JRSR
JOURNAL OF REGIONAL STUDIES REVIEW

Journal of Regional Studies Review (JRSR)
Volume 4, Issue 2 (Spring 2025) | Pages: 80–91
ISSN (Online): 3006-6646
Digital Object Identifier (DOI): 10.62843/jrsr/2025.4b114
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RESEARCH ARTICLE

Mapping the Levels of Risk Factors, Protective Factors and Quality of Life Among Young Adults

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Abstract: This study explored how risk factors (academic stress, poor sleep, excessive social media use, and perfectionism) and protective factors (resilience, coping strategies, social support, and self-esteem) influence the quality of life among young adults. To access the levels of risk factors, protective factors and quality of life among young adults. Total 900 young adults were selected with age 18-25, Using a cross-sectional design and validated scales, data was analyzed through cluster analysis in SPSS-24. Three distinct clusters were identified (high, moderate, low) based on risk/protective factor levels. Cluster 1 (High risk): High academic stress, excessive social media use, low sleep quality, low resilience, low social support, and moderate quality of life, Cluster 2 (Moderate risk/protection): Mixed levels of factors, with lowest quality of life scores and Cluster 3 (Low risk/high protection): Low stress, better sleep, strong coping, high resilience and support, and highest quality of life. Findings highlight that level of risk and protective factors significantly affect quality of life among young adults, with stronger protective factors linked to better outcomes.

Keywords: Academic Stress, Effective Coping Strategies, Excessive Social Media Use, Perfectionism, Quality of Life, Resilience, Self-Esteem, Sleep Quality, Young Adults

Introduction

Concerns about young adults' deteriorating mental health and well-being in educational settings led to the topic "Mapping the Levels of Risk Factors and Protective Factors and Quality of Life among Young Adults". A developmental period between the ages of 18 and 25 years is termed as young adulthood (Higley, 2019). It is the stage in which the individual faces various challenges and changes as they move towards independence, they depend less on family and begin to establish their careers, intimate relationships, mental health, and emotional challenges (Erol et al., 2022). Resilience is one of the most significant psychological notions, defined as the ability to maintain mental stability while efficiently reacting to adversity, trauma, or major pressures. It protects against risk factors such as academic stress, sleep quality, excessive social media usage, and perfectionism while improving quality of life (Masten, 2014). Resilience reduces the negative effects of perfectionism characterized by harsh self-evaluation; it reduces frustration, anxiety, and self-criticism by supporting goal setting , coping strategies, and self-acceptance (Hill & Curran, 2016). Effective coping strategies are the efforts that people make to manage stress and regulate their emotions in difficult situations. Coping measures are important for measuring QoL among young adults (Carver, 1997).

Young adults who use effective coping strategies have strong relationships with others. Social support conveys a sense of belongingness and self-control and improves the QoL (Thoits, 2011). It serves as a bridge between external stressors and internal resilience, allowing the young adults to deal with challenges in their lives. Such strategies not only impact the risk factors but also promote other protective factors such as resilience, social support, self-esteem, and psychological well-being, thus promoting QoL (Rodríguez-Pérez et

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Cite this Article: Taveel, U., & Riaz, S. (2025). Mapping the Levels of Risk Factors, Protective Factors and Quality of Life Among Young Adults. *Journal of Regional Studies Review, 4*(2), 80-91. https://doi.org/10.62843/jrsr/2025.4b114

al., 2017). Social support is important for young adults' emotional and informational well-being. Social support from peers promotes psychological health by providing individuals with positive life experiences and the ability to handle the hurdles of life (Geue et al., 2019). Social support and social relationships are important for emotional fulfillment. When young adults lack social support, they feel loneliness, and it badly affects their academic performance (Beutel et al., 2017). Those individuals who don't receive social support are at risk of mental health illness (Hefner & Eisenberg, 2009).

Self-esteem is an individual's overall perception of their own worth, and it is critical for maintaining mental health. "Self-esteem is defined as a person's complete perception of their self-worth" (Rosenberg, 1965b). The study indicates that young adults with low self-esteem dealing with academic careers and lack of confidence have poor mental health that may affect their academic performance (Ketata et al., 2021). It has a positive effect on real-life experiences, which directly impacts life satisfaction, while low self-esteem results in failure of academic performance (Orth et al., 2012). Such people exaggerate their success, accept their flaws, and have positive social relationships with others (Baumeister et al., 2003). Research defines academic stress as the challenges young adults face in meeting their academic expectations, adapting to new environments, managing overload, and securing future career opportunities, which can lead to severe anxiety, decreased life satisfaction, and mental health issues (Beiter et al., 2015).

