

# The Effect of Interpersonal Trust on Minority High School Students' Psychological Well-being

## The Mediating Roles of Forgiveness and Self-esteem\*

Chao Ma

Normal College

Research Center for Psychological Application

Shihezi University

Shihezi, China 832003

Mi Chen

Normal College

Research Center for Psychological Application

Shihezi University

Shihezi, China 832003

Nianxin Guo

Research Center for Psychological Application

Shihezi University

Shihezi, China 832003

**Abstract—Objective:** To explore the relationship between interpersonal trust, forgiveness, self-esteem and psychological well-being in high school students. **Methods:** By surveying 562 ethnic minority high school students with relevant scales and questionnaires in Xinjiang. **Results:** Scores of interpersonal trust, self-esteem, forgiveness and psychological well-being of ethnic minority high school students were ( $62.96 \pm 7.30$ ,  $25.05 \pm 4.23$ ,  $107.00 \pm 13.30$ ,  $160.47 \pm 7.91$ ), and all scales of interpersonal trust, forgiveness and self-esteem were positively correlated with psychological well-being ( $r=0.19/r=0.30/r=0.63$ ,  $P < 0.05$ ). Self-esteem and forgiveness have mediating effect on interpersonal trust and psychological well-being (mediating effect value is 0.16 and 0.05 respectively), while self-esteem and forgiveness have chain mediating effect on the relationship between interpersonal trust and psychological well-being (mediating effect value is 0.01). **Conclusion:** To enhance the psychological well-being of minority high school students, on the one hand, it is necessary increase the trust and communication between ethnic groups; on the other hand, it is necessary to pay more attention to the development of minority students' self-esteem, introduce forgiveness into moral courses, and cultivate the forgiveness ability of minority students.

**Keywords—**interpersonal trust; psychological well-being; forgiveness; self-esteem; Minority high school students

## I. INTRODUCTION

Establishing appropriate interpersonal trust in daily life is conducive to physical and mental health [1], which can help individuals to change the assessment of stress events, reduce the negative impact of negative events, and enhance individual psychological well-being [2]. Studies at home and abroad have

\*Project: The National Natural Science Foundation of China (NSFC) project "The Brain Mechanism of Face Recognition and Facial Expression Recognition in Ethnic Differences: Taking Han, Uygur and Kazakh Ethnic Groups in Xinjiang as objects" (No. 31660280).

shown that individuals with high levels of forgiveness tend to forgive each other in the face of interpersonal violations [3], [4], maintain normal interpersonal trust and communication with each other, and have a higher psychological well-being [5]. It can be speculated that forgiveness may play a mediating role between interpersonal trust and psychological well-being. There are studies have also shown that ethnic minority high school students have a high level of self-esteem [6], and they are more willing to trust others in interpersonal relationships, thus having a higher psychological well-being [8], [9]. It is also speculated that self-esteem may play an intermediary role between interpersonal trust and psychological well-being. Both the physiological and mental aspects of high school students are in a state of rapid development. Forgiveness and self-esteem are important positive psychological qualities. From the perspective of positive psychology, this study examines the influence of interpersonal trust on psychological well-being of minority high school students in Xinjiang, and explore the multiple mediating roles of self-esteem and forgiveness in interpersonal trust and psychological well-being, and provides guidance for enhancing the psychological well-being of ethnic minority high school students, promoting national unity and strengthening ethnic exchanges.

## II. OBJECTS AND METHODS

### A. Objects

From October to November 2017, this study used a cluster sampling method to select students from 12 ethnic classes in two middle schools in a certain city in Xinjiang. A total of 600 questionnaires were distributed and 600 were recovered. After eliminating the invalid questionnaires, the remaining 562 were collected, with an effective rate of 93.66%. Among them, 258 were boys (45.90%); 304 were girls (54.09%); 198 were senior

one, 165 were senior two and 100 were senior three; the average age was  $(16.59 < 0.62)$ . The study was approved by the Medical Ethics Committee of the First Affiliated Hospital of Shihezi University of Medicine and investigated with the informed consent of the subjects.

