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Friendship Quality Matters: Understanding its Impact on Mental Health of Adolescents with Mindfulness as a Mediator

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Abstract:

Positive friendships offer adolescents a platform to vocalize their emotions, fostering the acquisition of emotional regulation skills. Through these relationships, adolescents can freely articulate their feelings, receive affirmation, and acquire constructive coping mechanisms, ultimately enhancing their mental health. The aim of this research is to investigate the impact of friendship quality on the mental health of adolescents, with mindfulness as a mediating factor. In total, 600 adolescents were recruited from five districts of Punjab, Pakistan (Lahore, Rawalpindi, Faisalabad, Multan, and Bahawalpur) through multi-stage random sampling. Three research instruments were used in data collection: the Friendship Quality Questionnaire, the Cognitive and Affective Mindfulness Scale, and the Mental Health Inventory. The collected data were analyzed using SPSS (27.0) and Smart PLS (4.0.9.6). The results of correlation analysis revealed that friendship quality (including subscales such as safety, closeness, acceptance, and help) was significantly positively correlated with mindfulness, mental health, and psychological well-being. Conversely, friendship quality was negatively significantly associated with psychological distress. Furthermore, mindfulness was positively significantly linked with mental health and psychological well-being, and negatively significantly associated with psychological distress. The results of structural equation modeling showed that mindfulness played a

significant mediating role between friendship quality and mental health, friendship quality and psychological distress, and friendship quality and psychological well-being. Additionally, friendship quality was a significant direct and indirect predictor of mental health, psychological distress, and psychological well-being. This research will be beneficial for psychologists, psychiatrists, counselors, parents, and government agencies in policymaking. Similarly, teachers will benefit from this research as they will understand the importance of friendship quality and its role in adolescent mental health, ultimately improving academic outcomes.

Keywords: *Friendship quality, Mindfulness, Mental health, psychological wellbeing, psychological distress.*

Introduction:

Adolescence, spanning from 10 to 19 years of age, is a pivotal stage in life marked by heightened vulnerability to experiencing diminished well-being. This concept encompasses an individual's sense of happiness, positive emotions, life satisfaction, and overall functioning, particularly in social aspects (Alsarrani et al., 2022; Diener, 2009; Gallagher et al., 2009). Recent studies have revealed a notable global decline in the well-being of adolescents over the past decade (Marquez & Long, 2021; Twenge et al., 2018). Consequently, there is an increasing recognition of the importance of enhancing adolescents' well-being as both an individual and societal objective (Every Woman Every Child, 2015).

Furthermore, since lower levels of well-being during adolescence can persist into adulthood and result in adverse outcomes across the lifespan (Bor et al., 2014), it is crucial to focus on early prevention and intervention by identifying and investing in factors that protect and enhance well-being during adolescence. Close friendships, particularly adolescents' perceived quality of these peer relationships (such as levels of warmth and conflict; Furman & Buhrmester, 2009), have been recognized as key contextual resources that contribute to adolescents' well-being (Luijten et al., 2021; Luijten et al., 2022). Indeed, adolescents with higher-quality close friendships have reported higher levels of well-being both concurrently and longitudinally (Demir & Özdemir, 2010; Saric & Sakic, 2014). However, the mechanism underlying the link between high-quality close friendships and improved well-being over time among adolescent boys and girls remains unclear.

Friendship has long been a topic of interest among theorists and philosophers, who have explored its multifaceted nature. In the twentieth century, psychologists began to recognize its significance (Warris & Rafique, 2009). According to Berndt (1996), it's crucial not to conflate friendship quality with other aspects of friendship, such as conflict, intimacy, and companionship. He proposed that friendship quality should be treated as a comprehensive measure, describing the overall richness or poverty of the friendship in terms of how closely it aligns with ideal friendship characteristics.

Friendship quality serves as a fundamental aspect in evaluating and understanding individuals' interpersonal and peer relationships, encompassing the support and companionship exchanged during peer interactions (Liu et al., 2022). It involves a reciprocal process between individuals, reflecting the emotional bond characterized by trust. The level of friendship quality significantly influences adolescents' psychosocial adjustment and overall psychological well-being (Karataş et al., 2021). Given adolescents' inclination to socialize with peers, friendship relationships emerge as their primary interpersonal connections and a crucial protective factor for their mental health and social development (Son et al., 2020).

