



The Relationship between Gratitude and Life Satisfaction among Ethnic Minority Adolescents: The Mediating Role of Altruistic Behavior

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Abstract. This study analyzes the link between gratitude and life satisfaction among ethnic minority adolescents, while also evaluating the mediation effect of prosocial conduct, with an emphasis on the prosocial behavior's altruism component in connection to gratitude and life satisfaction. This study investigates the underlying mechanisms of gratitude in enhancing life satisfaction among minority adolescents using cross-sectional data, aiming to uncover effective strategies for improving teenagers' well-being. The research employs the Adolescent Gratitude Scale, Life Satisfaction Scale, and Prosocial Behavior Scale to survey a sample of 1,781 minority middle school students from five different schools. The results show:(1) Gratitude significantly positively predicted the life satisfaction of minority students;(2) For minority middle school pupils, the association between gratitude and life satisfaction was somewhat mediated by altruistic conduct.

Keywords: Minority middle school students, gratitude, altruistic dimension of prosocial behavior, life satisfaction.

1 Introduction

Life satisfaction, as a positive psychological attribute, can facilitate cognitive transformation among adolescents. Adolescents with high life satisfaction exhibit a more positive and optimistic attitude, possess accurate perceptions of negative behaviors, and demonstrate resilience against the impact of adverse events while reducing the occurrence of inappropriate behaviors. Studies have revealed that ethnic minority students display only moderate levels of positive emotion, low levels of life satisfaction, and heightened negative emotions [1]. Simultaneously, the majority of ethnic minority regions are situated in remote areas with relatively weak healthcare infrastructure and limited availability of nursing professionals, potentially leading to lower levels of life satisfaction. Although some studies have investigated the life satisfaction of adolescents in recent years, these primarily focused on Han students as subjects, leaving a significant dearth of research on the life satisfaction of minority adolescents.

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Therefore, the purpose of this research was to investigate the mechanisms and determinants of life satisfaction among young individuals from ethnic minorities.

According to Diener et al., life satisfaction is a cognitive and evaluative process, which is considered an integral component of happiness. Therefore, life satisfaction can be defined as a comprehensive cognitive assessment of one's own life, not reliant on objective parameters but rather influenced by the comparison between personal circumstances and internal patterns, while also being shaped by the cultural context in which individuals reside. Gratitude represents a character emotion that exhibits close association with adolescents' life satisfaction. During adolescence, the feeling of thankfulness is usually linked to life satisfaction. Gratitude and life satisfaction were found to positively correlate in a study by Datu and Mateo on 409 Filipino teenagers. This association was somewhat mediated by the existence of meaning in life. You, Lee, Lee, and Kim conducted a second study with 877 Korean teenagers, and the results showed that pupils who showed thankfulness experienced greater levels of contentment. Previous research suggests that those who exhibit great amounts of gratitude are believed to possess extensive social support networks due to the promotion of relationship maintenance and the accumulation of ongoing positive feelings. Fredrickson's "broaden-build" theory asserts that gratitude enhances an individual's cognitive scope, fostering heightened awareness of positive stimuli and facilitating the accumulation of personal resources to attain life goals, thereby contributing to increased life satisfaction. Various studies have demonstrated that gratitude serves as a catalyst for promoting prosocial behavior towards others. Specifically, individuals who express gratitude are more inclined to extend assistance to unfamiliar individuals. Consequently, gratitude is closely associated with prosocial behaviors that concurrently foster enhanced life satisfaction[2].

Adaptation and development are fundamental tasks of life, with teenagers being in a critical period of development where good adaptability is crucial for their harmonious physical and mental growth. As society rapidly develops, interpersonal contact and interaction become increasingly complex, highlighting the importance of gratitude as an effective means to promote harmony among individuals[3]. Prosocial behavior plays an indispensable and pivotal role in upholding social order, fostering social harmony, and facilitating the development of positive interpersonal relationships, normative consciousness, resilience, and other psychosocial adaptability factors. Altruistic behavior, as a form of prosocial conduct, encompasses voluntary assistance provided to others without expecting any reciprocation. A psychological experiment aimed at inducing gratitude in individuals also demonstrates their inclination to assist both the benefactor and unrelated individuals. After receiving assistance from others, most grateful individuals are inclined to extend their support towards either the benefactor or even strangers. Positive helping behaviors are simpler to practice when one's sense of gratitude is higher, as demonstrated by Pang et al. Furthermore, there is a reinforcing impact of thankfulness, meaning that as people express gratitude, the benefactor becomes more selfless. When individuals perceive a favorable interpersonal environment and close organizational relationship, they tend to have a strong sense of belonging and then exhibit prosocial behaviors such as helping others or altruism, namely altruistic behaviors [4]. According to the theory of attitude

change, individuals who engage in prosocial activities with the primary aim of assisting others will subconsciously immerse themselves in these activities, leading to a sense of satisfaction and happiness. According to research by Zhang Dajun et al., those who exhibit more prosocial actions also tend to have better levels of life satisfaction and a stronger feeling of purpose in life. Additionally, they exhibit reduced negative emotions such as anxiety and depression while enhancing their subjective well-being [5].