### B. Methods

1) *Forgiveness scale*: The forgiveness scale compiled by Thompson and revised by Wang Jinxia et al. [10], which included two dimensions of interpersonal forgiveness and self-forgiveness. There were 12 subjects with a total of 24 questions in each dimension. It adopts a scale of 1-7 (1 = completely inconsistent, 7 = fully consistent). The higher the score, the easier it is to forgive others and oneself. The split-half reliability of the scale is 0.89, and the internal consistency coefficient is 0.75, which has good reliability and validity.

2) *Interpersonal trust scale*: The interpersonal trust scale compiled by Rotter et al. in 1967 [11], which contains 25 subjects. It adopts a scale of 1-5 (1 = completely disagreement, 5 = completely agreement), with a total score of 125. The higher the score, the higher the level of interpersonal trust. The internal consistency reliability and retest reliability of the scale are 0.61 and 0.72, which have good reliability and validity.

3) *Self-esteem scale*: The self-esteem scale was compiled by Rosenberg, revised by Wang Dongxiang, Ji Fuyi et al. [12], and deleted the eighth question considering the cultural differences according to the suggestion of Tian Lumei et al. [13], the score of grade 4 (1 = completely consistent, 4 = completely inconsistent) is 36. The higher the score, the higher the level of self-esteem. The internal consistency reliability and retest reliability of the scale are 0.85 and 0.78, which have good reliability and validity.

4) *Comprehensive well-being questionnaire*: The psychological well-being questionnaire of the well-being measurement questionnaire compiled by Miao Yuanjiang [14] is divided into six dimensions (personality growth, self-worth, life vitality, friendly relationship, altruistic behavior, health concern) and 33 items. The internal consistency reliability of the scale is 0.94, and the retest reliability is 0.89, which has a good reliability and validity.

### C. Quality Control

There may be a common method deviation in this study. Therefore, Harman single-factor method test was adopted to put all the questions in the four questionnaires into exploratory factor analysis. The unrotated principal component analysis shows that there were 23 factors with characteristic root greater than 1, and the explanatory variation of the first factor is 18.56%, which is lower than the critical value of 40%. This shows that the common method deviation does not cause serious errors in this study. In order to ensure the reliability, this study will adopt the following measures to control quality. First, conduct a pre-survey on a class to grasp the content and time. Secondly, the surveyors are all psychology and pedagogy

related majors, they have received unified training, who were trained uniformly and used the same set of standardized instructions; the respondents were informed about the contents of the survey and volunteered to participate. Then during the test, the surveyors explained the unclear content and the respondents completed the questionnaire within 30 minutes. Finally, in the collation and entry of data, remove the invalid questionnaire, and 5% of the randomly selected data to check whether the data entry was consistent, so as to ensure the consistency above 95%.

### D. Statistical Analysis

In this study, the data were statistically analyzed by spss20.0, which mainly make statistical analysis of data by Pearson correlation analysis, regression analysis and structural equations.  $P < 0.05$  or  $0.001$  indicated that the difference was statistically significant.

## III. RESULTS

### A. Descriptive Statistics and Related Analysis of Interpersonal Trust, Self-esteem, Forgiveness and Psychological Well-being of Minority High School Students

Pearson correlation analysis of interpersonal trust, self-esteem, forgiveness and psychological well-being showed that interpersonal trust was positively correlated with psychological well-being and its sub-dimensions of personality growth, self-worth and vitality ( $P < 0.05$ ), and positively correlated with self-esteem and forgiveness ( $P < 0.05$ ); psychological well-being and its sub-dimensions of personality growth; Self-worth, vitality, friendly relation and health concern were positively correlated with self-esteem and forgiveness ( $P < 0.05$ ). See "Table I".