Young adults in academic environments are exposed to academic stressors, which reduces their motivation to achieve goals and has an impact on academic performance, learning problems, and mental health issues such as depression, sleep disturbances, excessive social media use, and substance abuse. Such adults are constantly nervous and have lower well-being (Pascoe et al., 2020). Sleep deprivation can cause cognitive impairments, lower academic performance, and risk of mental health problems like anxiety and frustration, thus diminishing their quality of life (Wang & Fan, 2023). Sleep quality is an important aspect of physical, emotional, and cognitive well-being among young adults. "Sleep quality is defined as how one sleeps, including aspects like sleep duration, sleep latency, and sleep disruption." Sleep quality disturbance is associated with depression, schizophrenia, and stress (Buysse et al., 1989). According to the study, insufficient sleep has a detrimental effect on young adults' They typically get less than six hours of sleep per night, whereas seven to nine hours is the recommended amount.

Depression, anxiety, and diabetes are just a few of the serious mental health effects of poor sleep quality (Nelson et al., 2022). As the young adults have academic expectations in universities, the resulting stress activates the hypothalamic-pituitary-adrenal axis, which raises cortisol levels and reduces sleep quality (Kim & Dimsdale, 2007). Excessive use of social media leads to increased feelings of comparison and bitterness, which negatively affect well-being. Digital technologies refer to an improved level of loneliness among young adults, and it is interconnected with decreased life satisfaction. Social media passive use leads to upward social comparison (Marttila et al., 2021). It is viewed as a "double-edged sword." People have multiple accounts on social media platforms, and it is interrelated with levels of anxiety, depression, and psychological distress (Keles et al., 2020). When people misuse social media, they become exhausted. It occurs when people become mentally tired as a result of excessive use of technology. Young people who use social media excessively suffer from poor sleep, FOMO, anxiety, and despair. Individuals who experience social media fatigue have reduced life satisfaction and quality of life (Al Houri, 2023).

Perfectionism means setting high personal standards of performance and striving for flawlessness. Perfectionism is considered to be high performance standards combined with a tendency to judgmentally evaluate one's own behavior. It associates with depression, feelings of inferiority, guilt, worthlessness, and helplessness because of their overly self-evaluations (Frost et al., 1990). Perfectionist individuals fear that others will evaluate them negatively, they have social appearance anxiety, which is the fear of how they look. Perfectionism negatively disturbs young adults' quality of life (Maphis et al., 2013). Interventions such as cognitive behavior therapy (CBT), mindfulness-based intervention therapy (MBIs), interpersonal psychotherapy, and self-monitoring strategies resulted in significant reductions in depression, anxiety, and

depressive symptoms by restructuring negative thought patterns. It assists young adults in recognizing perfectionist ideas, maintaining their well-being, and maintaining a happy attitude. Furthermore, self-compassion decreases self-criticism and improves emotional well-being (Egan et al., 2011). Quality of life encompasses the well-being of young adults and society as a whole. According to WHOQOL, an individual's perception of life context to their belief system, culture, expectations, and their own standards about life. It is an assessment of their overall well-being (Group, 1998) . QoL is a cognitive assessment of an individual's life, and it provides important signs about their quality of life. As, students shift to university life, many changes occur, like academic expectations and social adaptations, which affect their quality of life (Civitci, 2015). It is a positive feeling a degree of satisfaction or dissatisfaction, a sense of well-being, or happiness or unhappiness felt by individuals in different facets of their lives (Hill et al., 2010).

Literature Review

Young adults' Quality of Life (QoL) relates to their overall well-being and happiness in a variety of categories, such as mental health, emotional well-being, academic satisfaction, social relationships, work-life balance, and personal growth.

