

A Study on the Mechanism of the Effect of Interpersonal Relationship Quality on Psychological Exhaustion Among College Students

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Abstract

This study employed questionnaire surveys and in-depth interviews to systematically explore the association between three types of interpersonal relationships—family, friendship, and romantic relationships—and psychological internal conflict among university students. Descriptive analysis revealed that university students overall exhibit a high degree of psychological internal conflict, with balanced scores across the dimensions of low self-confidence, high sensitivity, and strong indecision; Further research found that family intimacy and adaptability are significantly negatively correlated with psychological exhaustion through direct resolution of family conflicts, indirect development of social skills, and provision of emotional buffers. Friendship quality is also significantly negatively correlated with psychological exhaustion through the establishment of psychological safety boundaries, optimisation of interaction patterns, and enhancement of cognitive regulation functions. Among romantic attachment styles, secure attachment types (low avoidance + low anxiety) exhibit the lowest levels of psychological exhaustion. The avoidance dimension influences communication and conflict resolution strategies, the anxiety dimension exacerbates suspicion cycles through trust mechanisms, and college students with limited romantic experience are more prone to falling into negative emotional friction cycles. This study provides a multi-dimensional theoretical basis for psychological intervention among college students, encompassing family support, social quality, and romantic relationship regulation.

Keywords

Internal Conflict, Family Intimacy and Adaptability, Quality of Friendships, Types of Romantic Attachment.

1. Introduction

Against the backdrop of rapid societal development in contemporary society, mental health among college students has emerged as a strategic priority in national social development—President Xi Jinping explicitly identified ‘prioritizing mental health and mental hygiene’ as a key task in his report at the 20th National Congress of the Communist Party of China, underscoring its central value in social governance and individual development. While existing research has explored the connection between interpersonal relationships and mental health, no comprehensive studies have yet been conducted on the integrated mechanisms linking family

intimacy and adaptability, friendship quality, and romantic attachment styles to psychological internalization among university students.

This study employs questionnaire surveys and in-depth interviews to systematically examine the pathways through which three types of interpersonal relationships influence the extent of mental exhaustion among university students: descriptive analysis confirms that university students exhibit relatively high levels of mental exhaustion overall, with balanced performance across the dimensions of low self-confidence, high sensitivity, and strong indecision; Mechanism studies found that family relationships exert a negative influence through conflict resolution, the development of social skills, and emotional buffering; friendship quality reduces psychological exhaustion through the establishment of psychological safety, optimisation of interaction patterns, and cognitive regulation; among romantic attachment groups, those with a secure attachment style (low avoidance + low anxiety) exhibit the lowest levels of psychological exhaustion; avoidance and anxiety dimensions exacerbate psychological exhaustion through communication patterns and suspicion mechanisms, respectively; and those lacking romantic experience are more prone to falling into negative cycles. The research findings provide quantitative evidence for the development of a multi-dimensional psychological intervention system encompassing family support, social quality enhancement, and romantic relationship regulation.

2. Analysis of the Degree of Mental Internal Conflict

2.1. Questionnaire reliability and validity analysis

The questionnaire on internal conflict was designed to assess the degree of internal conflict among university students from three dimensions (low self-confidence, high sensitivity, and strong indecision) using a five-point scoring method. A total of 469 valid questionnaires were collected. The reliability and validity of the questionnaire were tested, with the results shown in Table.1. Cronbach's $\alpha = 0.884 > 0.8$, indicating that the questionnaire has high reliability and can effectively measure the degree of mental exhaustion. The KMO value is 0.925, indicating that there is correlation among the variables. The Bartlett chi-square value is 1670.158, and the significance level is less than 0.05, indicating statistical significance. Factor analysis is valid, and the sample data has high validity.

Table 1. Questionnaire reliability and validity analysis

Inspection Type	Numerical Value	
Cronbach's α Coefficient	0.884	
Standardised Cronbach's α Coefficient	0.884	
KMO Value	0.925	
Bartlett Sphericity Test	Approximate Chi-Square	1670.158
	df	36
	P	0.000***

2.2. Descriptive analysis

This study used descriptive statistical methods to quantitatively analyse the degree of internal conflict among university students and its three dimensions (lack of confidence, high sensitivity, and low execution ability). As shown in Table.2 and Figure 1, the data indicate that the overall degree of internal conflict among university students is relatively high, fluctuating around the average level. The overall indicators for each dimension are relatively high, and the differences

between different dimensions are small, indicating that the subjects exhibit relatively balanced performance across the different dimensions of internal conflict.

