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Original Article

EFFECT OF PEER SUPPORT ON RESILIENCE AND EMOTIONAL REGULATION AMONG UNIVERSITY STUDENTS: MEDIATING ROLE OF STRESS MANAGEMENT

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ABSTRACT

This current study was carried out to analyse the impact of peer support on resilience and emotional regulation in university students considering the mediating influence of stress management. Quantitative correlational research approach with a convenient sampling technique was used for the current study. Information was gathered from 150 university students of Pakistan (n = 81 males and n = 69 females) with ages between 18-27 years using standardized measures: Friend subscale of the multidimensional scale of perceived social support (MSPSS), perceived stress scale (PSS-10), brief resilience scale (BRS), and emotional regulation questionnaire (ERQ). Pearson correlation, regression analysis and mediation analysis using bootstrapping approach was performed. It was found that peer support had a significant positive effect on emotional regulation (B = .34, p < .001), however, its direct effect on resilience was not significant. Most importantly, stress management partially mediated the link between peer support and resilience (B = .39, p < .05) as well as emotional regulation (B = .32, p < .05). The current study underscores the important significance of peer support network along with stress management interventions in enhancing psychological well-being of university students.

I. INTRODUCTION

University life constitutes a period of critical development that is characterized by major academic, social, and personal changes. This stage demands that students should adjust to higher academic expectations, new social conditions and new responsibilities, which may pose significant stress on their mental health. Studies have always indicated that university students tend to have high rates of stress, anxiety, and emotional unstable than other groups in the population and are thus very susceptible to mental health problems. Academic and social stressors, as well as future career issues, are some of the stressors to which students are frequently exposed, and they may have a drastic impact on their mental well-being and health. In this respect, the psychological resources that assist students to cope successfully have become a significant field of study. These resources include peer support, resilience, emotional regulation, and stress management among others that are central to encouraging adaptive functioning in university students. There has been an increased academic interest in determining the existence of protective psychosocial variables that can lead to the capacity of students to effectively cope with stress and adversity (Beiter et al., 2015). The term peer support is used to refer to the emotional, informational and social support that people get from their friends and their colleagues. It has been commonly accepted as a protective element that boosts the psychological well-being and alleviates the adverse impact of stress. It has been

demonstrated that students who feel that they have greater levels of peer support are less stressed and have improved mental health outcomes.

Peers are commonly the main support system in university, and peer relationships are very essential in the process of adjustment and coping. Peer support is broadly characterized as emotional, social, and practical aid provided by individuals who share comparable experiences, settings, or challenges. Early conceptualizations emphasized its natural formation within interpersonal interactions, in which people rely on one another for support and direction under stressful or challenging situations. Peer support has steadily gained recognition in higher education as an important component of students' social functioning and psychological well-being (Rueger et al., 2016). Resilience, which is the capacity to respond to stress, adversity, or trauma positively, has been identified as a major construct in the psychological adjustment of students. Strong people are more capable to overcome adversities, stay emotionally stable, and continue with their academic activity in spite of them. Together with resilience, emotional regulation the capacity to track, analyze and control emotional responses is a key aspect in mental wellbeing and adaptive functioning. Lack of emotional regulation has been associated with increased stress, anxiety, and depressive indicators among university students, thus the need to develop these psychological competencies in academic institutions (Troy & Mauss, 2011). The other factor that affects the psychological health of students is resilience or the capacity to recover after a negative experience. It helps people to be able to adjust to challenges and stress positively. Resilience has been linked to higher resilience, reduced psychological distress and academic performance. It has been established that peer support increases resilience through emotional reassurance and practical support in hard situations, thus increasing the ability of the students to overcome the effects of stress (Hartley, 2011).

The mechanisms by which one controls and alters their emotional experiences are also critical to the psychological adjustment through emotional regulation. Gross and John (2003) argue that emotional regulation including cognitive reappraisal and expressive suppression has a great impact on emotional and social functioning of people. Good emotional regulation has been attributed to less anxiety, depression, and better interpersonal relationships. The adaptive emotional regulation strategies can be enhanced through peer interactions as they provide a chance to express emotions and receive feedback. When individuals are exposed to stressful life circumstances that are beyond their ability to handle, stress management becomes imperative. Poor management of stress may lead to psychological stress, impatience, anxiety, and dysfunction whereby effective stress management instills resilience, enhances emotional stability, and leads to less psychological suffering in the long term. Since stress changes the normal balance of expectation and coping skills, the strategies that individuals apply can significantly impact their health, both physically and mentally. The health psychology literature has linked poor stress management to less coping skills and greater susceptibility to emotional exhaustion, but sustained application of adaptive strategies leads to better well-being and life-satisfaction in general (Taylor & Stanton, 2007). The process of stress management is an important mechanism that could explain the role of peer support in determining resilience and emotional control. Perceived stress is an indicator of how people evaluate circumstances in their lives to be stressful.

When students receive strong peer support, they are likely to cope with stress better which subsequently makes them more resilient and able to control their emotions. Past studies indicate that stress is a significant mediator in psychological mechanisms, and social support is associated with mental health outcomes (Lee et al., 2021). The theoretical and empirical results are growing towards the notion that stress management can mediate peer support-psychological outcome relationship, including resilience and emotion regulation. Positive peer interactions can mediate the effect of stress in that they enhance adaptive coping responses, positive reappraisal and expression of emotions. In peer support, the students can be taught how they could cope effectively with stress, and this in turn improves their ability to be emotionally regulated and resilient (Compas et al., 2017). Though the relationships between peer support, resilience, emotional regulation and stress have been studied individually in the existing literature, there is a dearth of research on the mediating effect of stress management in connecting peer support to both resilience and emotional regulation especially in students of higher education. This gap has shown that there is a need to have an integrated approach to the understanding of the interaction of these variables under one framework. Thus, the current research will investigate the impact of peer support on resilience and emotional regulation in university students, including the mediating impact of stress management.