**TABLE I. CORRELATION MATRIX BETWEEN INTERPERSONAL TRUST, SELF-ESTEEM, FORGIVENESS AND PSYCHOLOGICAL WELL-BEING**

	M	SD	1	2	3	4	4.1	4.2	4.3	4.4	4.5	4.6
1. Interpersonal trust	62.96	7.30	1									
2. Self-esteem	25.05	4.23	0.34*	1								
3. Forgiveness	107.00	13.30	0.36*	0.37*	1							
4 Psychological well-being	160.47	27.42	0.19*	0.63*	0.30*	1						
4.1 Personality growth	39.36	7.91	0.22*	0.60*	0.26*	0.73*	1					
4.2 Self-worth	23.49	5.49	0.30*	0.74*	0.28*	0.78*	0.66*	1				
4.3 Life vitality	27.87	7.34	0.15*	0.51*	0.24*	0.87*	0.57*	0.60*	1			
4.4 Friendly relation	16.74	4.15	0.04	0.28*	0.24*	0.63*	0.37*	0.36*	0.49*	1		
4.5 Altruistic behavior	25.17	5.52	0.09	0.33*	0.11	0.71*	0.41*	0.39*	0.54*	0.39*	1	
4.6 Health concern	27.29	5.50	0.13	0.40*	0.24*	0.76*	0.44*	0.48*	0.66*	0.45*	0.53*	1

<sup>a</sup> Note: \*P<0.05; \*\*P<0.01.

**B. Regression Analysis of Interpersonal Trust, Self-esteem, Forgiveness and Psychological Well-being of Minority High School Students**

According to the mediation effect test process proposed by Wen Zhonglin et al. [15], this study adopts hierarchical regression method to test whether self-esteem and forgiveness have mediating effects between interpersonal trust and psychological well-being.

The results of regression analysis show that self-esteem and forgiveness play a full intermediary role when interpersonal trust and self-esteem and forgiveness enter the equation alone. However, when the three factors enter the regression equation at the same time, the regression coefficient of interpersonal trust decreases; this indicates that when self-esteem and forgiveness work simultaneously, it further decomposes the direct effect of interpersonal trust and plays a full intermediary role (See "Table II").

**TABLE II. REGRESSION ANALYSIS OF INTERPERSONAL TRUST, SELF-ESTEEM, FORGIVENESS AND PSYCHOLOGICAL WELL-BEING**

Regression Equation		Global Fitting Index			Significance of Regression Coefficient	
Result Variables	Predictive Variables	R	R2	F	β	t
Self-esteem	Interpersonal Trust	0.17	0.03	8.64	0.19	3.12**
Forgiveness	Interpersonal Trust	0.33	0.11	19.58	0.34	5.23**
	Self-esteem				0.36	5.43**
Psychological Well-being	Interpersonal Trust	0.65	0.42	45.86	-0.06	-0.72
	Self-esteem				0.63	8.79**
	Forgiveness				0.30	4.87**

<sup>a</sup> Note: \* P < 0.05; \*\* P < 0.01.

**C. The Construction of Chain Mediation Model of Self-esteem and Forgiveness**

In order to further verify the relationship among interpersonal trust, self-esteem, forgiveness and psychological well-being, the model was constructed with interpersonal trust

as independent variable, psychological well-being as dependent variable and self-esteem and forgiveness as mediating variable. The structural equation model is shown in "Fig. 1", and the fitting index is shown in Table 3 below. It can be concluded from the fitting indicators in the model that the model is an acceptable model.

**TABLE III. THE MEDIATING MODEL FITTING INDEXES OF INTERPERSONAL TRUST, SELF-ESTEEM, FORGIVENESS AND PSYCHOLOGICAL WELL-BEING**

CFI	NFI	RMSEA	GFI	IFI	AGFI	χ2/ df
0.97	0.94	0.06	0.95	0.97	0.90	1.61

It can be seen from "Fig. 1" that except for the path coefficient hypothesis test of interpersonal trust on psychological well-being ( $\beta = -0.06, P > 0.05$ ) shows that the difference is not statistically significant, and other path coefficient hypothesis tests in the model show that the difference is statistically significant ( $P < 0.05$  or  $0.001$ ). And it can be seen from Table 4, the joint significance test can judge that the chain mediation effect from interpersonal trust to

psychological well-being is significant. In order to further test the mediating effect of self-esteem and forgiveness, the deviation-corrected non-parametric percentage Bootstrap test was performed with 1000 sample repeats. The results show that the 95% confidence intervals of the three paths do not contain 0, which indicates the existence of chain mediation effect again.