Table 2. Descriptive analysis results

Variable	Sample Size	Maximum Value	Minimum Value	Mean	Standard Deviation	Median
Internal Conflict Level	469	45	12	30.925	7.203	32
Lack of Confidence	469	15	3	10.382	2.856	11
High Sensitivity	469	15	3	10.324	2.656	11
Strong Hesitation	469	15	3	10.22	2.697	11

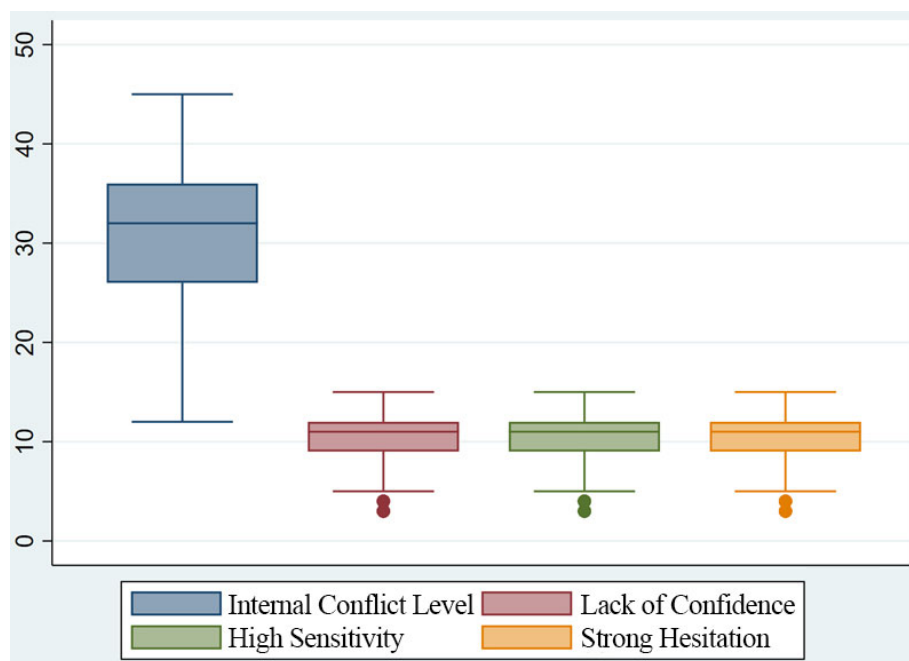


Figure 1. Box plot of four variables

3. Family Intimacy, Adaptability, And Internal Conflict Level

3.1. Questionnaire reliability and validity analysis

The questionnaire sections on family intimacy and family adaptability were measured using the second edition of the Family Intimacy and Adaptability Scale (FACES II) developed by Olson et al. (1982) and translated and revised by Fei Lipeng et al [6]. A total of 471 valid questionnaires were collected.

The questionnaire was tested for reliability and validity, with the results shown in Table.3. The standardized Cronbach's $\alpha = 0.887 > 0.8$, indicating that the questionnaire has high reliability. These results suggest that the questionnaire can effectively measure family intimacy and adaptability. The KMO value was 0.989, indicating that there was correlation among the variables. The Bartlett chi-square value was 10,121.641, and the significance level was less than 0.05, indicating significant level, valid factor analysis, and high validity of the sample data.

Table 3. Questionnaire reliability and validity analysis

Inspection Type	Numerical Value	
Cronbach's α Coefficient	0.775	
Standardised Cronbach's α Coefficient	0.887	
KMO Value	0.989	
Bartlett Sphericity Test	Approximate Chi-Square	10121.641
	df	435
	P	0.000***

3.2. Exploring the relationship between family intimacy and internal conflict

Table 4. Spearman correlation analysis results

	Internal Conflict Level	Intimacy	Adaptability
Internal Conflict Level	1 (0.000***)		
Intimacy	-0.387 (0.000***)	1 (0.000***)	
Adaptability	-0.439 (0.000***)	0.736 (0.000***)	1 (0.000***)

This study used Spearman's correlation analysis to explore the relationship between family intimacy and adaptability and the degree of internal friction. The results of the analysis are shown in Table.4. Both intimacy and adaptability have a significant negative correlation with the degree of internal friction. This suggests that family intimacy and adaptability may have an inhibitory effect on the degree of internal friction.

