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SELF-ESTEEM AND FORGIVENESS AS PREDICTORS OF ADOLESCENT MENTAL HEALTH: THE ROLES OF RESILIENCE AND SOCIAL SUPPORT

Original Article

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ABSTRACT

Background: Adolescence is a critical developmental phase characterized by emotional vulnerability and rapid psychosocial changes. Identifying personal and environmental protective factors that enhance mental health during this period is essential. Self-esteem and forgiveness are recognized as key psychological strengths, while resilience and social support are considered important contextual buffers that promote positive adjustment and reduce psychological distress among adolescents.

Objective: The study aimed to examine the predictive roles of self-esteem and forgiveness on adolescent mental health, testing the mediating role of resilience and the moderating role of social support in these associations.

Methods: A cross-sectional survey was conducted among 300 adolescents (M = 15.6 years; 49.3% male; 50.7% female) from public and private secondary schools in Layyah, Lahore, and Swat, Pakistan. Participants completed the Rosenberg Self-Esteem Scale, Heartland Forgiveness Scale, Connor–Davidson Resilience Scale (CD-RISC-10), Multidimensional Scale of Perceived Social Support, and Strengths and Difficulties Questionnaire. Data were analyzed using Structural Equation Modeling (SEM) to test direct, mediating, and moderating effects.

Results: Self-esteem (β = .34, p < .001) and forgiveness (β = .28, p < .01) significantly predicted mental health. Resilience mediated the effects of self-esteem (β = .15, 95% CI [0.07, 0.24], p < .01) and forgiveness (β = .12, 95% CI [0.05, 0.20], p < .01) on mental health. Social support moderated both pathways, with stronger associations observed under high social support for self-esteem (β = .42 vs .21, p < .001) and forgiveness (β = .35 vs .18, p < .01).

Conclusion: The findings highlight that self-esteem and forgiveness significantly enhance adolescent mental health, particularly when reinforced by resilience and strong social support. Integrative school- and family-based interventions fostering these strengths may protect adolescents against psychological distress.

Keywords: Adolescents; forgiveness; mental health; Pakistan; resilience; self-esteem; social support.



INTRODUCTION

Adolescence represents a pivotal period of human development marked by rapid biological, cognitive, and socio-emotional transformations. These transitions often coincide with increased vulnerability to mental health concerns such as anxiety, depression, and diminished well-being (1). Given the lifelong implications of adolescent mental health, it is crucial to identify protective psychological strengths and social resources that foster resilience and emotional stability. Among the psychological strengths, self-esteem and forgiveness have emerged as salient predictors of psychological well-being, though their effects may depend on other protective mechanisms, including resilience and social support. Self-esteem, defined as an individual's global evaluation of self-worth (2), has long been associated with psychological health in adolescence. Higher self-esteem has been linked with lower depressive and anxiety symptoms, as well as greater life satisfaction (3). Evidence suggests a bidirectional relationship between self-esteem and depression where low self-esteem increases susceptibility to depressive symptoms, and depression subsequently erodes self-worth (4). Furthermore, adolescents with higher self-esteem demonstrate greater emotional regulation and resilience, indicating that self-esteem serves as both a protective and promotive factor for mental well-being (5). Forgiveness, conceptualized as the process of releasing resentment and fostering constructive responses toward transgressors (6), has gained increasing attention for its role in positive psychological adjustment. Adolescents who exhibit higher levels of forgiveness tend to report fewer depressive symptoms and enhanced subjective well-being (7,8). In collectivistic cultures such as Pakistan, forgiveness has been found to significantly predict mental health outcomes, functioning synergistically with self-esteem to explain substantial variance in psychological well-being (9). The act of forgiving may not only alleviate interpersonal stressors but also strengthen social ties, contributing indirectly to improved emotional health (10).