Maintaining friendship quality is linked to various psychosocial benefits, which in turn reduce the incidence of symptoms associated with psychopathology (Bagwell et al., 2005), such as loneliness and social isolation (Parker & Asher, 1993). Individuals with high-quality friendships tend to be more satisfied and well-adjusted in social settings (Updegraff & Obeidallah, 1999) and often have elevated self-esteem (Keefe & Berndt, 1996). Such friendships are globally associated with positive outcomes and life satisfaction (Demir & Weitekamp, 2007), as well as greater commitment to obligations (Thien & Razak, 2013). Moreover, individuals with high-quality friendships demonstrate effective coping mechanisms for life stressors (Hartup & Stevens, 1999) and are content with life's necessities (Demir & Ozdemir, 2010). Additionally, Pratscher et al. (2018) observed that interpersonal mindfulness was linked to better reports of friendship quality among emerging adults.

Mindfulness originates from Buddhist teachings and practices, often described as "attention to the present moment" (Kabat-Zinn, 2009). Research in literature has revealed a positive association between mindfulness and resilience among university students (Pidgeon & Keye,

2014; Zahra & Riaz, 2018). Additionally, studies have identified resilience as a predictor of mindfulness in university students (Merdiaty & Aldrin, 2020; Zahra & Riaz, 2017). Furthermore, mindfulness has been linked to forgiveness, with university students exhibiting higher levels of forgiveness also demonstrating greater mindfulness (Karremans et al., 2020; Webb et al., 2013; Webb & Toussaint, 2019). Mindfulness requires heightened attention and has been shown to impact mental, psychological, physiological, and professional well-being (McConville et al., 2017).

Meanwhile, numerous past empirical studies have consistently reported a positive association between mindfulness and both mental well-being and psychological well-being (Arslan & Asici, 2021; Hong et al., 2021; Hong et al., 2023). Mindfulness is recognized as an important protective factor against the adverse effects of psychological distress (Brooks et al., 2017). Cross-sectional research has indicated a negative correlation between mindfulness and depression (Sherwood et al., 2020; Wenger et al., 2021), which was further supported by previous studies with student samples (Medvedev et al., 2018). Additionally, research has highlighted the significant mediating role of mindfulness in various relationships, including between friendship quality and subjective vitality, resilience, and stress (Zahra & Riaz, 2017), as well as between forgiveness and mental health (Adeeb et al., 2022).

Merdiaty and Aldrin (2020) discovered that mindfulness acts as a mediator between resilience and burnout. Given that healthy friendships offer emotional and cognitive benefits such as cognitive flexibility, mood regulation, and clarity of feelings (Feldman et al., 2007; Keng et al., 2011), it is plausible that individuals may naturally develop varying levels of mindfulness even without formal training. Friendship quality significantly impacts the mental health of adolescents, as positive friendships serve as sources of positive mental health. Therefore, the objective of this research is to explore the relationship between friendship quality and adolescent mental health, with mindfulness as a potential mediator. Building upon the literature cited above, the following hypotheses have been formulated;

H1: There would be a positive relationship between friendship quality and mental health of adolescents.

H1a: There would be a negative association between friendship quality and psychological distress of adolescents.

H1b: There would be a positive relationship between friendship quality and psychological well-being of adolescents.

H2: Mindfulness would be a mediator between friendship quality and mental health (psychological distress & wellbeing) of adolescents.

Methods:

Research design:

This study utilized a quantitative approach, employing a cross-sectional and correlational research design.

Sample:

A total of 600 adolescents from five districts of Punjab, Pakistan (Lahore, Rawalpindi, Faisalabad, Multan, and Bahawalpur) participated in the study. The average age of respondents was 14.46 years (SD = 1.28). Both male and female adolescents took part in the research, providing information about their age, gender, city of residence, level of education, family structure, parents' occupations, and number of close friends. The sample size was determined using an online calculator and justified through a-priori statistical multiple regression test (Soper, 2023), ensuring a power and precision of 0.9 at a 95% confidence interval, accounting for a 20% attrition rate. Data were collected from adolescents aged 13 to 19 years residing in newly developed colonies over the past five years. Any respondent displaying psychological or medical symptoms was excluded from the study.