Based on the results of the data analysis, in-depth interviews were conducted to explore the causal relationship within. According to the interview results, the possible causal relationship can be summarized as follows:

Direct impact: Increased family intimacy and adaptability can effectively reduce friction and conflict among family members. In families with strong emotional bonds, members build a foundation of trust through continuous interaction, significantly reducing the frequency of daily conflicts and alleviating feelings of loneliness. Families with high adaptability prioritize equal communication, preferring negotiation over confrontation when faced with disagreements. They can swiftly develop response strategies in emergencies, avoiding the negative cycle of mutual blame and fostering an open and inclusive communication environment.

Indirect impact: Positive family interaction patterns subtly shape an individual's social skills. Members of highly adaptive families often demonstrate stronger empathy and conflict resolution skills when interacting with others. They are better at listening to others' needs, actively expressing their own views, and maintaining rationality and emotional stability when faced with conflicts. These traits help build healthy interpersonal networks and reduce psychological exhaustion in social situations.

Indirect impact: The family system can provide an emotional buffer against external pressures. When children face interpersonal difficulties, families with high intimacy are more likely to become confidants. While parental emotional support may not resolve specific issues, it can significantly alleviate anxiety through understanding and acceptance. This companionship mechanism acts as a psychological 'safety net,' helping individuals maintain internal stability in stressful environments and indirectly reducing mental exhaustion caused by other factors.

3.3. Summary of characteristics specific to the university student population

Direct effects are weakening, while indirect effects are becoming more prominent. Among the current university student population, the direct regulatory role of family relationships is showing a weakening trend. As individuals gradually leave their original families to live

independently, the frequency of substantive contact with family members decreases. Additionally, since most have not yet formed new families, the immediate influence of family members' words and actions relatively diminishes. The deeper influence of family relationships continues to exert its effects through psychological mechanisms. Family interaction patterns formed during the minor stage, including certain maladaptive communication habits, often unconsciously reappear in college students' social behavior, constituting a potential source of internal attrition in new interpersonal relationships.

The family's function as an emotional support system is weakening. In some cases, despite regular communication between family members, generational differences in living environments lead to cognitive misalignment—parents may struggle to accurately identify their children's real-life challenges, and their comforting words may feel superficial due to a lack of context, or even backfire due to conflicting value systems. This decline in support effectiveness indicates that mere relational closeness is insufficient to provide effective psychological security; environmental adaptability has become a key determinant of support quality.

4. Quality of Friendship and Degree of Internal Conflict

4.1. Questionnaire reliability and validity analysis

The friendship quality measurement section of this questionnaire was adapted from the friendship questionnaire compiled by Zhao Dongmei and Zhou Zongkui [7]. A total of 448 valid questionnaires were collected. The questionnaire was tested for reliability and validity, with the results shown in Table.5. Cronbach's $\alpha = 0.856 > 0.8$, indicating that the questionnaire has good reliability and can be used for effective measurement. The KMO value is 0.907, indicating that there is correlation among the variables. The Bartlett chi-square value is 2977.087, and the significance level is less than 0.05, indicating significant level. Factor analysis is valid, and the sample data has high validity.

Table 5. Questionnaire reliability and validity analysis

Inspection Type	Numerical Value	
Cronbach's α Coefficient	0.856	
Standardised Cronbach's α Coefficient	0.856	
KMO Value	0.907	
Bartlett Sphericity Test	Approximate Chi-Square	2977.087
	df	66
	P	0.000***

4.2. Exploring the relationship between the quality of friendship and degree of internal conflict

Table 6. Spearman correlation analysis results

	Internal Conflict Level	Quality of Friendship
Internal Conflict Level	1 (0.000***)	
Quality of Friendship	-0.11 (0.02**)	1 (0.000***)

