship. Psychopathology and Development, 2(4), 425–444.
- Arif, M. I., and Mirza, M. S. (2018). promoting academic resilience in secondary school students who are at risk of failing. Behavioural Sciences Journal, 28(1).
- Handarini, D. M., Hambali, I. M., Setyosari, P., and Rachmawati, I. (2021). Does academic resilience in adolescents have a correlation with social support and self-efficacy? Journal of Learning and Change International, 13(1), 49–62.
- Meissel, K., Rudd, G., and Meyer, F. (2021). A comprehensive assessment of the literature on quantifying academic resilience in quantitative research. 34, 100402 (Educational Research Review).

- Meissel, K., Rudd, G., and Meyer, F. (2021). A comprehensive assessment of the literature on quantifying academic resilience in quantitative research. 34, 100402 (Educational Research Review).
- Khan, N., Anwar, N., Inamullah, H., and Sarwar, M. (2010). Academic success and resilience of Pakistani secondary school pupils, both male and female. *College Teaching & Learning Journal (TLC)*, 7 (8).
- J. K. N. Singh (2021). International students' life experiences as postgraduate students in Malaysia demonstrate academic perseverance. 22(1), 129–138 in *Asia Pacific Education Review*.
- Bierman, J. M., French, F. E., and Werner, E. E. (1971). A long-term research covering the Kauai children from birth to ten years old. Hawaii University Press.
- Worsley, L. (2006). *The Resilience Doughnut Book: How Strong Kids Are Made*. Alpha Counseling Services, Eastwood.
- A. P. J. Wulandari (2021, April). The impact of self-efficacy and self-esteem on undergraduate students' academic resilience in Jakarta. *Earth and Environmental Science, IOP Conference Series*, Vol. 729, No. 1, p. 012094. IOP Books.
- Zuill, Z. D. (2016). Resilience and academic achievement in adolescents in foster care in Bermuda (Doctoral dissertation, Walden University).
- Ali, Z., Ahmad, N., Rehman, H. U., Ullah, N., & Zahra, T. (2023). Investigating Teacher Educators' Perceptions on Technology Integration in Teacher Preparation Programs. *Journal of Social Sciences Review*, 3(2), 341-355. <https://doi.org/10.54183/jssr.v3i2.272>
- Hussain, A., Jat, Z. G., Hassan, M., Hafeez, A., Iqbal, S., & Imran, M. (2022). Curriculum Reforms In School Education Sector In Sindh; What Has Changed?. *Journal of Positive School Psychology*, 6(9), 2675-2687.
- Hafeez, A., Iqbal, S., & Imran, M. (2021). Impact of Devolution of Power on School Education Performance in Sindh after 18th Constitutional Amendment; *Journal of Development and Social Sciences*, Vol. 2, No. IV, 273-285. [http://doi.org/10.47205/jdss.2021\(2-IV\)24](http://doi.org/10.47205/jdss.2021(2-IV)24)
- Imran, M., Kazmi, H. H., Rauf, M. B., Hafeez, A., Iqbal, S., & Solangi, S. U. R. (2022). Internationalization Education Leadership of Public Universities of Karachi. *Journal of Positive School Psychology*, 6(11), 1175-1188.
- Ahmed, S., Ahmed, S., & Buriro, A. (2023). Strategies and Best Practices for Managing Cost Overruns in the Construction Industry of Pakistan. *Propel Journal of Academic Research*, 3(1), 28-55.
- Khan, R., Hussain, A., & Ahmad, S. (2023). Revolutionizing Human Resource Management: The Transformative Impact of Artificial Intelligence (AI) Applications. *International Journal of Social Science & Entrepreneurship*, 3(4), 306-326.
- Imran, M., Sultana, Z., & Ahmed, S. (2023). The Influence Of Student-Teacher Interactions on Secondary School Students' academic Performance. *Benazir Research Journal of Humanities and Social Sciences*, 2(1).
- Imran, M., Zaidi, S.S., & Rehan, F., (2024). The Impact of Excessive Internet Usage on the Emotional Maturity of Adolescents: A Case Study in Pakistan. *Spry Journal of Humanities*

- and Social Sciences (SJHSS), 2(1), 1-20.
<https://doi.org/10.62681/sprypublishers.sjhss/2/1/1>
- Imran, M., Zaidi, S.S., & Khanzada, R. A., (2023). A Comparative Analysis of South Asian Countries and East Asian Countries on Moral Education. *Spry Journal of Humanities and Social Sciences (SJHSS)*, 1(2), 120-134.
<https://doi.org/10.62681/sprypublishers.sjhss/1/2/5>
- Oad, L., Zaidi, S.S., & Phulpoto, S. A. J., (2023). Helicopter Parenting and its Influence on the Children of Pakistan: Thematic Analysis. *Spry Journal of Humanities and Social Sciences (SJHSS)*, 1(2), 72-87. <https://doi.org/10.62681/sprypublishers.sjhss/1/2/1>
- Phulpoto, S. A. J., Oad, L., & Imran, M. (2024). Enhancing Teacher Performance in E-Learning: Addressing Barriers and Promoting Sustainable Education in Public Universities of Pakistan. *Pakistan Languages and Humanities Review*, 8(1), 418-429.
[https://doi.org/10.47205/plhr.2024\(8-I\)38](https://doi.org/10.47205/plhr.2024(8-I)38)
- Imran, M., & Akhtar, N. (2023). Impact of Ethical Leadership Practices on Teachers' Psychological Safety and Performance: A Case of Primary School Heads in Karachi-Pakistan. *Academy of Education and Social Sciences Review*, 3(2), 172-181.
<https://doi.org/10.48112/aessr.v3i2.505>
- Imran, M., Ahmad, N., Al-Harthy, A. A. Q., & Jat, Z. G. (2023). Early Identification and Intervention: Amplifying the Voice of Slow Learners. *AITU Scientific Research Journal*, Volume. 1, Issue. 4,
- Rehan, F., Zaidi, S. S., Imran, M., Akhtar, S., Shah, A., & Hameed, S. (2024). Exploring the Efficacy of Music-Based Pedagogies in Developing Communication Skills: Perspectives of Early Childhood Educators. *Al-Qanṭara*, 10(2), 79-98.
- Ahmad, N., Iqbal, S., Ali, Z., Jabeen, R., & Imran, M., (2024). Bridging the Gap: Secondary School Teachers' Perspectives on Behavioral Barriers to Academic Success. *Al-Qanṭara* 10(2), 144-162.
- Mohammad, N., Aslam, M., Anjum, T., Haider, S., Hashim, M., & Imran, M. (2024). Phenomenological Inquiry into Postgraduate Students' Perceptions of Academic Supervision and Feedback Experiences. *Al-Qanṭara*, 10(2), 126-144.
- Umrani, W. A., Qureshi, M. A., Ahmed, U., and Samad, A. (2018). investigating the connections in Bahrain between student engagement, academic resilience, academic efficacy, and assistance from instructors. *Journal of Advanced and Applied Sciences International*, 5(9), 39-46.
- Verma, R., and Bala, P. (2019). The association between international students' educational aspirations and academic resilience. *Indian Journal of Research & Development in Public Health*, 10(6).