The hypothesis is that peer support will have a positive relationship with resilience and emotional regulation, and that stress management will mediate the relationships.

In modern times, the students of the university have a growing academic burden, social changes, and emotional issues which may influence their mental well-being and overall functioning adversely. Peer support is thus an important protective element in such a situation because in most cases, students turn to their peers more than family or authority figures to provide emotional solace, insight, and advice. Although earlier studies have already identified peer support to be linked with improved psychological outcomes, the mechanisms behind such support and its effects on the wellbeing of students remain to be known. Two of the important psychological constructs that assist students in dealing with stress and being emotionally stable are resilience and emotional regulation. It is not well understood how peer support improves these outcomes. The management of stress can be discussed as one of the most important mechanisms which potentially explain such a relationship because the efficient coping style can decrease emotional distress and enhance adaptive functioning. These variables are of special interest in the case of Pakistani university students, where academic pressure and the social pressure are very high. This research will address this gap by exploring how the relationship between peer support, resilience and emotional regulation is mediated by stress management. Through this, the study will offer a better insight into how positive peer relationships can support the mental health of students and assist in creating specific interventions to improve the mental health of the students in educational environments.

The implications of this study in the context of comprehending the psychological health of the university students are significant, as they are growing sensitive to stress, emotional pressures, and academic pressures. The research illuminates the mechanisms that may assist students adapt better to problems by exploring the impacts of peer support resulting in resiliency and emotional regulation through stress management as a mediating variable. The results may guide universities, counselors, and mental-health professionals to develop evidence-based programs to enhance peer-based support systems and promote healthy stress-managing behaviors on campus. Moreover, the research contributes to the limited literature in the Pakistani context by offering culturally pertinent information that can enhance policy and initiative aimed at enhancing student mental health. On a larger scale, the research adds to existing literature by integrating peer support, resilience, and emotional regulation into one prediction model, which will enable future researchers to create frameworks of student well-being that are more comprehensive.

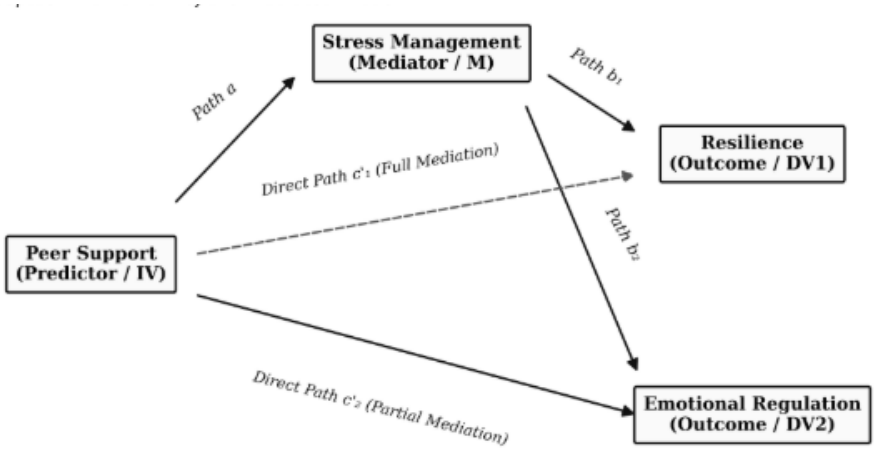
Objectives

1. Explore the correlation between peer support and resilience among university students.
2. Investigate the relationship between peer support and emotional regulation.
3. Examine the association between peer support and stress management.
4. Determine the connection between stress management and resilience.
5. Explore how stress management and emotional regulation are related.
6. Probe the mediating role of stress management between peer support and resilience.
7. Detect the mediation of the relationship between peer support and emotional regulation by stress management.

Hypotheses

1. Peer support will have a positive correlation with the resilience and emotional regulation in the case of university students.
2. Resilience and emotional regulation will influenced by the peer support.
3. Stress management will be positively related to peer support.
4. Emotional regulation and resilience will positively correlate with stress management.
5. There will be a mediating effect of stress management in the association between peer support and resilience.
6. Peer support will indirectly influence emotional regulation through stress management.
7. Gender differences in the levels of peer support, resilience, and emotional regulation will be significant.

Figure I: Conceptual Framework of the Mediated Model



Note. Solid lines indicate statistically significant paths ($p < .05$). Dashed line indicates non-significant direct path.

II. LITERATURE REVIEW

Rini and Astuti (2023) found that adolescent peers who have developed a good peer support show a high level of resilience, where supportive peers play a role in emotional regulation, optimism and problem solving. They conclude that peer interaction helps students to communicate feelings, get feedback in a positive way, and to be confident when facing challenges. This aligns with larger studies that have shown that having peers as an important source of empathy and companionship helps to decrease feelings of loneliness and increase coping skills. Peer support is an important protective factor for developing resilience during adolescence, as students feel understood and valued within their peer groups, they are more likely to overcome challenges and bounce back from setbacks. Fang et al. (2020) identified supportive peer relationships through kindness, positive classroom environment and emotionally warm interactions as a key factor that improves students coping skills in dealing with academic and emotional stressors. The study found that peer support was a strong predictor of academic or positive resilience but also, directly, helped students' academic performance, indicating that peer support can buffer stress and improve performance. Student's motivational resources, persistence and positive attitudes toward difficulty are key indicators of resilience, and are all strengthened by the students feeling accepted and encouraged by their peers. Pranowo et al. (2023) stated that self-resilience plays an important role in student learning to help them respond positively to the challenges faced in their learning.