Academic Stress: Mofatteh (2021) conducted a study among university students on risk factors associated with stress. When students come to university from various backgrounds, they have to face various challenges that affect their mental health badly. Primary research articles were used in this as a narrative review of literature. This review identifies six themes linked with stress among students (academic, psychological, biological, lifestyle, and social factors). According to another study, the mental health of students was a major issue after COVID-19. This observational research was conducted to find which factor is related to mental health of university students. Need for intervention and their implementation was considered vital before entering into the universities because at this stage there are higher expectations from themselves (Campbell et al., 2022). A study looked into a relationship between the academic integrity of online young adults. Data was sent to 1500 participants, but only 155 responded to the questionnaire via email, and the results indicated that there is a significant relationship between the academic honesty of them taking online classes and academic learning quality. The relationship was strong (0.57) (Ayoub/Al-Salim & Aladwan, 2021).

Sleep Quality: Poor sleep quality for individuals has no impact on psychological well-being and mental health. Results indicated that having a good nap is a vital factor in increasing sleep quality (Liu et al., 2021). Sleep is an essential physiological function for humans. Young adults frequently report poor sleep quality as a result of shifting social possibilities and increased academic responsibilities. However, no studies on sleep quality among young adults in educational institutions have been conducted. 2817 students participated in this research. Perceived stress, depression, and anxiety were found to be related to sleep quality. 55.8% of students had poor sleep quality (Lemma et al., 2012). This research included a total of 275 young adults. The mean age (SD) was 22.1 ± 3.6 years. Participants who lived in their own houses were 2.18 times more likely than others to have a greater quality of life. Sleep disorders have a negative impact on QoL (Rezaei et al., 2020).

Excessive Social Media Use: The study's goal was to investigate the association between addictive behavior, mobile device use, depression, and suicidal thoughts. The questionnaires were given to 374 young adults, including 58.6% women and 41.4% men. Contrasting utilization of social media, addictive behavior was found substantially connected with melancholy. 36.1% of the sample reported having suicide thoughts within the preceding two weeks (Jasso-Medrano & López-Rosales, 2018). He used a quantitative method to gather data from a group of 90 young adults through a survey questionnaire. According to the data, a significant proportion of them displayed indicators of social media addiction, such as obsessive social media use, withdrawal symptoms, and negative consequences for social media use. Furthermore, students who spent

more time on social media platforms were more likely to develop social media addiction. Other traits were also found, like the need for social recognition, peer pressure, and boredom (Akther, 2023). Another study aimed to observe the prevalence and impact of problematic Internet usage, gaming, and quality of life QoL among young adults. Data analysis included 202 valid questionnaires. A non-experimental study design was used to address one descriptive and two research questions. The study found that problematic online behaviors were associated with greater levels of depression ($R = .14$, $p < .05$) and worse quality of life ($R = .20$, $p < .05$) (Kalkan & Bhat, 2020). Perfectionism involves individuals setting high standards for doing tasks they assess themselves. High perfectionism is linked to increased postponement determined by pressure to meet high expectations (Ashraf et al., 2023). The research observed elements of distress, resilience, and perfectionism in connection to each other. Participating were 413 young adults; an online posting on the website of the psychology department. Only perfectionism that was executed by society was strongly related to resilience. On the other hand, all three of Hewitt and Flett's (2004) traits of perfectionism were linked to higher levels of sadness and anxiety.

The results exposed that resilience mostly mediated the link between anxiety and socially imposed perfectionism (Klibert et al., 2014). Another study of 1,916 young adults in four programs reported much higher levels of depression, anxiety, and stress than national averages, with females outperforming males in terms of stress. First-year students were more anxious than third-year students, while third-year students experienced less stress than both first- and second-year students. Finally, students reported higher levels of worry following the start of the COVID-19 epidemic compared to previous periods (Bogardus et al., 2022).

Resilience: In addition to improving mental health and well-being, resilience programs help graduates get a highly desired skill. A systematic assessment observed the impact of therapies meant to increase young adults' resilience on their overall well-being and mental health. Divided into four categories: coaching, skills-based, mindfulness, and psychoeducation. The treatments were given in person and online. The studies generally showed that, although there is no evidence of a positive effect on depression, therapy could reduce stress and anxiety (Abulfaraj et al., 2024).