TABLE IV. EFFECT VALUE AND EFFECT AMOUNT OF INTERPERSONAL TRUST ON PSYCHOLOGICAL WELL-BEING

Mediation Effect	Value of Mediation Effect	Amount of Mediation Effect	95% Confidence Interval
Interpersonal Trust → Self-esteem → Psychological Well-being	0.16	72.70%	[0.44,1.22]
Interpersonal Trust → Forgiveness → Psychological Well-being	0.05	22.30%	[0.03,0.46]
Interpersonal Trust → Self-esteem → Forgiveness → Psychological Well-being	0.01	4.50%	[0.60,1.50]

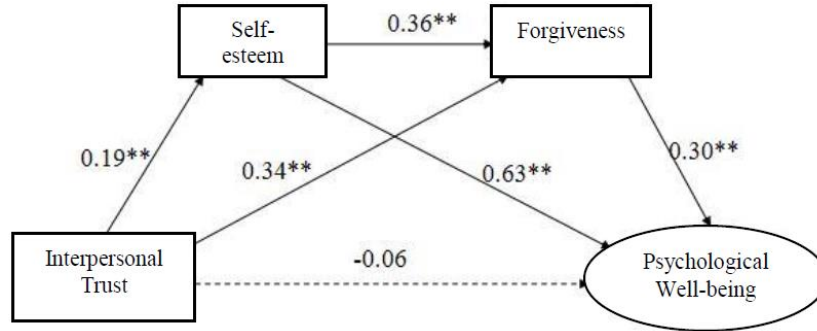


Fig. 1. Structural equation of the relationship for self-esteem and forgiveness work together on interpersonal trust and psychological well-being.

IV. DISCUSSION

A. The Mediating Role of Self-esteem Between Interpersonal Trust and Psychological Well-being

The results of this study show that interpersonal trust and self-esteem, forgiveness and psychological well-being of minority high school students are positively correlated. This is consistent with the existing empirical research. [16], [17] Individuals with high level of interpersonal trust of minority high school students usually have higher self-esteem level, they are more likely to forgive others and maintain a pleasant interpersonal environment, so they have a higher sense of psychological well-being.

In this study, the psychological well-being of minority high school students is not only directly affected by interpersonal trust, but also indirectly affected by the complete mediation of self-esteem, which is consistent with the research results obtained by Bai Yonglei in college students [2]. This indicates that individuals with high level of interpersonal trust in minority high school students have higher level of self-esteem, they are more willing to hold an attitude of trust and expectation towards others when dealing with unforeseen events [18], and believe that they can cope with various challenges in life [19] and interpersonal relationships, so as to improve their psychological well-being [5].

B. The Mediating Role of Forgiveness Between Interpersonal Trust and Psychological Well-being

The results of this study show that interpersonal trust in minority high school students affects their psychological well-being through the mediating role of forgiveness. Minority high school students have a better sense of national trust and the behavior of forgive others. Individuals with higher interpersonal trust are more likely to forgive others, and there is a significant positive correlation between them [4], [5], [6], [7], [8], [9], [10]. Good interpersonal trust can help ethnic

minorities obtain effective social support and improve their interpersonal adaptability. Poor interpersonal trust makes individuals negatively treat interpersonal conflicts and show unfriendly social behaviors to others [20]. Among the minority student groups, students with high levels of interpersonal trust usually have a positive attitude toward others, and prefer to trust others, they are more willing to choose forgiveness when facing interpersonal offence, and gaining psychological well-being while forgive others [4].

C. The Chain Mediating Role of Self-esteem and Forgiveness Between Interpersonal Trust and Psychological Well-being

The results also show that interpersonal trust indirectly affects the level of psychological well-being of minority high school students through self-esteem and forgiveness. Ethnic minority teenagers with high level of interpersonal trust feel a higher sense of self-worth [6] and have higher self-esteem. Individuals with higher self-esteem are more likely to forgive offenders than lower self-esteem individuals [4], [22]. Self-esteem has a positive predictive effect on forgiveness [23], and forgiveness has great significance for psychological well-being [24], which explains most of the variance of psychological well-being [25]. Previous forgiveness intervention has proved that it can effectively improve psychological well-being of children and reduce depressive mood [26]. Therefore, individuals with a high level of forgiveness have a higher level of psychological well-being.