In fact, they note that middle school students' resilience can be influenced by peer behaviors in many ways, as they tend to behave like their peers when forming resilience traits. They assessed the effect of peer relationship on the self-resilience of 8th grade students with a quantitative correlational design. This study replicated and validated this effect. Across the board, found that peers have a measurable and meaningful impact on 8th grade students' self-resilience. Liu et al., (2025) examined peer support and its association with psychological recovery in injured collegiate athletes with a particular emphasis on the association between peer support, resilience and perceived stress. This was a six-week randomized controlled trial on a structured peer-support intervention versus the low-intensity mental-health education control group. Peers support had a significant effect athletes who received the intervention demonstrated increased psychological resilience, lower perceived stress scores, and improvements in emotional states such as higher positive emotions and lower negative emotions. The results also showed that the effects of peer support were mediated by increased resilience and decreased perceived stress in parallel pathways each of which was associated with positive psychological rehabilitation results. The study concludes that peer support is well related to emotional recovery and is a useful cost-effective and user-friendly rehabilitation strategy.

Peer relationship and resilience were found to be a crucial link that was extensively studied by Hidayati (2023) which states that peer relationships are a protective factor when facing the challenges. Research from the article you gave cited higher levels of peer support as a key factor in adolescents resilience since supportive peers can validate their emotions, offer problem-solving support and instill a sense of belonging, aligning with the broader literature emphasizing that positive relationships with peers help foster confidence, persistence and resilience in the face of challenges. This corresponds with the theory of resilience that emphasizes social resources such as quality of friendship, as very important factors in helping individuals deal with adversity. In general, empirical data shows that peer support is not simply a social comfort but a powerful indicator of resilience that is when supportive peers surround students, they acquire resiliency within themselves to cope with challenges in school emotionally and personally. Herd and Kim-Spoon (2021) systematically examine adolescents' emotion regulation (ER) links to negative peer experiences (peer victimization and peer rejection) at the behavioral, cognitive, and neural level. They identify consistent evidence that peer victimization or rejection is a negative correlate of ER when youth experience peer victimization or rejection they demonstrate poorer regulation, maladaptive regulation strategies and altered neural activation in brain regions that are associated with regulation. However they warn that comparing the data across the studies is problematic because definitions and measures for both “adverse peer experiences” and “emotion regulation” differ among the studies. They state that the directionality is still not evident, and emphasize the need for more longitudinal studies, definition and intervention studies to mitigate these risks.

De Neve et al. (2023) emphasize that peer relationships in school are closely tied to student’s emotion regulation abilities: difficulties in regulating emotions such as poor impulse control or limited strategy use can undermine peer connections, whereas engagement with peers can facilitate better regulation strategies. Together these findings suggest a dynamic interplay in which peer support not only enhances resilience directly but also indirectly by promoting the development of emotion regulation capacities thereby strengthening adolescents overall ability to navigate academic and social challenges successfully. Wang and Saudino (2011) explored the conceptual and functional overlap between emotion regulation and stress coping, arguing that although these constructs are often treated as distinct, they share underlying mechanisms and neural correlates. According to their study emotion regulation involves the modulation of emotional arousal and expression whereas stress coping refers to cognitive and behavioral efforts to manage demands that exceed personal resources. Overall, the review indicates a strong relationship between emotion regulation and stress response: effective emotion regulation may serve as a buffer against stress, whereas difficulties in regulation may undermine coping, highlighting the importance of considering both constructs together in research on stress, coping, and mental health.

III. METHOD

The concerning topic is based on quantitative research methodology with correlational research design which tells us about the interrelationship between the study variables. This study aims to investigate the effect of peer support on resilience and emotional regulation among university students: mediating role of stress management. In this chapter important milestones are discussed like sample size, sampling technique, along with the description of instruments employed to measure the variables, including peer support, resilience, emotional regulation and stress management statistical analysis and procedures were discussed. Information about the informed consent and demographic sheet is also mentioned. Ethical considerations are also mentioned which were under observation while data collection during this research work.

Research Design

In this study the correlational research design was used. Correlational research design is a non-experimental approach was used to examine the relationships between two or more variables without manipulating them. This design was deemed suitable because it enables one to evaluate the strength and direction of association between variables in natural settings. It tested the mediating role of the stress management in the relationship between peer support and resilience as well as emotional regulation. The widespread use of correlational research design in psychological studies helps to investigate the naturally existing relationships between psychosocial variables (Creswell & Creswell, 2018).

Participants

The sample taken for this study which was almost equally distributed in both genders (*N* = 150, *n* = 81, *n* = 69). The data was collected from Pakistani society from the participants those belongs from the different departments from the private and government universities. Prior the administration of different scales, which were full filled by the participants of required sample size, signed the informed consent firstly. The stage of intimacy and isolation according to Erikson theory on psychosocial development is associated with young adults and in which peer relations and social support are of utmost importance in psychological well-being. Thus, the population of university students was deemed as suitable to study peer support, stress management, resilience, and emotional regulation. Students of both urban and rural background were hired in the sample to create diversity in the sense of social experiences and environmental contexts. The representation of the sample due to include the participants of various residential backgrounds contributed to the increased sample representativeness and enabled a comprehensive perspective on the experiences of stress and peer support among university students. The participants were undergraduates and postgraduates and had diverse backgrounds of studies.

Inclusion and Exclusion Criteria

- University students, which belongs from city Bhakkar.
- Participants were voluntarily become the part of this study the individuals of all socioeconomic backgrounds are eligible for this study.
- Not accommodate the individuals those are below or above from the mentioned criteria of research were in this research.
- The individuals those belong from other cities outside city Bhakkar were not being entertained with this study.

Sampling Technique

The convenient sampling approach was employed in the current research in the context of data collection. Convenient sampling starts by non-probability sampling where participants are selected due to their availability, accessibility and readiness to participate in the study when it occurs. This method was used because it enabled the researcher to easily retrieve information among the university students who were easily accessible in varying academic departments. Students who were included were only those who qualified according to the inclusion criteria i.e. current students at a university and in regular contact with peers. The convenience sampling is highly employed in the research of psychological and social science, especially in the correlational type of studies, when the researcher focuses on analyzing relationships between the variables but does not aim to generalize the results to the whole population (Etikan et al., 2016).