The cross-sectional survey included 607 individuals, ranging from third-year students to interns. Data was acquired using a self-reported questionnaire and analyzed using t-tests, ANOVA, and linear regression. Resilience was shown to have a substantial association with both life satisfaction ($P < 0.001$) and happiness ($P < 0.001$). 66.3% had below-average resilience, whereas 24.7% had below-average life satisfaction. The results indicated that those with high resilience enjoy happier and more fulfilled lives (Aboalshamat et al., 2018).

Effective coping strategies: Research was conducted on the strategies students use to manage stress and what universities offer to support their mental health. It was conducted in 2019 by a survey of over 3200 students from three universities. Young adults propose task-oriented, proactive coping methods to their classmates more often than they use them themselves. The results found that the general mental health knowledge of participants was good, yet help-seeking behavior remains low among those experiencing mental health concerns (Reis et al., 2021). The study examined 1072 university students aged between 18 and 48 years. Latent profile analysis was used to assess four psychological well-being indices: self-acceptance, environmental mastery, life purpose, and personal progress. It reported that the higher the level of psychological well-being, the greater the utilization of three coping techniques. Gender differences in coping techniques were noted, but no interaction effects on psychological well-being were discovered. Results suggested that male students used positive reappraisal as academic stress coping mechanisms to a greater extent than females, and also, psychological well-being plays a crucial role in promoting adaptive coping methods (Freire et al., 2016).

Social Support: According to the findings, those with greater social support had higher academic accomplishment, and those with less social support had lower academic achievement. People who receive greater gratitude and encouragement from educators, friends, and family are more interested in learning and have better general health (Chen et al., 2023). During the COVID-19 pandemic, young adults' mental health had gotten worse because they didn't have enough social support. Those who struggle to adapt to online learning lead to stress and mental health issues. It used a purposeful sampling method, and 524 participated. The results showed that psychological well-being and social support are significantly correlated, but there was no difference in psychological well-being between male and female students. It was meant to help teachers, friends, parents, and other relevant parties make a plan to help HEI improve their mental health (Yusof et al., 2022). The study recruited 263 young adults in Indonesia and aimed to describe the level of social support and QoL among those who were taking lectures via online learning modes. By gathering the data from the participants by questionnaires, results were found that the majority had access to a moderate amount of social support (Sulistyorini & Roswiyani, 2021).

Self-Esteem: Research indicated that a young adult's feelings of self-worth, academic engagement, and drive are some of the factors that affect their success or failure. 243 participants, ranging in age from 19 to 21, took part in the quantitative study. The results showed that self-esteem influences behavioral and emotional disengagement. Motivation had a greater influence on academic engagement, and students' metacognitive engagement predicts their academic success. Young adults' performance would therefore be enhanced by promoting metacognitive strategies that teach them to plan, monitor, and manage their own learning. The current study has a large sample size from two institutions to observe their comparative differences, whereas the previous study only included a limited sample size from one university (Acosta-Gonzaga, 2023). The research was done to assess the self-esteem and academic performance among young adults. 80 participants were selected by purposive sampling, and the results indicated that females have higher academic performance than males, while males have higher self-esteem among themselves as compared to females. Moreover, a higher level of self-esteem resulted in good academic performance, which improves their QoL (Arshad et al., 2015).

Quality of Life (QoL)

396 young adults enrolled in nursing schools made up the research population for this descriptive and cross-sectional study. The study found a significant positive association between life satisfaction and quality of life, as well as between the four main dimensions of quality of life scores ($P<0.05$). Additionally, it was demonstrated that young adults' position as nursing students had a favorable effect on their life satisfaction and quality of life. Thus, it is recommended that the educational system be changed to promote greater physical activity among them and improve their satisfaction and quality of life (Yildirim et al., 2013). In this study, first-year young adults' university quality of life was compared to that of their working peers of the same age. Each group's subjects and materials were collected in 1999 from two cross-sectional data sets, which included both males and females between the ages of 20 and 34. According to a gender-based comparison, first-year university students' average reported QoL was worse than that of their working counterparts for both males and females ($p < 0.0001$ in all cases). A greater percentage of pupils than anticipated gave their health an "average" or "low" rating ($p < 0.0001$). In both groups, there was a strong correlation between SRH and perceived QoL. There are variations between young adults and their counterparts who work full-time (Vaez et al., 2004).