Sampling Technique:

The data were collected using a multi-stage random sampling method from five major cities in Punjab, Pakistan. Following final approval from the Board of Study in the Department of

Psychology at Riphah International University, Faisalabad, a total of 600 respondents (N=600) were included in the study. In the first stage, one province (Punjab) was randomly chosen from the five provinces of Pakistan. In the second stage, five districts (Lahore, Rawalpindi, Faisalabad, Multan, and Bahawalpur) were selected from Punjab. In the third stage, a total of 25 colonies (5 colonies per district) were randomly chosen. In the fourth stage, one private school (25 schools in total) was randomly selected from each colony. Finally, in the last stage, data were collected from three classes (8th, 9th, and 10th grades) using simple random sampling. The randomization process was conducted online using the website www.random.org, after obtaining lists of enrolled students in the selected classes.

Instruments:

Demographic Sheet. Demographic sheet (Table 1) was obtained from participant which included their age, gender, city, education, family type, Parent’s profession and number of best friends.

Table 1

Frequency Distribution of Demographic Sheet (N=600)

Respondent’s Characteristics		f (%)
Gender	Male	300 (50.0)
	Female	300 (50.0)
City	Faisalabad	120 (20.0)
	Lahore	120 (20.0)
	Rawalpindi	120 (20.0)
	Multan	120 (20.0)
	Bahawalpur	120 (20.0)
Education	8 th Class	258 (43.0)
	9 th Class	130 (21.7)
	10 th Class	212 (35.3)
Family Type	Nuclear	499 (83.2)
	Joint	101 (16.8)
Father’s Profession	Employed	156 (26.0)
	Businessman	224 (37.3)
	Agriculturalist	220 (36.7)

	One	346 (57.7)
No of Best Friends	Two	207 (34.5)
	Three	35 (5.8)
	Four	12 (2.0)

Friendship Quality Questionnaire. The Friendship Quality questionnaire (Thien et al., 2012) consists of 21 items divided into four subscales: closeness (six items), help (three items), acceptance (four items), and safety (eight items). Each item is rated on a six-point scale, ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). This scale demonstrates high reliability, with a Cronbach's Alpha of .81 for internal consistency. The Cronbach's Alpha values for the subscales are as follows: Safety ($\alpha = .88$), Closeness ($\alpha = .83$), Acceptance ($\alpha = .84$), and Help ($\alpha = .81$). Total scores on the scale range from 21 to 126, with higher scores indicating greater friendship quality.

Cognitive and Affective Mindfulness Scale. The Cognitive and Affective Mindfulness Scale-revised (Feldman et al., 2007) consists of 10 items, such as "I can usually describe how I feel at the moment in considerable detail," each rated on a four-point scale from 1 (Rarely/Not at all) to 4 (Almost always). The total score is calculated by summing all item responses, with higher scores indicating greater mindfulness. The internal consistency of this scale was found to be within an acceptable range ($\alpha = .76$) (Catak, 2012). In the present study, the scale also demonstrated excellent internal consistency, with a Cronbach's Alpha of .87.

Mental Health Inventory (MHI). The Mental Health Inventory (MHI) consists of 38 items used to assess mental well-being, comprising two subscales: psychological distress with 22 items, and mental well-being with 16 items. Respondents rate each item on a scale from 1 (all of the time) to 6 (none of the time). Scores for the psychological distress subscale range from 22 to 132, while scores for the mental well-being subscale range from 16 to 96. The psychological distress subscale is negatively oriented, so reverse scoring is necessary to measure overall mental well-being (as a positive). The internal consistency (reliability) of both subscales and the overall MHI score was found to be satisfactory, ranging from alpha 0.92 to 0.96 (Veit & Ware, 1983).

Similarly, in the present study, the reliability of the MHI was satisfactory, with a Cronbach's Alpha of .96.

Data Analyses:

The gathered data underwent analysis using SPSS (version 27.0). Frequency distributions were computed for all demographic variables. The reliability of all scales was assessed through Cronbach's alpha analysis, and descriptive statistics were generated for both scales and subscales. Bivariate correlation analysis was employed to examine the relationships among all variables. Additionally, Structural Equation Modeling via Smart PLS was utilized to explore mediation effects.