It should be noted that in addition to self-esteem and forgiveness, variables that mediate interpersonal trust and psychological well-being may also be social support that affects subjective well-being [4], [27], personality [28], and psychological resilience [29] and so on. These variables may also be potential mediators affecting psychological well-being, and there may also be interactions among these mediators and between self-esteem and forgiveness. These potential

mediators and their interaction mechanisms are remains to be further study in the future.

This study adopts a cross-sectional research design, which theoretically verifies the chain mediation role, but it can not analyze the relationship among several from the perspective of real development. In the future, it is necessary to conduct further follow-up investigation and research on minority high school students of different grades, and adopt a crisscrossed research method to analyze to make up for the inadequacy of this study.

In addition, it is inevitable for high school students to have friction with their classmates in their daily life and interpersonal conflicts occur from time to time. In this process, it will be necessary to improve psychological well-being is not only to promote the harmonious ethnic relationship, enhance the trust among nationalities. On the one hand, schools and teachers should improve the self-esteem level of minority students and guide students to take a positive attitude towards their interpersonal skills, and on the other hand, they should also cultivate their ability to forgive, introduce forgiveness learning into moral classes, and raise the level of forgiveness of students, and then enhance the psychological well-being of minority students.

## V. CONCLUSION

This study explores the relationship between interpersonal trust and psychological well-being of minority high school students by questionnaire. To improve the psychological well-being of minority high school students, on the one hand, it is necessary to increase the trust and communication among ethnic groups, and on the other hand, it is also necessary to pay more attention to the development of self-esteem minority students, introduce forgiveness into moral courses, and cultivate the forgiveness ability of minority students in the teaching stage.