Beyond individual traits, environmental and interpersonal factors also shape adolescent adaptation. Resilience—the capacity to recover from adversity and adapt positively under stress—acts as a key mediator in mental health outcomes (11). Studies indicate that resilience enhances coping efficiency, reduces psychological distress, and mediates the effects of self-esteem on well-being (12). Similarly, social support, encompassing emotional and practical assistance from family, peers, or teachers, has been consistently associated with reduced mental health risks and greater life satisfaction (13,14). Adolescents with robust social networks often exhibit higher resilience, which buffers against the adverse effects of stress and negative affect. Moreover, forgiveness is positively correlated with perceived social support, suggesting that forgiving individuals may develop more supportive interpersonal relationships (15). Despite extensive literature on these constructs individually, limited empirical work has examined self-esteem, forgiveness, resilience, and social support collectively within an integrative model of adolescent mental health. Few studies have explored whether resilience and social support serve as mediators or moderators linking self-esteem and forgiveness to psychological well-being, and most prior research relies on cross-sectional designs that limit causal interpretation. Addressing this gap, the current study aims to examine a structural model wherein self-esteem and forgiveness predict adolescent mental health, while resilience and social support function as mediating and moderating variables, respectively. The objective of this study is to elucidate the complex interplay between psychological strengths and social resources in shaping adolescent mental health, thereby providing evidence for targeted interventions that enhance resilience and support systems to promote emotional well-being in this critical developmental phase.

METHODS

The present study employed a quantitative, cross-sectional survey design to examine the predictive roles of self-esteem and forgiveness on adolescent mental health, as well as to test the mediating effect of resilience and the moderating effect of social support. This design was selected for its suitability in identifying correlational patterns among psychological constructs within a naturalistic setting. Structural equation modeling (SEM) was used to test the hypothesized direct and indirect relationships, aligning with previous studies on adolescent well-being that have successfully utilized this analytical framework (11). The study population comprised adolescents aged 13 to 18 years enrolled in secondary schools. A stratified random sampling method was adopted to ensure adequate representation across gender, age groups, and school types (public and private). Participants were required to be currently enrolled students within the defined age range and able to comprehend the language of the questionnaire. Exclusion criteria included adolescents with any diagnosed psychiatric disorder, cognitive impairment, or inability to provide assent. A minimum sample size of 300 was determined based on recommendations for SEM analyses, which suggest at least 10 participants per estimated parameter to ensure model stability and power (12). Self-report measures with established psychometric validity in adolescent populations were used to assess all variables. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES), a 10-item instrument rated on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Negatively worded items were reverse-coded, and higher total scores reflected higher self-

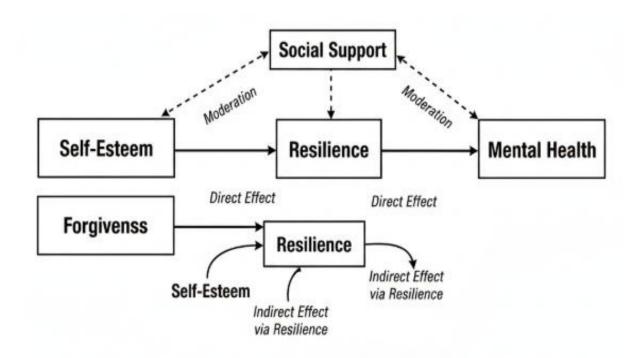


esteem. The RSES has demonstrated satisfactory internal consistency in adolescent samples (Cronbach's $\alpha = .77-.88$). Forgiveness was assessed using the Heartland Forgiveness Scale (HFS), which consists of 18 items measuring forgiveness of self, others, and situations. Items were rated on a 7-point Likert scale from 1 (almost always false of me) to 7 (almost always true of me), with higher scores indicating greater dispositional forgiveness. Internal consistency in adolescent samples has been reported between $\alpha = .82$ and .87.

Resilience was measured with the 10-item Connor–Davidson Resilience Scale (CD-RISC-10; Connor & Davidson, 2003), which evaluates adaptability and coping capacity. Responses were recorded on a 5-point Likert scale (0 = not true at all to 4 = true nearly all the time), with higher total scores signifying greater resilience. The instrument has shown robust internal reliability in adolescent populations (α = .85–.91). Perceived social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS), a 12-item scale assessing support from family, friends, and significant others. Each item was rated on a 7-point scale (1 = very strongly disagree to 7 = very strongly agree). Higher scores represented higher perceived support, and reliability coefficients in prior adolescent studies ranged between α = .85–.92. Adolescent mental health outcomes were assessed with the Strengths and Difficulties Questionnaire (SDQ), a 25-item instrument evaluating emotional symptoms, conduct problems, hyperactivity, peer relationship issues, and prosocial behavior. Items were rated on a 3-point scale (0 = not true, 1 = somewhat true, 2 = certainly true). Subscale scores were summed to yield a total difficulties score ranging from 0–40. All subscales were reverse-coded so that higher scores indicated better mental health. Previous studies have reported Cronbach's α values between .73 and .83 for adolescent populations (15).