Ethical Considerations:

The present study adhered to all ethical guidelines for survey research. Written informed consent was obtained from all participants, who were briefed on the research's purpose and assured of the confidentiality of their information and the privacy of their identity. Additionally, necessary ethical considerations, such as obtaining prior permission from the original authors to use the questionnaire, were addressed. Formal approval was obtained from the ethical review committee.

Results:

Prior to hypothesis testing, reliability analysis and descriptive statistics were conducted to assess the reliability and normality of the data. Table 2 presents the results, indicating that all scales used in the study (Friendship Quality Scale and its subscales; Safety, Closeness, Acceptance, Help, Cognitive and Affective Mindfulness Scale, and Mental Health Inventory and its subscales; Psychological Distress & Well-Being) demonstrated acceptable levels of Cronbach's alpha (ranging 0.72 to 0.86) for reliability analysis. Furthermore, the values of skewness and kurtosis for all variables fell within acceptable ranges.

Correlation Analysis:

Following the satisfactory results of reliability and descriptive statistics, bivariate correlation analysis was conducted to examine the relationships between variables for hypotheses testing (H1, H1a & H1b) as presented in Table 2. The analysis revealed that friendship quality

(including its subscales: safety, closeness, acceptance, and help) exhibited a significant positive correlation ($p < .01$) with mindfulness, mental health, and psychological well-being. Conversely, friendship quality was found to be significantly negatively correlated ($p < .01$) with psychological distress. Additionally, mindfulness demonstrated a significant positive correlation ($p < .01$) with psychological well-being and a significant negative correlation ($p < .01$) with psychological distress.

Structural Equation Modeling:

This study aims to investigate the mediating role of mindfulness between friendship quality and the mental health of adolescents. Partial Least Squares Structural Equation Modeling (PLS-SEM) was utilized as an analytical tool, known for its effectiveness in elucidating complex relationships among variables. In PLS-SEM, a bootstrap procedure was employed to assess the significance of coefficients and examine relationships among study variables. This procedure involves drawing random samples (with replacement) from the data and estimating the path model multiple times with slight data variations (Hair et al., 2017). In this study, a bootstrap procedure was conducted using 5,000 bootstrap samples, as recommended (Hair et al., 2017). Two different models (Figure 1 and 2) were analyzed to assess the mediating effects of mindfulness between friendship quality and mental health, as well as the mediation role of mindfulness in the relationship of friendship quality with psychological distress and well-being..

Table 2

Correlation and Descriptive Analysis (N=600)

Variables	1	2	3	4	5	6	7	8	9
1.Friendship Quality	-	.78**	.83**	.78**	.70**	.33**	.22**	-.23**	.21**
2.Safety		-	.55**	.52**	.41**	.24**	.12**	-.15**	.11*
3.Closeness			-	.49*	.46**	.23**	.17**	-.14**	.23**
4.Acceptance				-	.59**	.29**	.16**	-.18**	.14*
5.Help					-	.33**	.21**	-.25**	.12*
6.Mindfulness						-	.26**	-.27**	.16**
7.Mental Health							-	-.81**	.79**
8.Psychological Distress									-.54**
9.Psychological Well-being									-
Mean	72.41	27.15	18.50	13.66	10.10	31.44	122.20	72.32	47.32
Standard Deviation	17.96	7.35	6.12	4.68	3.76	5.28	33.83	21.96	16.82

Cronbach's Alpha	.86	.75	.82	.73	.72	.83	.79	.85	.82
Skewness	.05	-.01	.35	-.16	-.08	-1.24	-.22	-.20	.07
Kurtosis	.62	-.20	.22	-.65	-.68	1.58	-.64	-.93	.01