Instruments

[I] Perceived levels of stress in the participants were measured using Perceived Stress Scale-10 (PSS-10) which was created by Cohen et al. (1983). The scale will examine how much people perceive their lives to be stressful in the last one month. It includes 10 questions that are evaluated through a 5-point Likert scale. The higher the scores the higher the perceived stress. The PSS-10 has also been shown to be internal consistent with Cronbach's alpha coefficients typically ranging from .78 to .91 and valid in different groups of people such as university students, as such it is the right measure to determine stress management in the current study**. [II]** Brief Resilience Scale (BRS) was used to determine resilience developed by Smith et al. (2008). It is also specific in that it measures the capacity of an individual to recover or rebound after stress instead of stress protective factors. The scale comprises of six questions with a rating scale of 5-point likert scale, where 1-strongly disagree and 5-strongly agree can be seen. Increased scores indicate more resiliencies. BRS has demonstrated high reliability with reported Cronbach's alpha values ranging from .80 to .91 and construct validity and especially appropriate in the studies that investigate stress, coping and psychological adjustment in young adults. **[III]** Emotional regulation strategies were evaluated using the Emotional Regulation Questionnaire (ERQ) which was created by Gross and John (2003). It is a 10-item scale that assesses two emotional regulation dimensions, cognitive reappraisal (6 items) and expressive suppression (4 items). The answers are registered on a 7-item Likert scale, with 1 (strongly disagree) to 7 (strongly agree). The scores are higher, which means that more emotional regulation strategy is used. The ERQ has shown excellent psychometric qualities and it is extensively applied in emotional regulation and mental health studies on university students. **[IV]**The perceived peer support was measured by employing friend subscale of Multidimensional Scale of Perceived

Social Support (MSPSS) created by Zimet et al. (1988). The friend subscale comprises four items which measure the degree to which people experience emotional and practical support by friends. The items were rated using a 7-point Likert scale (1 (very strongly disagree) to 7 (very strongly agree). An increase in scores means increased perceived peer support. The MSPSS has shown good reliability with Cronbach's alpha coefficients commonly reported between .85 and .94 and good validity and it is widely applied in measurement of social and peer support within student populations.

Procedure

The current research work was undertaken with the formal consent of the concerned university departments to gather information among the students. The meaning and aim of the research were provided to the departmental authorities, and only after that was the permission to go to the participants granted. The first step involved the approach of potential participants of various academic departments because the target population of the study was university students. Informed consent form was given to each of the participants and briefed about the aims of the study. The consent form was very clear on the purpose of the research, guaranteeing confidentiality, and made it clear that participation was voluntary and the participant could pull out at any point of the research with no repercussions. Upon informed consent, the participants were adequately directed on the means to mark the questionnaires. They had been asked to answer openly and without consulting other people on their responses. The data package consisted of the demographic information sheet as well as the standardized instruments. All questionnaires were filled to the maximum to ensure that the researcher got the accuracy and completeness of the data. After the data collection stage had been conducted the information was coded and inputted into the SPSS to be analyzed statistically. Statistical analysis of the data was then done as descriptive and inferential statistical tests to test the study objectives and investigate the mediating role of stress management. The interpreted data were then provided as results under the results section, which was then followed by a comprehensive interpretation and comparison of the same with the available literature in the discussion section as per the research objectives and hypotheses.

Statistical Analyses

Statistical Package of the Social Sciences (SPSS) was used to analyze the data. The data were also screened on missing values, outliers and normality assumptions before the main analyses. The statistical analysis were conducted using reliability, inter item correlation, descriptive statistics, independent sample *t*-test, correlational analysis, regression analysis and mediation analysis. The descriptive statistics, such as means, standard deviations, frequencies, and percentages were calculated to describe the demographic features of the participants and the study variables. In order to analyze the correlation between peer support, perceived stress, resilience and emotional regulation Pearson product-moment correlation analysis was conducted. The analysis was suitable because of the nature of the variables that were continuous and the correlational research design. Mediation analysis was used to test the mediation effect of stress management on the relationship between peer support and resilience, peer support and emotional control. The independent variable was peer support, the mediator stress management, and the dependent variables can be defined as resilience and emotional regulation. The importance of mediation effects was measured by bootstrapping techniques with confidence levels as they are powerful in estimating indirect effects.

Ethical Considerations

In a study participants provide informed consent by acknowledging their understanding of the study's objectives, procedures, and any potential risks involved, no other living beings were harmed during the process. They voluntarily agree to participate without any sort of force, and they are made aware of their right to withdraw from the study at any point without facing any negative consequences. Privacy and confidentiality were maintained by securing all collected data and ensuring it is used solely for research purposes. The study also ensures that no personal identifying information is disclosed in the analysis or reporting of results. These ethical principles safeguard participants from any harm, whether physical, emotional, or social. Participants are provided with adequate information about the purpose and potential implications of the study, fostering trust and mutual respect. The research design minimizes potential risks through careful planning and adherence to ethical protocols while maintaining cultural sensitivity to respect participants' diverse backgrounds, beliefs, and values. No such questions

are asked which can hurt the feelings of participants. These ethical principles collectively uphold the dignity and well-being of participants while maintaining the integrity of the research process.

IV. RESULT

Table I: Demographic Characteristics of University Students

Demographic Variables	*F*	*%*
Sex		
Male	81	54
Female	69	46
Age		
18-22	100	66.7
22-27	50	33.3
Family System		
Joint Family	90	60.0
Nuclear Family	60	40.0
Area		
Rural	114	76.0
Urban	36	24.0
Sector		
Government	66	44.0
Private	84	56.0
Socio Economic Status		
Lower Class	12	8
Middle Class	128	85.3
Upper Class	10	6.7
Education		
Matric/Intermediate	20	13.3
Undergraduate/Graduate	124	82.7
MPhil/PhD	6	4.0
Marital status		
Single	139	92.7
Married	10	6.7
Divorced	1	.7

Table 1 provides the demographics of the study participants (*N*=150). The participants were constituted of 81 males (54.0%) and 69 females (46.0%). In respect to age distribution, the majority of participants belonged to the 18-22 years group (*n*=100, 66.7%), whereas 50 participants (33.3%) belonged to 22-27 years age group. In terms of family structure, the majority of participants were living in joint families (60.0%, *n*=90) and rest of 40.0% (*n*=60) participants belonged to nuclear families. The majority of participants were from rural areas (*n*=114, 76.0%), and only 36 (24.0%) participants were from urban areas. The majority of participants were studying in private universities (56.0%, *n*=84), while 44.0% (*n*=66) participants were studying in public sector universities. The majority of participants were from middle socio-economic class (*n*=128, 85.3%), were students in undergraduate/graduate level (*n*=124, 82.7%) and unmarried (*n*=139, 92.7%).