Ethical approval for the study was obtained from the Institutional Review Board (IRB) of the respective university. Permissions were also secured from school administrations prior to data collection. Informed consent was obtained from parents or legal guardians, and written assent was obtained from all participating adolescents. The purpose of the study, confidentiality assurances, and voluntary participation rights were clearly explained to participants. The questionnaires were administered in classroom settings under researcher supervision to ensure standardization and to address queries without influencing responses. The average completion time was approximately 25–30 minutes per participant, and all responses were collected anonymously to preserve privacy and reduce response bias. Data were analyzed using SPSS (version 26) and AMOS software. Descriptive statistics, Pearson correlations, and internal reliability coefficients (Cronbach's α) were computed to evaluate data quality and reliability. Preliminary analyses addressed missing data, normality, and outlier detection. Confirmatory factor analysis (CFA) was conducted in AMOS to validate the measurement model and assess the construct validity of the instruments. Structural equation modeling (SEM) was subsequently employed to evaluate the hypothesized pathways. The direct effects of self-esteem and forgiveness on adolescent mental health (H1–H2), the mediating effects of resilience (H3–H4), and the moderating effects of social support (H5–H6) were tested. Model fit was assessed using multiple indices, including the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Chi-square/degrees of freedom ratio (χ^2 /df), following recommended cut-off criteria.





Conceptual Framework of the Study

RESULTS

The study included 300 adolescent participants aged between 13 and 18 years (M = 15.6, SD = 1.42). The sample consisted of 148 males (49.3%) and 152 females (50.7%). A majority of participants were enrolled in public schools (62.0%), while 38.0% attended private institutions. Most adolescents resided in urban areas (68.3%), with 31.7% from rural regions. Regarding parental education, 55.3% reported parents with high school or lower qualifications, whereas 44.7% had at least one parent with a university degree. Descriptive statistics indicated that the mean score for self-esteem was 28.4 (SD = 5.6), with good internal reliability (α = .85). Forgiveness had a mean of 90.2 (SD = 11.3) and high reliability (α = .88). Resilience showed a mean score of 27.8 (SD = 6.2) and strong internal consistency (α = .87). Perceived social support had a mean of 60.5 (SD = 9.8), demonstrating excellent reliability (α = .91). The mean score for adolescent mental health was 22.6 (SD = 5.1), with acceptable reliability (α = .82). Overall, all measures displayed satisfactory psychometric properties suitable for further inferential analysis. Correlation analyses revealed significant positive relationships among all variables. Self-esteem was positively correlated with forgiveness (r = .46, p < .01), resilience (r = .52, p < .01), social support (r = .49, p < .01), and mental health (r = .55, p < .01). Forgiveness was positively associated with resilience (r = .44, p < .01), social support (r = .51, p < .01), and mental health (r = .59, p < .01). Similarly, social support was positively correlated with mental health (r = .54, p < .01). These findings indicate that higher levels of self-esteem, forgiveness, resilience, and social support are associated with better mental health outcomes in adolescents.

Path analysis further demonstrated that self-esteem (β = .34, SE = .06, p < .001) and forgiveness (β = .28, SE = .07, p < .01) were both significant positive predictors of adolescent mental health. These results confirmed that adolescents with higher levels of self-esteem and forgiveness reported better psychological well-being, thereby supporting the first two hypotheses. The mediation analysis using bootstrapped confidence intervals revealed that resilience significantly mediated the relationship between self-esteem and mental health (β = .15, 95% CI [0.07, 0.24], p < .01). Likewise, resilience mediated the relationship between forgiveness and mental health (β = .12, 95% CI [0.05, 0.20], p < .01). These findings suggest that resilience serves as a key psychological mechanism through which self-esteem and forgiveness enhance adolescent mental health, supporting the third and fourth hypotheses. Moderation analysis demonstrated that



the effect of self-esteem on mental health was stronger among adolescents with high levels of social support (β = .42) compared to those with low levels of support (β = .21, p < .001). Similarly, the relationship between forgiveness and mental health was more pronounced under conditions of high social support (β = .35) than low social support (β = .18, p < .01). These results supported the fifth and sixth hypotheses, indicating that social support amplified the beneficial impact of self-esteem and forgiveness on psychological well-being.