**p < .01; *p < .05

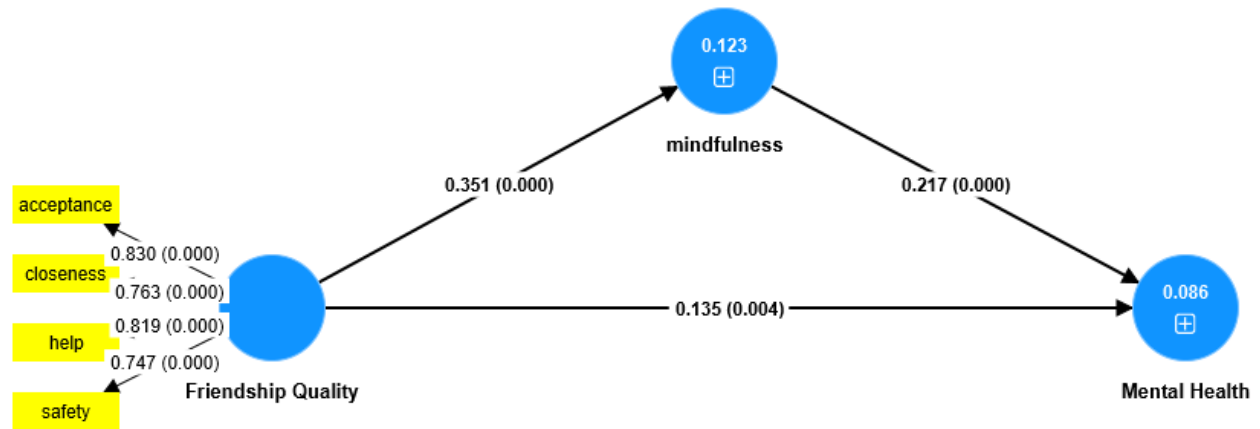


Figure 1: Mindfulness as mediator between friendship quality and mental health

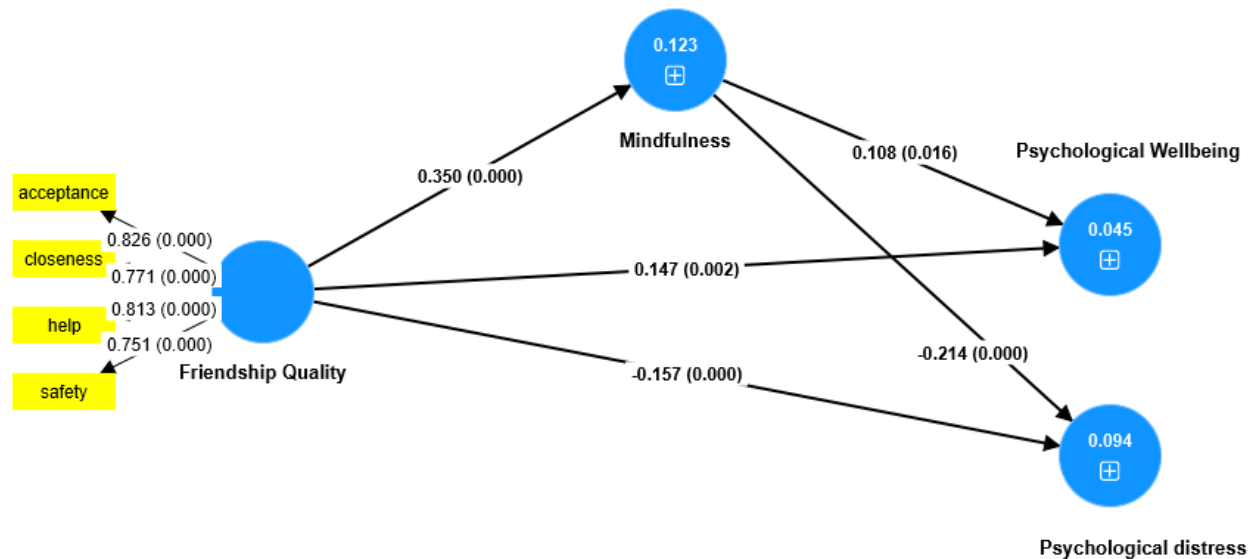


Figure 2: Mindfulness as mediator for friendship quality with psychological distress and wellbeing

The results are presented in Table3 for standardized estimates of friendship quality on mindfulness, mental health, psychological distress and wellbeing. The results reported that friendship quality confirmed as a significant positive direct predictor of mindfulness (*Coefficient* = 0.350; *p* < 0.001), mental health (*Coefficient* = 0.135; *p* < 0.01) and psychological wellbeing (*Coefficient* = 0.147; *p* < 0.01). While friendship quality confirmed as a significant negative direct predictor of psychological distress (*Coefficient* = -0.157; *p* < 0.001). Similarly, mindfulness also confirmed as a significant positive direct predictor of mental health (*Coefficient* = 0.217; *p* < 0.001) and psychological wellbeing (*Coefficient* = 0.108; *p* < 0.05). Although mindfulness found as a significant negative direct predictor of psychological distress (*Coefficient* = -0.214; *p* < 0.001).