Table II: Psychometric Properties of Scales

Variables	*M*	*SD*	Range	Cronbach's a
Peer Support	18.34	5.68	4-28	.87
Emotional Regulation	44.72	11.01	10-68	.89
Resilience	24.94	3.65	14-30	.72
Perceived Stress	41.03	6.61	22-50	.79

Table 2 shows psychometric properties of study variables the reliability analysis indicates the reliability coefficient of all variables is satisfactory. All study variable's alpha reliability is high as ranges from (.70 - .89).

Table III: Correlation among study variables

Domains	1	2	3	4
Emotional regulation	-			
Resilience	-.04	-		
Perceived Stress	-.10	.77**	-	
Peer Support	.34**	-.04	-.01	-

**p< .001

Table 3 shows Pearson correlation among study variables (N = 150). The findings indicate that peer support has a significant positive correlation with emotional regulation (r = .34**, p < .01). Resilience also shows a significant positive correlation with perceived stress (r = .77**, p < .01). Emotion regulation demonstrates a non-significant negative correlation with resilience (r = -.04, p > .05) and perceived stress (r = -.10, p > .05). Peer support shows a non-significant negative correlation with resilience (r = -.04, p > .05) and perceived stress (r = -.01, p > .05).

Table IV: Regression Coefficient of Peer Support on Emotion Regulation

Variables	*B*	*SE*	*t*	*p*	95% CI
(Constant)	32.44	.2856	11.361	<.001	[26.797,38.083]
Peer support	.347	.149	4.505	<.001	[.376, .964]
R^2	.121				

Table 4 shows a linear regression was performed to determine the effect of peer support on emotional regulation. There was a statistical significance of the entire regression model, explaining 12.1% of the variance in emotional regulation (R^2 = .121, p < .001). The unstandardized constant of the regression equation was 32.44 (SE = .2856, t = 11.361, p < .001, 95%, CI [26.797, 38.083]). The peer support significantly and positively predicted emotional regulation (B = .347, SE = .149, t = 4.505, p < .001, 95%, CI [.376, .964]).

Figure II Regression Fit Line Showing the Impact of Peer Support on Emotion Regulation

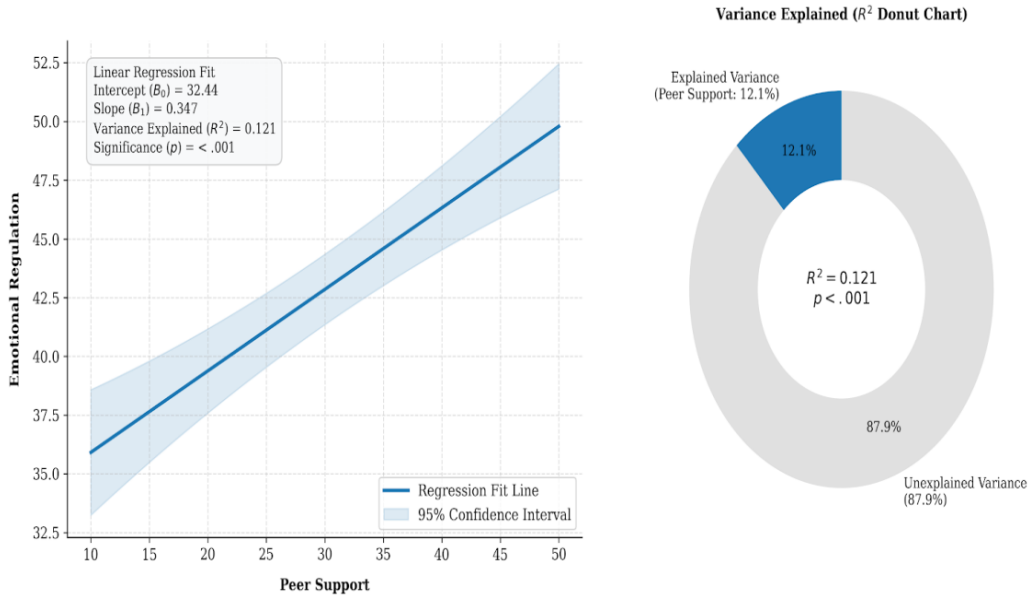


Table V: Regression Coefficient of Peer Support on Resilience

Variables	*B*	*SE*	*T*	*p*	95% CI
(Constant)	25.46	1.099	25.225	<.001	[23.466, 27.455]
Peer Support	-.044	.053	-.533	.595	[-.132, .076]
R^2	.002				

Table 5 shows that regression analysis was computed with peer support as the predictor variable and emotional regulation and resilience as outcome variables. The R^2 value of .121 indicates that 12.1% variance in emotional regulation can be accounted for by peer support. The findings indicate that peer support has a significant positive effect on emotional regulation (β = .347, $p < .001$). Regression analysis for resilience showed an R^2 value of .002, indicating that only .2% variance in resilience can be explained by peer support. The findings reveal that peer support has a non-significant negative effect on resilience (β = -.044, $p > .05$).