Table 1: Demographic Information of the Participants (N=300)

Category	n	%	
Male		49.3	
Female	152	50.7	
13–14 years	84	28.0	
15–16 years	118	39.3	
17–18 years	98	32.7	
Public	186	62.0	
Private	114	38.0	
Urban	205	68.3	
Rural	95	31.7	
High school or below	166	55.3	
University and above	134	44.7	
	Male Female 13–14 years 15–16 years 17–18 years Public Private Urban Rural High school or below	Male 148 Female 152 13-14 years 84 15-16 years 118 17-18 years 98 Public 186 Private 114 Urban 205 Rural 95 High school or below 166	Male 148 49.3 Female 152 50.7 13-14 years 84 28.0 15-16 years 118 39.3 17-18 years 98 32.7 Public 186 62.0 Private 114 38.0 Urban 205 68.3 Rural 95 31.7 High school or below 166 55.3

Table 2: Mean, Standard Deviation and Reliability

Variable	M	SD	α	
Self-Esteem	28.4	5.6	0.85	
Forgiveness	90.2	11.3	0.88	
Resilience	27.8	6.2	0.87	
Social Support	60.5	9.8	0.91	
Mental Health	22.6	5.1	0.82	

Table 3: Correlation Analysis Among Variables

Variables	1	2	3	4	5
Self-Esteem	-	0.46	0.52	0.49	0.55
Forgiveness		-	0.44	0.51	0.48
Resilience			-	0.57	0.59
Social Support				-	0.54
Mental Health					-



Table 4: Path Analysis (Direct Effect)

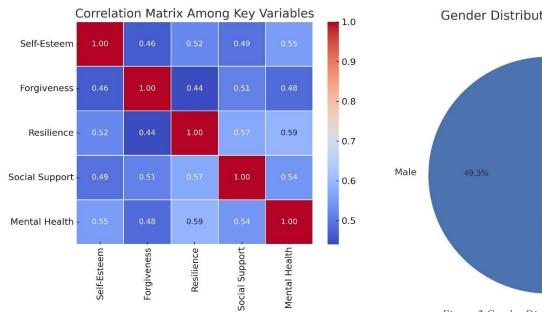
Path	β	SE	p
Self-Esteem — Mental Health	0.34	0.06	<.001
Forgiveness — Mental Health	0.28	0.07	< .01

Table 5: Mediation Analysis

Indirect Path		β	95% CI	p
Self-Esteem *Resilience	→ Mental Health	0.15	0.07, 0.24	<.01
Forgiveness *Resilience	——▶ Mental Health	0.12	0.05, 0.20	< .01

Table 6: Moderation Analysis

Path Tested		β (High Support)	β (Low Support)	p
Self-Esteem	Mental Health	0.42	0.21	< .001
Forgiveness	→ Mental Health	0.35	0.18	< .01





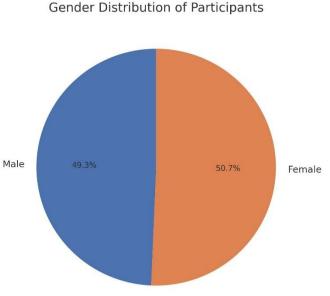


Figure 2 Gender Distribution of participants

DISCUSSION

The findings of the present study provided compelling evidence that self-esteem and forgiveness play significant and positive roles in predicting adolescent mental health, with resilience acting as a mediator and social support functioning as a moderator. This integrative model contributes to a growing body of research emphasizing the dynamic interplay between personal psychological strengths and contextual resources in fostering psychological well-being during adolescence. The results offered a comprehensive understanding of how intrapersonal characteristics and environmental supports collectively protect against emotional and behavioral difficulties, confirming the robustness of the proposed framework. Consistent with previous literature, higher levels of self-esteem were associated



with better mental health outcomes, including reduced emotional distress and behavioral problems. Adolescents with elevated self-worth were more capable of managing internal conflicts and navigating social environments effectively, reinforcing evidence that self-esteem serves as a core protective factor in psychological development (12,13). Similarly, forgiveness demonstrated a positive association with mental health, supporting existing research that identified forgiveness as a coping strategy that alleviates psychological distress and promotes interpersonal harmony (14,15). Forgiveness appeared to mitigate negative emotional states such as resentment or hostility, leading to a reduction in depressive symptoms and enhancing overall subjective well-being. Together, these findings reaffirmed the hypothesis that both self-evaluative and prosocial strengths serve as critical components of adolescent adjustment. The mediation analysis provided further depth by revealing that resilience explained the indirect pathways linking both self-esteem and forgiveness to adolescent mental health. Adolescents who reported higher self-esteem and greater capacity to forgive also demonstrated increased resilience, which in turn enhanced their overall psychological well-being. This result supports the conceptualization of resilience as a process of adaptive functioning, reflecting one's ability to recover from adversity and maintain positive emotional regulation (16-18). The mediating role of resilience also suggested that personal strengths operate through internal coping mechanisms rather than in isolation. These results expand upon prior evidence that resilience transforms individual capacities, such as self-esteem and forgiveness, into tangible psychological benefits and stable emotional functioning across challenging circumstances.