The results of indirect effects have confirmed in Table 4 that mindfulness established a significant mediator between friendship quality and mental health, friendship quality and psychological distress, and friendship quality and psychological wellbeing. Whereas, friendship quality found significant indirect predictor of mental health through mindfulness (*Coefficient* = 0.076; *p* < 0.001). Similarly, friendship quality also confirmed significant indirect predictor of psychological distress through mindfulness (*Coefficient* = -0.075; *p* < 0.001). Likewise, friendship quality found significant indirect predictor of psychological wellbeing through mindfulness (*Coefficient* = 0.038; *p* < 0.05).

Table 3

Direct effects of Friendship Quality and Mindfulness on Mental Health

Variables	Coefficient	T	P
Friendship Quality -> Mindfulness	0.351	7.799	0.000
Friendship Quality -> Mental Health	0.135	2.863	0.004
Friendship Quality -> Psychological Distress	-0.157	3.506	0.000
Friendship Quality -> Psychological Wellbeing	0.147	3.174	0.002
Mindfulness -> Mental Health	0.217	5.359	0.000
Mindfulness -> Psychological Distress	-0.214	5.698	0.000
Mindfulness -> Psychological Wellbeing	0.108	2.40	0.016

Table 4

Indirect effects of Friendship Quality through Mindfulness (Mediator) on Mental Health

Variables	Coefficient	T	P
Friendship Quality -> Mindfulness -> Mental Health	0.076	3.915	0.000
Friendship Quality -> Mindfulness -> Psychological Distress	-0.075	4.333	0.000
Friendship Quality -> Mindfulness -> Psychological Wellbeing	0.038	2.097	0.036

Discussion:

The primary aim of this study was to assess the mediating role of mindfulness between friendship quality and mental health among adolescents. The findings revealed a significant correlation between friendship quality and the mental health of adolescents. Friendship has long been recognized as a crucial support system in various societal contexts. King and Terrance (2008) highlighted a significant positive association between mental health symptoms and friendship quality, suggesting that individuals lacking healthy friendships may experience mental vulnerability. Conversely, existing literature offers insights indicating that good friendship quality is linked to positive outcomes among adolescents, including better psychosocial adjustment, resilience to stress, and overall mental well-being (Graber et al., 2016; Mette et al., 2020; Wilkinson, 2010). Close friendships are often characterized by diverse interpersonal experiences, and individuals with higher-quality friendships tend to report greater happiness and a heightened sense of uniqueness and individuality (Demir et al., 2013). Previous scientific research has indicated that high-quality friendships signify intimate relationships, bolster self-esteem, foster honesty and loyalty, and promote a sense of closeness among individuals (Narr et al., 2017). The findings of this study align with the aforementioned research, thereby supporting H1.

The findings of this research revealed a significant negative relationship between friendship quality and psychological distress among adolescents, confirming H1a. These results are consistent with previous studies, such as Bagwell et al. (2005), which have highlighted the widespread impact of friendship quality on psychological behaviors. Additionally, the findings align with previous research indicating that psychological issues are strongly influenced by the

quality of friendships among young individuals. For example, Pittman and Richmond (2007) examined student relationships and found that behaviors such as anxiety, depression, and withdrawal symptoms were more prevalent in students with lower-quality friendships.

Furthermore, Rodriguez et al. (2003) found that a higher level of friendship quality is associated with a lower level of perceived distress. These findings also underscored the influence of high-quality friendships on the psychological adjustment and well-being of students. In another study conducted by Jackson et al. (2000), it was suggested that many adolescents who experience disappointing relationships with society may tend to isolate themselves if they feel unsupported by their close networks and friends. Thus, it can be inferred that individuals experience less loneliness when they are satisfied with the quality of their relationships with friends and society. When such relationships are characterized by closeness, intimacy, and perceived supportiveness, individuals are more likely to experience heightened satisfaction with their relationships (Jackson et al., 2000).