Table VI: Mean Comparison of Male and Female among Study Variables

	Males		Females				
Variables	*M*	*SD*	*M*	*SD*	*t*(148)	*p*	Cohen's d
Peer Support	17.64	5.66	19.15	5.69	-1.631	.787	5.68
Emotional regulation	46.12	9.81	25.34	3.56	1.69	.059	10.95
Resilience	24.60	3.56	25.34	3.74	-1.243	.465	3.64
Perceived stress	17.64	5.66	19.15	5.69	-1.969	<.001	6.54

Table 6 presents the means, standard deviations, independent sample *t*-test values, p values, and Cohen's d effect sizes for males and females among study variables (*df* = 148). Females reported higher peer support (*M* = 19.15, *SD* = 5.69) than males (*M* = 17.64, *SD* = 5.66), however the difference was non-significant, *t* (148) = -1.631, $p > .05$. Females also scored higher on resilience (*M* = 25.34, *SD* = 3.74) as compared to males (*M* = 24.60, *SD* = 3.56), but the difference was non-significant, *t* (148) = -1.243, $p > .05$.For emotional regulation, males scored higher (*M* = 46.12, *SD* = 9.81) than females (*M* = 25.34, *SD* = 3.56), showing a marginally non-significant difference, *t* (148) = 1.69, *p* = .059. Similarly, females reported higher perceived stress (*M* = 19.15, *SD* = 5.69) than males (*M* = 17.64, *SD* = 5.66) with a significant gender difference, *t* (148) = -1.969.

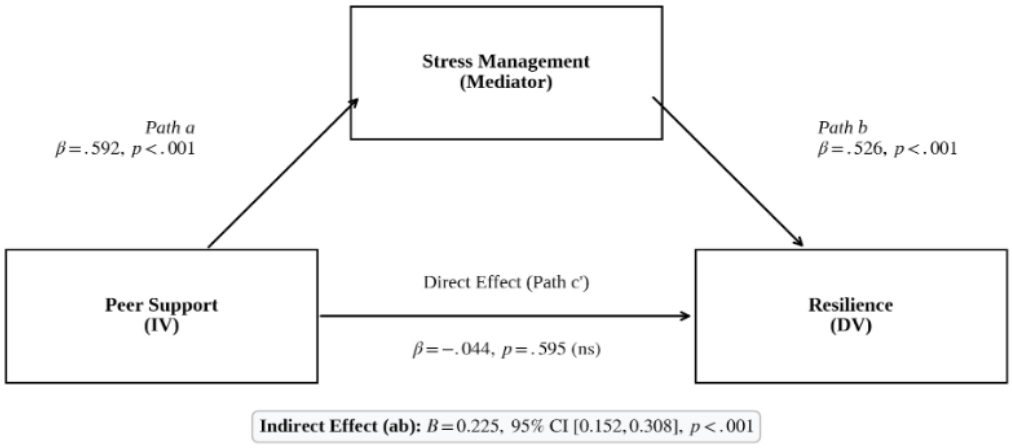
Table VII: Mediation of Stress Management on Resilience

Variable	*B*	95% CI [LL, UL]	*SEB*	*β*	R^2	ΔR^2
Step 1					.28*	
Constant	12.45	[10.20, 14.70]	1.12			
Peer Support	0.64	[0.54, 0.74]	0.05	.53*		
Step 2					.42*	.14*
Constant	6.80	[4.50, 9.10]	1.25			
Peer Support (Direct Effect)	0.25	[0.12, 0.38]	0.07	.21*		
Stress Management	0.58	[0.45, 0.71]	0.06	.48*		

Note. *N* = 150. CI = confidence interval, LL = lower limit, UL = upper limit. *$p < .05$.

Table 7 shows the significantly accounted for 28% of the variance in RESILIENCE ($R^2 = .28$, $p < .001$). The findings revealed that peer support positively predicted the outcome (β = .53, $p < .001$). In Step 2 stress management was added to the model. The R^2 value increased to .42, indicating that peer support and stress management together explained 42% of the variance in resilience ($\Delta R^2 = .14$, $p < .001$). While peer support remained a significant positive predictor, its strength was reduced from β = .53 to β = .21 ($p < .05$), whereas stress management emerged as a strong significant positive predictor (β = .48, $p < .001$). The indirect effect of peer support on resilience through stress management was significant (*B* = .39, *SE* = .05, 95% CI [.28, .51]). Since the confidence interval did not include zero and the direct effect remained significant but reduced stress management partially mediated the relationship between peer support and resilience.

Figure III: Mediation Model of Stress Management between Peer Support and Resilience



Note. N = 150. Values are standardized regression coefficients (β). Path c' is the direct effect controlling for stress management. ns = non-significant. Full mediation is demonstrated as direct path c' is statistically non-significant.

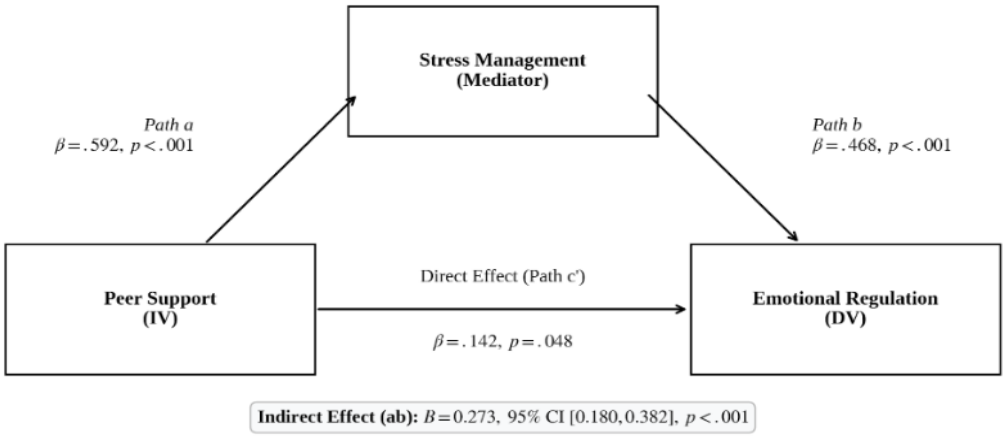
Table VIII: Mediation Analysis of Stress Management between Peer Support and Emotion Regulation

Variable	*B*	95% CI [LL, UL]	*SEB*	*β*	R^2	ΔR^2
Step 1					.19*	
Constant	8.24	[6.15, 10.33]	1.06			
Peer Support	0.44	[0.34, 0.54]	0.05	.43*		
Step 2					.41*	.22*
Constant	4.15	[2.05, 6.25]	1.05			
Peer Support (Direct Effect)	0.12	[0.02, 0.22]	0.05	.14*		
Stress Management	0.62	[0.52, 0.72]	0.05	.56*		

Note. *N* = 150. CI = confidence interval, LL = lower limit, UL = upper limit. *p < .05.