This paper also uses Spearman's correlation analysis method to analyse the relationship between friendship quality and the degree of internal friction. The correlation results are shown in Table.6, which shows that friendship quality has a significant negative correlation with the degree of internal friction, indicating that higher friendship quality may reduce the

degree of internal friction in social interactions. Based on the results of the data analysis, in-depth interviews were conducted to explore the causal relationship within. According to the interview results, the possible causal relationship can be summarized as follows:

(1) Building psychological safety. Positive friendships alleviate self-consumption by enhancing psychological tolerance. When individuals are in an accepting social environment, their peers' inclusive attitudes can trigger psychological adjustment mechanisms, effectively buffering self-criticism tendencies caused by mistakes. This supportive interaction reduces excessive reflection on behavioral mistakes, avoiding harsh self-criticism and thereby reducing internal consumption caused by perfectionism.

(2) Optimisation of interaction patterns. Stable peer connections promote the expression of one's authentic self. In relationships built on trust, both parties tend to adopt cooperative strategies to resolve conflicts and avoid defensive communication patterns. Maintaining a baseline of respect during interactions allows individuals to express their true thoughts without hiding or embellishing them. This low-psychological-vigilance communication state significantly reduces the cognitive load caused by self-censorship, fostering sustainable emotional resource exchange.

(3) Cognitive regulation function. Deep friendships offer dual support for emotional and cognitive well-being. Peers not only provide emotional comfort through empathetic responses but also help reconstruct problem-solving frameworks from an external perspective. This interaction helps reduce excessive focus on negative evaluations, moderately decoupling self-worth judgments from external feedback, thereby minimising psychological energy expenditure caused by overinterpreting others' attitudes and maintaining a stable self-evaluation system.

5. The Relationship Between Romantic Attachment Styles and Internal Conflict Level

5.1. Questionnaire reliability and validity analysis

The measurement questionnaire for the romantic relationship section was selected from the Adult Attachment Questionnaire compiled by Li Tonggui et al. [8]. A total of 197 valid questionnaires were collected. As shown in Table.7, Cronbach's $\alpha = 0.853$, indicating that the questionnaire has high reliability and can be used for effective measurement. The KMO value is 0.886, indicating that there is correlation among the variables. The Bartlett chi-square value is 2614.066, and the significance level is less than 0.05, indicating significant level, valid factor analysis, and high validity of the sample data.

Table 7. Questionnaire reliability and validity analysis

Inspection Type	Numerical Value	
Cronbach's α Coefficient	0.853	
Standardised Cronbach's α Coefficient	0.848	
KMO Value	0.886	
Bartlett Sphericity Test	Approximate Chi-Square	2614.066
	df	496
	P	0.000***

5.2. The relationship between types of romantic attachment and the level of internal conflict

Scores for the avoidance and anxiety dimensions were calculated using the scale algorithm developed by Phillip Shaver, and four types were identified based on the combined scores of the two dimensions: secure type (M1, low avoidance + low anxiety), preoccupied type (M2, low avoidance + high anxiety), fearful type (M3, high avoidance + high anxiety), and dismissive type (M4, high avoidance + low anxiety). The subsequent analysis will examine whether there are significant differences in internal conflict levels among the four types of individuals.

This study first conducted a normality test on the internal conflict levels of university students to ensure that the data met the normal distribution assumption required for subsequent one-way analysis of variance (ANOVA). As shown in Table.8, the *P*-value from the S-W test was greater than the 0.05 significance level, so this paper did not reject the null hypothesis that the data followed a normal distribution. Next, a homogeneity of variance test was conducted. Since the *P*-value was less than 0.05, this paper concluded that the data did not satisfy the assumption of homogeneity of variance.

Since the data did not satisfy the assumption of homogeneity of variance, Welch's variance test was used in the one-way ANOVA. According to the analysis results, the *P*-value was far less than 0.05, indicating statistical significance. Thus, it can be concluded that there are significant differences in the degree of internal conflict among different types of individuals. Additionally, the effect size analysis indicates an η value of 0.231, meaning that 23.1% of the differences in internal conflict levels are attributable to differences in type. The Cohen's *f* value is 0.548, indicating that the effect size differences in the data are of a large magnitude. Furthermore, M1 (the secure type—low avoidance, low anxiety) corresponds to the lowest mean internal conflict level.