## REFERENCES

- [1] Qiao Zhen. Investigation report on interpersonal trust and overall well-being of college students[J]. Knowledge Economy, 2018(06): 133-134. (in Chinese)
- [2] Bai Yonglei. Research on the relationship among Physical Self-esteem, Interpersonal trust and psychological well-being of college students [D]. Hebei Normal University, 2010. (in Chinese)
- [3] Noor, M. , Brown, R. , Gonzales, R. , et al. On positive psychological outcomes: What helps groups with a history of conflict to forgive and reconcile with each other? [J]. Personality and Social Psychology Bulletin, 2008, 34(6):819-832.
- [4] Guo Nianxin, Liujue, Ma Chao. The influence of interpersonal trust of high school students on altruistic behavior: multiple mediation of self-esteem and forgiveness of others [J]. China Health Care Management, 2018. (in Chinese)
- [5] Adolescent forgiveness and its impact on happiness [D]. Guo Nianxin. Shihezi University, 2018. (in Chinese)
- [6] Qiao Xiacong. A comparative study on physical self-esteem of Uyghur and Han high school students in Shanghai [D]. Shanghai Normal University, 2014. (in Chinese)
- [7] Liu Guangzeng, Hu Tianqiang, Zhang Dajun. Interpersonal relationship of middle school students and its relationship with self-esteem and interpersonal trust[J]. Chinese Journal of Clinical Psychology, 2016,24(2):349-351,355. (in Chinese)
- [8] Lu Jinhua. The relationship between academic achievement and psychological well-being of junior high school students: the mediating role of self-esteem [D]. Shandong Normal University, 2016. (in Chinese)
- [9] Chai Zhiye. Study on the relationship among family function, self-esteem and psychological well-being of high school students [D]. Hebei Normal University, 2017. (in Chinese)
- [10] Xu Enzhen. The influence of perception of forgiveness on interpersonal trust [D]. Shaanxi Normal University, 2018. (in Chinese)
- [11] Rotter, J. B. A new scale for the measurement of interpersonal trust[J]. Journal of Personality, 1967, 35(4): 651-665.
- [12] Wang Xiangdong, Wang Xilin, Ma Hong. handbook of mental health rating scale. Updated version. Beijing: China Mental Health Magazine, 1999. (in Chinese)
- [13] Tian Lumei. The deficiencies in the Chinese version of Rosenberg's (1965) Self-esteem Scale[J]. Psychological Exploration, 2006, 26(2): 88-91. (in Chinese)
- [14] Miao Yuanjiang. Happiness in the Perspective of Psychology [D]. Nanjing: Nanjing Normal University, 2003. (in Chinese)
- [15] Wen Zhonglin, Zhang Lei, Hou Jietai, et al. The mediation effect test procedure and its application [J]. Journal of Psychology, 2004, 36 (5): 614-620. (in Chinese)
- [16] Wang Hui, Xie Yajing, Liu Huashan. Correlation study of interpersonal trust and self-esteem on subjective well-being [A]. Abstracts of the 15th National Psychological Academic Conference [C]. 2012. (in Chinese)
- [17] Zheng,Xue. ,Fehr, Ryan. ,Tai, Kenneth. The Unburdening Effects of Forgiveness: Effects on Slant Perception and Jumping Height [J]. Social psychological and Personality Science, 2015, 6 (4): 431-438.
- [18] Liu Linyan, Lu Jiamei. Research on the relationship between subjective well-being and interpersonal trust of junior high school students [A]. Summary of the 18th National Psychological Conference - Psychology and Social Development [C]. 2015. (in Chinese)
- [19] Tian Lumei, Li Shuang. Analysis of the Concept of Self-esteem[J]. Psychology Exploration, 2005, 25(2): 26-29. (in Chinese)
- [20] Liu Huichi, Wu Mingxia. Research on the relationship between forgiveness, interpersonal satisfaction and subjective well-being of college students [J]. Chinese Journal of Clinical Psychology, 2011, 19(4): 531-533. (in Chinese)
- [21] Jiang Lin. Experimental study on the internal group bias of interpersonal trust between Uyghur and Han middle school students [D]. Xinjiang Normal University, 2017. (in Chinese)
- [22] Tian Lumei, Yang Jing, Yu Fangrong. Relationship between self-esteem, peer acceptance and different forgiveness of junior high school students [J]. Chinese Journal of Clinical Psychology, 2015,23(2):336-338. (in Chinese)
- [23] Li Yulan, Fu Jin. The between self-esteem and forgiveness tendency of college students: the mediating effect of attribution [J]. Chinese Journal of Clinical Psychology, 2013, 21(1): 129-132. (in Chinese)
- [24] Wilks, D.C., Neto, F., Mavroveli, S. Trait emotional intelligence, forgiveness, and gratitude in Cape Verdean and Portuguese students[J]. South African Journal Of Psychology, 2015,45(1): 93-101.
- [25] Suh,Kyunghyun.The relationship between regret, self-disclosure, resentment, forgiveness, and well-being of the female elderly living alone [J]. Korean Journal of Health Psychology, 2014, 19(2):565-583.
- [26] Lin Weifen, Positive emotional education program of Enright forgiveness orientation: A study on forgiveness attitude, psychological well-being and emotional regulation effect of melancholy-prone children [C]. 2009. (in Chinese)
- [27] Liu Haitao. Research on the level of interpersonal trust, social support and subjective well-being of drug addicts [A]. Abstracts of the 11th National Psychological Academic Conference [C]. 2007. (in Chinese)
- [28] Yang Xiumu, Shen Zhengfu, Qi Yulong, et al. Analysis of the relationship between personality traits, interpersonal trust and subjective well-being of medical students [J]. Journal of Shanghai Jiaotong University (Medical Sciences), 2015, 35(1): 102- 106,127. (in Chinese)
- [29] Li Xueping, Li Shuangshuang. The Influence of Fair World Belief on Adolescent Subjective Well-Being: Chain Mediating Effect of Mental Resilience and Self-esteem[J]. China Special Education, 2016, (3): 71-76. (in Chinese)