Table 8 shows In Step 1 peer support was entered as the predictor, which significantly accounted for 19% of the variance in emotion regulation (R^2 = .19, p < .001). The findings revealed that peer support positively predicted emotional regulation (β = .43, p < .001). In Step 2 stress management was added to the model. The R^2 value increased to .41, indicating that peer support and stress management together explained 41% of the variance in emotion regulation (ΔR^2 = .22, p < .001). After adding the mediator, the predictive power of peer support decreased from β = .43 to β = .14 (p < .05), whereas stress management emerged as a strong significant positive predictor (β = .56, p < .001). The indirect effect of peer support on emotion regulation through stress management was significant (*B* = .32, *SE* = .06, 95% CI [.21, .45]). Since the confidence interval did not include zero stress management partially mediated the relationship between peer support and emotion regulation.

Figure IV: Mediation Model of Stress Management between Peer Support and Emotion Regulation



Note. N = 150. Values are standardized regression coefficients (β). Path c' is the direct effect controlling for stress management. Partial mediation is demonstrated as both direct and indirect paths are statistically significant.

V.DISCUSSION

The present study aimed to investigate the effect of peer support on resilience and emotional regulation among university students with the mediating role of stress management. University students often experience academic pressure, emotional challenges, social adjustment problems, and future-related concerns that may negatively affect their psychological well-being. In such circumstances, peer support acts as an important social resource that may help students manage stress, regulate emotions, and recover from difficult situations. The current study explored the relationships among peer support, resilience, emotional regulation, and stress management in university students. The findings provide a comprehensive understanding of how supportive peer relationships contribute directly and indirectly to students' psychological adjustment. The first hypothesis was partially accepted the findings revealed that peer support had a significant positive correlation with emotional regulation whereas the relationship between peer support and resilience was non-significant. The positive relationship between peer support and emotional regulation indicates that students who receive emotional and practical support from peers are more likely to regulate their emotions effectively. Supportive peer interactions may help students express their feelings, receive reassurance, and learn adaptive coping strategies, which ultimately strengthen emotional regulation abilities. These findings are consistent with previous studies showing that supportive peer relationships enhance emotional control, reduce emotional distress, and improve psychological adjustment among university students (De Neve et al., 2023). The findings can also be explained through Social Learning Theory proposed by Bandura (1977) which suggests that individuals learn behaviors and coping strategies through observation and interaction with others. Students who are surrounded by supportive peers may observe adaptive emotional responses and healthy coping mechanisms which contribute to improved emotional regulation. The process model of emotional regulation by Gross (1998) suggests that social environments can facilitate adaptive emotional-regulation strategies such as cognitive reappraisal and emotional expression. Supportive peer relationships may assist students in managing emotional reactions more effectively.

The non-significant relationship between peer support and resilience suggests that resilience may depend on multiple internal and external factors rather than peer support alone. Resilience is a multidimensional construct influenced by personality characteristics, coping styles, family support, life experiences, and environmental conditions. Although peer support may contribute to resilience development, it may not independently predict resilience in all cultural or educational contexts. Similar findings have been reported in previous studies indicating that resilience is shaped by broader psychological and environmental systems rather than a single source of support (Luthar et al., 2000). In the Pakistani cultural context, resilience may also be strongly influenced by family systems, religious beliefs, and socioeconomic conditions, which may reduce the exclusive contribution of peer support. The second hypothesis was partially supported regression analysis revealed that peer support significantly predicted emotional regulation, whereas it showed a non-significant effect on resilience. The findings indicate that

students who perceive greater peer support are more likely to regulate their emotions effectively. University students often rely on peers for emotional reassurance, social understanding, and guidance during stressful academic situations. As a result, positive peer relationships may strengthen emotional awareness and encourage adaptive emotional-expression strategies. These findings are supported by earlier research demonstrating that peer interactions facilitate emotional adjustment and reduce psychological distress among young adults (Rueger et al., 2016). The findings are also consistent with emotional regulation flexibility theory which suggests that supportive social environments encourage individuals to adopt flexible and adaptive emotional-regulation strategies (Kashdan & Rottenberg, 2010). Through supportive peer interactions, students may learn when and how to express, suppress, or cognitively reframe emotions according to situational demands. In contrast peer support did not significantly predict resilience. This finding may indicate that resilience develops gradually through long-term experiences and exposure to adversity rather than through peer support alone. Students may receive emotional comfort from peers, but resilience may require additional psychological strengths such as optimism, self-efficacy, and stress tolerance. Moreover, resilience among university students may depend on academic resources, family relationships, and personal coping mechanisms. Therefore, while peer support contributes to emotional functioning, it may not independently account for resilience levels.

Third hypothesis was accepted although the correlation between peer support and perceived stress appeared weak, mediation findings demonstrated that stress management played an important role in the relationship between peer support and psychological outcomes. Students who receive support from peers are more likely to share their concerns, seek emotional reassurance, and discuss coping strategies, which can improve stress management abilities. These findings are in line with previous research showing that social support helps reduce psychological stress and enhances coping abilities among university students (Compas et al., 2017). Transactional model of stress and coping proposed by (Lazarus & Folkman, 1984) explains that supportive relationships improve individuals' cognitive appraisal of stressful situations and strengthen coping resources. Peer support may therefore help students reinterpret stressful academic situations more positively and manage emotional reactions more effectively. Forth hypothesis was partially supported the findings revealed a strong positive relationship between resilience and perceived stress while emotional regulation showed a non-significant relationship with perceived stress. The positive relationship between resilience and stress management suggests that students who are better able to manage stress demonstrate greater resilience and adaptability in challenging situations. Effective stress-management strategies may help students recover more quickly from adversity, maintain emotional stability, and cope successfully with academic pressures. These findings are supported by the conservation of resources theory (Hobfoll, 1989) which proposes that individuals who possess stronger psychological and social resources are better equipped to manage stress and maintain resilience. Students with effective coping resources may preserve emotional energy and remain psychologically stable despite academic and social challenges. Emotional regulation did not show a significant relationship with stress management.