Table 8. Results of single-factor analysis of variance process

Results of normality test							
Variable	Sample Size	Median	Mean	Standard Deviation	Skewness	Kernel	S-W Test
Internal Friction Level	197	19	18.68	4.479	-0.26	-0.126	0.987 (0.072)
Results of the homogeneity of variance test							
Quantitative Data	Type (Standard Deviation)				Levene's statistic	P-Value	
	M1	M2	M3	M4			
Internal Friction Level	4.378	3.730	2.923	3.560	2.713	0.046**	
Analysis of Variance Results							
Variable		Variable Value	Sample Size	Mean	Standard Deviation	Welch's Variance Test	
Internal Friction Level		M1	89	17.135	4.378	F=23.177 P=0.000***	
		M2	37	21.973	3.730		
		M3	10	23.9	2.923		
		M4	61	18.082	3.560		
Results of effect quantification analysis							
Analysis Item	Between-Group Difference		Total Deviation	Partial Eta- Square		Cohen's Value	
Internal Friction Level	908.008		3932.853	0.231		0.548	

The following sections will continue to explore the mechanisms through which the avoidance dimension and anxiety dimension influence the degree of internal conflict using in-depth interviews:

(1) Avoidance Dimension: Open communication and expression, establishing two-way communication channels. Individuals with low avoidance indices are more willing to enjoy the intimate process with their partners. This is reflected in: a) being more willing to share their inner thoughts with their partners, leveraging their partners' emotional support to help reshape their self-evaluation and gain the motivation to face setbacks. b) They are willing to accept intimate and passionate gestures from their partners and provide positive responses and emotional value in return. Moderately fulfilling their partners' emotional needs can effectively reduce conflicts caused by insufficient emotional value and mitigate the negative impact of such conflicts on both parties. c) When faced with conflicts, they tend to adopt communication and negotiation to resolve issues rather than resorting to indifferent responses or self-digestion, which overly deplete their psychological resources.

(2) Anxiety Dimension: Reducing unnecessary worries and suspicions alleviates the over-consumption of internal resources. Lower anxiety levels are directly correlated with enhanced trust, reducing excessive interpretation of the partner's behavior. When an individual's anxiety level is low, their neurophysiological indicators (such as LPP amplitude) show more stable emotional regulation capabilities, which helps alleviate the cycle of suspicion in relationships. Meanwhile, anxiety can indirectly exacerbate social avoidance through feelings of loneliness and trust deficits, while a secure attachment style can effectively block this negative chain reaction.

5.3. Summary of characteristics of the university student population

Lack of dating experience increases the likelihood of friction and internal conflict in romantic relationships. Due to a lack of experience and foresight in handling conflicts, persistent emotional conflicts are more likely to arise. Such friction not only persists for longer periods but also has more intense negative effects. Systematic dating education interventions are needed to improve the current situation by enhancing cognitive levels and conflict resolution skills.

6. Conclusions

This study systematically analysed the association mechanisms between three types of interpersonal relationships—family, friendship, and romantic relationships—and psychological internal conflict among university students. The findings confirmed that family intimacy and adaptability, as well as friendship quality, have a significant negative impact on the degree of internal conflict among university students. Among romantic attachment styles, those with secure attachment (low avoidance + low anxiety) exhibited the lowest levels of internal conflict. The study found that family relationships form a psychological protective mechanism by alleviating internal conflicts, shaping social skills, and providing emotional buffers; friendship quality reduces psychological exhaustion through the construction of psychological safety, optimisation of interaction patterns, and cognitive regulation functions; while the avoidance and anxiety dimensions in romantic relationships exacerbate psychological exhaustion through communication barriers and suspicion cycles, and groups with limited romantic experience are more prone to falling into negative emotional friction cycles. Given the current issues in psychological services, such as the disconnect between course practice and counselling failing to address core issues, the study proposes intervention pathways to strengthen self-expression, optimise home-school collaboration, and reconstruct the mental health curriculum system. These provide theoretical basis and practical directions for alleviating internal conflict among university students from multiple dimensions, including

family support, social quality, and romantic relationship regulation. Future research could expand the sample coverage, explore more diverse influencing factors and pathways, and provide more comprehensive scientific support for improving the mental health service system for university students.

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