Methodology

A cross-sectional survey research design was utilized to enable objective measurement of key variables (protective, risk, and quality of life) (Creswell & Creswell, 2017). Multistage random sampling, a probability sampling method, was used. To guarantee varied representation among various student groups, the sample

was stratified according to important demographics, such as university, faculty, departments, semesters, programs, and gender (Etikan & Bala, 2017). A total of 900 young adults (aged 18–25) were recruited from University of Gujrat (500) and University of Chenab (400) through multistage random sampling technique. the sample size was worked out by applying the Yamane formula at 0.05 level (Yamane, 1973). The sample included students from various departments and faculties, ensuring diverse representation (Etikan & Bala, 2017).

Inclusion/Exclusion Criteria: Young adults (ages 18 to 25) voluntarily agreed to participate in the study and provided informed consent and those who were below 18 and above 25 ages were not part of this study and who were unable to give informed consent owing to cognitive disabilities or linguistic problems. Standardized scales were used: • Academic Stress – Perception of Academic Stress Scale (Bedewy & Gabriel, 2015) • Sleep Quality – Sleep Quality Scale (Yi et al., 2006) • Excessive Social Media Use – SMEQ (Przybylski et al., 2013) • Perfectionism – Perfectionism Scale (Parker & Tavella, 2021) • Resilience – Brief Resilience Scale (Smith et al., 2008) • Effective Coping Strategies – Brief COPE (Carver, 1997) • Social Support – Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) • Self-Esteem – Rosenberg Self-Esteem Scale (Rosenberg, 1965a) • Quality of Life – Satisfaction with Life Scale (Diener et al., 1985).

Results and Discussion

The University of Gujrat accounted for 55.6% of the total, while the University of Chenab accounted for 44.4%. There were 42.8% men and 68.2% women. The respondents were between the ages of 18 and 25. While 13.0% of students graduated, the majority (87%) were enrolled in undergraduate programs. Of the respondents, 42.8% reside in cities, while more than half (57.2%) reside in rural areas. The proportion of students was highest in the first, second, and third semesters, and then decreased in the following semesters. Science (33.6%), social sciences (14.2%), management and administrative sciences (16.1%), computing and information technology (20.8%), engineering (3.9%), the arts (9.1%), and architecture, design, and fine arts (2.3%) were among the faculties from which participants were drawn.

Furthermore, 90.4% were enrolled in morning sessions, with only 9.6% engaged in evening programs. The majority of respondents had three or four siblings, and 68.3% said they participated in sports, while some did not. Furthermore, 91.4% were single, with 8.6% married. In terms of living arrangements, 82.3% were family households, whereas 17.7% were hostile. Parents' educational backgrounds varied; 29.4% of women and 25.9% of fathers finished matriculation, with only a few holding PhDs. 8.6% of mothers and 9.3% of fathers were deemed unqualified. Cronbach's alpha scores range from.725 to.91, indicating that all of the variables have adequate to outstanding internal consistency.

Table 1

Cluster Analysis of Protective and Risk Factors with Quality of Life Among Young Adults Cutoff scores (N=900)

Variables	Cluster1 (High)		Cluster2 (Moderate)		Cluster3 (Low)		Cutoff scores	F	p
	M	n	M	n	M	n			
Academic stress	58.00	128	29.00	540	39.00	232	35.70	3107.169	.000
Sleep quality	42.00	107	69.00	397	60.00	396	61.83	2174.46	.000
Excessive social media	28.98	107	19.66	200	11.65	593	15.49	3784.89	.000
Perfectionism	20.36	438	15.44	297	28.01	165	20.14	2631.80	.000
Resilience	8.16	219	12.55	422	15.90	259	12.45	26799.4	.000
coping strategies	49.83	238	63.64	385	75.01	277	63.49	2423.70	.000