Moreover, the moderating analysis confirmed that social support strengthened the positive effects of both self-esteem and forgiveness on mental health. Adolescents who perceived higher levels of social support from family, friends, and significant others exhibited a stronger link between these psychological resources and their well-being. This interaction underscores the buffering role of social support in protecting adolescents against stress, reinforcing the notion that positive social environments enhance the expression of individual strengths (19,20). The observed moderation effect highlights the interdependence between personal and environmental factors, suggesting that adolescents thrive not only through internal strengths but also through the quality of their relational networks. These findings collectively advocate for an integrative model in which psychological and social resources interact synergistically to promote mental resilience and adaptive functioning. Theoretically, this research supports a resilience-based model of adolescent mental health in which internal psychological strengths and external social resources operate in tandem. The outcomes emphasize that mental health interventions targeting adolescents should adopt a dual focus: nurturing self-esteem and forgiveness while simultaneously fostering supportive social environments (21). Practically, these results have meaningful implications for educational and community settings. Implementing school-based programs that enhance self-esteem, emotional regulation, and forgiveness could reinforce coping capacity and resilience among adolescents. Furthermore, programs aimed at strengthening social bonds within families, peer groups, and educational institutions may enhance the protective influence of these personal attributes, thereby forming a comprehensive support system against psychological distress.

Despite its contributions, the study carried several limitations. The cross-sectional design restricted causal inference, as temporal sequencing among variables could not be firmly established. Longitudinal research would allow examination of how these psychological processes evolve over time and confirm directional causality. Additionally, the reliance on self-report measures introduced potential biases, including social desirability and common method variance. Future studies should integrate multiple informants—such as parents, teachers, or peers—and objective behavioral assessments to triangulate findings. Cultural factors also warrant consideration, as constructs like forgiveness and social support may hold differing meanings and significance across cultural contexts. Replicating the study in diverse populations would therefore enhance the generalizability of the findings (22). Nonetheless, the current study possessed methodological strengths, including the use of well-validated psychometric instruments and a sufficiently powered sample to support complex modeling. The application of structural equation modeling allowed simultaneous examination of multiple interrelated variables, providing a nuanced understanding of the mechanisms underlying adolescent mental health. In summary, the study offered evidence that self-esteem and forgiveness positively predict adolescent mental health both directly and indirectly through resilience, while social support amplifies these effects. These insights underscore the importance of integrating psychological and environmental dimensions in prevention and intervention strategies aimed at enhancing adolescent well-being.

CONCLUSION

In conclusion, the study demonstrated that self-esteem and forgiveness are vital psychological strengths that significantly contribute to the enhancement of adolescent mental health, with resilience serving as an internal mechanism that fosters positive adaptation, and social support amplifying these beneficial effects within a nurturing environment. The findings emphasize that adolescents are more likely to experience emotional stability and psychological well-being when personal attributes such as self-worth and forgiveness are



cultivated alongside strong social connections. These results highlight the importance of designing school- and community-based programs that not only build individual resilience and self-esteem but also strengthen family and peer support systems, thereby creating an integrated framework for promoting adolescent mental health and long-term emotional growth.

AUTHOR CONTRIBUTION

Author	Contribution
	Substantial Contribution to study design, analysis, acquisition of Data
Fazle Khaliq	Manuscript Writing
	Has given Final Approval of the version to be published
	Substantial Contribution to study design, acquisition and interpretation of Data
Rafi Ul Shan*	Critical Review and Manuscript Writing
	Has given Final Approval of the version to be published
Noor Ul Ain Substantial Contribution to acquisition and interpretation of Data	
Soomra*	Has given Final Approval of the version to be published
Zunaira Amin	Contributed to Data Collection and Analysis
Lunana Anni	Has given Final Approval of the version to be published

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