The results of this research indicated a significant positive correlation between friendship quality and the psychological well-being of adolescents (H1b). Previous literature consistently suggests that higher levels of friendship quality are associated with improved psychological well-being (Tipton et al., 2013). Additionally, Rodriguez et al. (2003) suggested in their study that adolescents who engage in risky behaviors may experience poorer academic outcomes and social adjustment. Furthermore, it has been observed that individuals with close friends tend to possess enhanced social skills, heightened self-esteem, a sense of pride, and perceived social competence (Pittman & Richmond, 2008).

Bagwell et al. (2005) also highlighted in their research that individuals with higher levels of self-esteem often attribute it to the positive quality of their friendships. Moreover, social relationships are believed to mitigate the impact of stressors in life and contribute to overall well-being and support from friendships. These factors serve as direct protective factors for well-being and contribute to positive emotions associated with friendship quality (Rodriguez et al., 2003). Past research has emphasized that the quality of friendships is paramount for adolescents' development, suggesting that the quality of friendships is more important than the quantity of friends they have (Tipton et al., 2013). The quality of friendship is closely linked with intimacy

levels, minimal competition and conflicts, and a high degree of social positivity among individuals (Berndt, 2002). The findings of this research align with the aforementioned literature, supporting the acceptance of H1b.

The findings of this research regarding H2 indicated that mindfulness significantly mediated the relationship between friendship quality and mental health (psychological distress & well-being). Additionally, friendship quality was found to be a significant direct and indirect predictor of mental health. These results are consistent with previous research; for instance, Akin et al. (2016) demonstrated that friendship quality significantly and positively predicted mindfulness in individuals. There is a growing interest in understanding how mindfulness enhances functioning in interpersonal environments. Mindfulness not only benefits individuals' social relationships but also enhances their social interactions (Karremans et al., 2017; Kok & Singer, 2017). Mindfulness training is considered one of the most effective approaches to improving mental health. Numerous studies have highlighted the positive impact of mindfulness on social, psychological, and cognitive behaviors, including increased flexibility, mood regulation, and emotional clarity (Feldman et al., 2007). Furthermore, mindfulness is associated with greater life satisfaction, optimism, hope, and positive affect, along with heightened self-esteem among individuals. It also helps reduce negative feelings, behavioral irregularities, and emotional reactivity (Brown & Ryan, 2003; Keng et al., 2011).

It is evident that friendship quality is strongly associated with positive outcomes on a global scale, including enhanced positive affect and life satisfaction among individuals (Demir et al., 2007; Thien & Razak, 2013). Friendship quality also contributes to individuals' abilities to engage with others and cope with stressors (Hartup & Stevens, 1999), fostering adaptive behaviors in life (Demir & Ozdemir, 2010; Demir et al., 2007). These outcomes underscore the role of friendship quality in the constructs of positive psychology, which encompass psychological well-being and personal capacities and strengths of individuals. Gable and Haidt (2005) further proposed that in addition to addressing psychopathologies, psychological research should focus on exploring healthy emotions and cognitions. The findings of this research support mindfulness as a mediator between friendship quality and mental health among adolescents, aligning with previous studies. Therefore, H2 of this research is accepted.

Recommendations and Strengths

Future studies may benefit from examining friendship quality and mindfulness among adolescents, or comparing these variables between school (adolescents), college, and university students. Friendship quality has been identified as a robust predictor of mental health, while mindfulness has been revealed as a mediator between friendship quality and mental health among adolescents. For researchers embarking on future investigations, it is advisable to explore friendship quality and mindfulness either individually or in combination as predictive factors alongside other decision-making phenomena. Additionally, mindfulness interventions could be implemented to enhance mental health outcomes. Qualitative approaches should also be considered to delve deeper into psychological issues. This research holds significant implications for various stakeholders, including psychologists, psychiatrists, counselors, teachers, parents, and government agencies involved in policymaking. Psychologists and psychiatrists can utilize the findings to aid in the developmental phase of adolescents and understand the roles of friendship quality and mindfulness in adolescent mental health. Teachers will also benefit from understanding the importance of friendship quality in adolescent mental health, as improved mental health is linked to better academic outcomes.

Conclusion:

In conclusion, the quality of friendships among adolescents positively contributes to their mental health, specifically enhancing psychological well-being while also reducing psychological distress. Furthermore, mediation analysis revealed that mindfulness serves as a mediator in the relationship between friendship quality and mental health, encompassing both psychological distress and well-being.

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