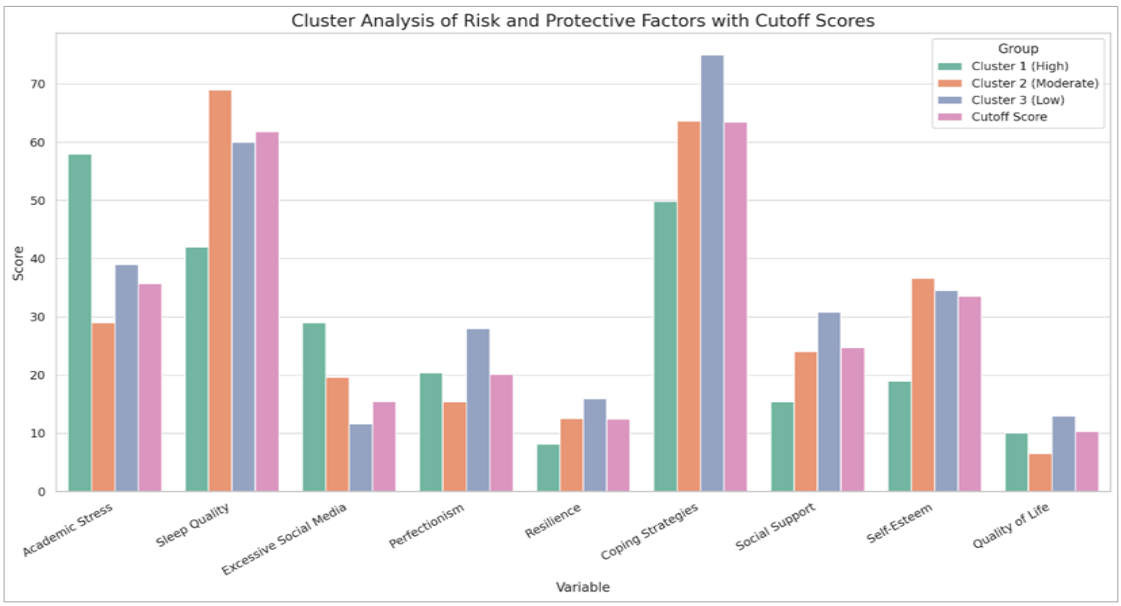
Social support	15.40	195	24.01	361	30.82	344	24.75	2771.12	.000
Self-esteem	18.97	90	36.60	255	34.53	555	33.56	2963.63	.000
Quality of life	10.08	307	6.50	236	13.02	357	10.31	2994.38	.000

Cluster analysis was performed to classify individuals based on their degree of risk and protective variables, revealing three clusters: high, moderate, and low. The weighted average method was used to calculate cutoff scores for each cluster mean M and sample size n (Hair Jr et al., 2010).

$$\text{Cutoff Score} = \frac{(\text{M1} \times \text{n1}) + (\text{M2} \times \text{n2}) + (\text{M3} \times \text{n3})}{\text{n1} + \text{n2} + \text{n3}}$$

They found a statistically significant difference. In addition to high levels of academic stress, excessive use of social media, and perfectionism, Cluster 1 (high) also showed low resilience (M=8.16), social support (M=15.40), self-esteem (M=18.97), poor sleep quality (M=42.00), excessive social media use (M=28.98), and moderate quality of life (M=10.08). While cluster 3 (low) demonstrated low risk factors like academic stress (M=39.00), better sleep quality (M=60.00), and less social media use (M=11.65), high resilience (M=15.90), more effective coping strategies (M=75.01), more social support (M=30.82), high self-esteem (M=34.53), high perfectionism (M=28.01), and high quality of life (M=13.02) were strong protective factors. However, cluster 2 (moderate) showed the lowest quality of life (M=6.50) and low perfectionism (M=15.44), exhibiting an average level between two extremes.

Figure 1



Conclusion

This study indicates that risk factors (academic stress, sleep quality, social media use, and perfectionism) significantly lower young adults' quality of life, and protective factors (resilience, effective coping strategies, social support, and self-esteem) play a critical part in improving young adults' quality of life. Using cluster analysis, three clusters were discovered: high, moderate, and low. The study found that students with high risk and low protective factors had lower quality of life, while those with low risk and strong protective traits reported higher well-being. Furthermore, the moderate cluster has the lowest QoL. These findings highlight the need of student-centered mental health programs that promote protective psychological qualities for better overall well-being and academic performance.

Limitations and Recommendations

The study's cross-sectional survey research design cannot establish causation; future research should utilize a longitudinal strategy to analyze changes over time. These may cause fatigue and boredom in participants due to their length; there may also be response bias and social-desirability bias. Using mixed methodologies (observation and interviews) and short scales could increase data reliability. These findings are specific to Pakistani students, whereas cross-cultural studies are more effective for comparing behaviors and attitudes across cultures because they increase external validity by collecting data once rather than multiple times.

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