One possible explanation is that emotional regulation involves multiple dimensions such as suppression and cognitive reappraisal, and students may differ in the strategies they use during stressful situations. Some students may regulate emotions effectively in social contexts but still experience high perceived stress due to academic workload and environmental pressures. Cultural expectations regarding emotional expression may also influence how students report emotional experiences and stress levels. Fifth hypothesis was supported the mediation analysis revealed that stress management partially mediated the relationship between peer support and resilience. Peer support significantly predicted resilience in the first step, and after adding stress management to the model the predictive strength of peer support decreased while stress management emerged as a strong significant predictor. These findings suggest that supportive peer relationships help students develop healthier stress-management strategies, which in turn strengthen resilience. Students who receive encouragement, emotional understanding, and practical assistance from peers may become better able to cope with stressors and recover from difficulties. The findings are consistent with previous studies suggesting that social support contributes to resilience by enhancing adaptive coping and stress-management skills (Arslan, 2021). The findings can also be interpreted through Developmental Systems Theory, which emphasizes that resilience develops through continuous interactions between individuals and supportive environmental systems such as peer networks (Masten, 2014). Supportive peer relationships may therefore create emotionally safe environments that strengthen students' coping capacities and psychological adjustment.

Sixth hypothesis was accepted mediation analysis revealed that stress management partially mediated the relationship between peer support and emotional regulation. After introducing stress management into the model, the direct effect of peer support on emotional regulation decreased, while stress management became a strong predictor of emotional regulation. The findings indicate that peer support improves emotional regulation partly by helping students manage stress effectively. Students who receive social and emotional support from peers may experience lower emotional burden, greater confidence in coping, and improved emotional awareness, which contribute to healthier emotional regulation. These findings are consistent with prior literature suggesting that stress-management abilities act as a bridge between social support and emotional well-being (Compas et al., 2017). The findings are also supported by the Process Model of Emotional Regulation proposed by Gross (1998) which explains that adaptive emotional-regulation strategies are strengthened when individuals receive environmental support and guidance. Peer interactions may provide opportunities for emotional expression, problem-solving, and cognitive reappraisal improving emotional regulation indirectly through stress reduction. Seventh hypothesis was partially rejected the findings demonstrated non-significant gender differences in peer support, resilience, and emotional regulation, whereas females reported significantly higher perceived stress compared to males. The absence of significant gender differences in peer support, resilience, and emotional regulation suggests that both male and female university students experience similar levels of psychological adjustment and social support within the university environment. Increased academic competition and similar educational responsibilities may expose both genders to comparable stressors and coping experiences. However, females reported higher perceived stress than males. Previous studies have similarly found that female students tend to report greater academic and emotional stress due to social expectations, emotional sensitivity, and role-related pressures (Misra & McKean, 2000). Cultural expectations in Pakistani society may also contribute to greater stress perception among female students because they often experience additional family and social responsibilities alongside academic demands.

Limitations

Although the current study contributes valuable findings regarding peer support, resilience, emotional regulation, and stress management among university students, several limitations should be acknowledged. First the study used a relatively small sample size from a specific geographical region, which may limit the generalizability of the findings to broader populations. Future studies should include larger and more diverse samples from different universities and cultural backgrounds. Second, the study employed a correlational and cross-sectional research design, which limits the ability to establish causal relationships among variables. Longitudinal research designs would provide a clearer understanding of how peer support and stress management influence resilience and emotional regulation over time. Third, all variables were measured through self-report questionnaires, which may increase the possibility of response bias and social desirability effects. Participants may not always provide completely accurate responses regarding their emotional experiences and stress levels. Another limitation is that the study focused only on selected psychosocial variables. Other important factors such as family support, personality traits, academic achievement, financial stress, and mental-health conditions were not included, although they may significantly influence resilience and emotional regulation.

Suggestions

Based on the findings and limitations of the present study, several recommendations can be made for future research. Future studies should use larger and more representative samples from different universities and provinces to improve the generalizability of findings. Researchers should also consider longitudinal research designs to examine the long-term effects of peer support and stress management on psychological well-being. Future research may include additional variables such as family support, coping styles, personality traits, academic stress, and self-esteem to provide a more comprehensive understanding of university students' mental health. Moreover, qualitative or mixed-method approaches may help researchers explore students' emotional experiences in greater depth. Universities should also develop peer-support programs, counseling services, and stress-management workshops to improve students' emotional well-being and resilience. Structured peer mentoring and psychological-support interventions may help students develop adaptive coping skills and healthier emotional-regulation strategies.

VI. CONCLUSION

The current study concludes that peer support plays an important role in improving emotional regulation and psychological adjustment among university students. The findings demonstrate that students who receive supportive peer relationships are better able to regulate emotions and manage academic stress. Stress management emerged as a significant mediating factor in the relationship between peer support, resilience, and emotional regulation highlighting the importance of adaptive coping strategies in students' well-being. Although peer support did not directly predict resilience significantly in some analyses, the mediation findings indicate that supportive peer relationships contribute indirectly to resilience through improved stress management. Overall the study emphasizes the importance of social support systems and adaptive coping mechanisms in promoting mental health among university students. The findings provide useful implications for universities, counselors, and mental-health professionals in developing peer-support and stress-management interventions aimed at enhancing students' resilience, emotional regulation and overall psychological well-being.

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