Therefore, considering the positive impact of gratitude on altruistic behavior and its potential to enhance individual life satisfaction. Investigating the relationship between these three constructs is the goal of this study. Additionally, in order to elucidate the underlying mechanism of life satisfaction, this research will explore whether altruistic behavior acts as a mediating factor between life satisfaction and gratitude.

2 Research Hypothesis

This study proposes the following research hypotheses, and constructs a simple mediation hypothesis model diagram, as shown in Figure 1.

H1:Gratitude, altruistic behavior and life satisfaction are significantly correlated.

H2:Altruistic behavior plays an intermediary role between life satisfaction and gratitude.

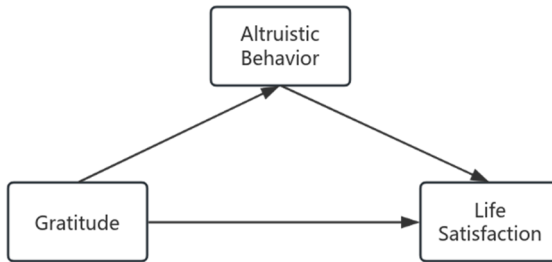


Fig. 1. Research hypothesis model

3 Research Methods

3.1 Research Object

The research participants consisted of students from diverse ethnic backgrounds, including 22 Hui students (1.23%),325 Qiang students (18.25%), 422 Yi students (23.70%),909 Tibetan students (51.04%).103 Han students (5.78%) sent 1781 questionnaires to the students in grade one and grade one of five middle schools in minority areas of Sichuan Province, and 1553 questionnaires, or 87.19% of the total, were successfully recovered. Statistics show that the middle school pupils that took part in

this survey were between the ages of 11 and 17, with an average age of ($M=14.57$; $SD=\pm 1.743$). Student families with many children (87.7%). There were 659 (42.4%) males and 894 (57.6%) females; 859 (55.3 percent) were junior high school students and 694 (44.7 percent) were senior high school students.

3.2 Research Tools

Life Satisfaction. Middle school pupils' life satisfaction was assessed using the Diener et al. life satisfaction scale. The scale consists of five items and uses seven points, with one being "strongly disagree" and seven being "strongly agree." The greater the score, the more content the person is with their life. This scale's Cronbach's α coefficient in this investigation was 0.851.

Gratitude. Gratitude was assessed using the Zhou et al. (2016) Gratitude Scale. Three of the six questions on the scale include reverse scoring, meaning that the greater the score, the stronger the thankfulness. The scale has seven points total, ranging from one wholly disagree to seven wholly agree. For the scale used in this investigation, the Cronbach's α coefficient was 0.651.

Altruistic Behavior. Altruistic behavior was measured using the altruistic Behavior Scale in the Adolescent Prosocial Behavior Scale (Yang Ying & Zhang Mengyuan & Kou Yu, 2016). The altruism dimension of the scale consisted of questions 3, 6, 11 and 15, which were scored with 7 points ("Completely inconsistent" is represented by 1; "completely consistent" is represented by 7.), and the average score of the altruism dimension was obtained for the study. This scale's Cronbach's α coefficient in this investigation was 0.926.

Mathematical Statistics. The scale's reliability test was carried out with the statistical program SPSS 25.0. The distribution of the demographic data, as well as the mean and standard deviation of the observed variables, were presented using descriptive statistics. The data were subjected to Harman's single factor test in order to evaluate common method bias. Pearson correlation analysis was utilized to examine the relationships between observed variables and demographic information, as well as pairwise associations among variables. A simple mediation model was constructed using PROCESS 4.2 macro program, and bootstrapping with 5000 resamples was employed to evaluate the mediating effect in the model.

4 Results

4.1 Common Method Deviation Test

Common method bias may exist because all of the data gathered for this study came from participant self-reported replies. Therefore, A single-factor Harman test was

conducted to assess this bias. Results indicated that the maximum factor variance accounted for 35.214% of the total variation, which falls below the threshold of 40%.Therefore, it can be said that this study does not exhibit a large common method bias.

4.2 Correlation Analysis

In the correlation study of demographic characteristics and observable variables, the results of the Pearson correlation analysis show a substantial bivariate link between life satisfaction, altruistic behavior, and gratitude among teenagers from ethnic minority groups. Specifically, gratitude exhibited a positive correlation with life satisfaction ($r=0.296$),gratitude was also positively correlated with altruistic behavior ($r=0.532$), and life satisfaction showed a positive correlation with altruistic prosocial behavior ($r=0.231$).These findings meet the necessary prerequisites for regression analysis and mediation effect testing, as presented in Table 1.

Table 1. Correlation analysis of each variable (N = 1553)

	M	SD	1	2	3	4	5
1 Age	14.57	1.743	-				
2 Gender	1.580	0.494	0.079 ***	-			
3 Gratitude	5.733	1.004	0.066 **	0.012 **	-		
4 Life satisfaction	4.443	1.317	0.188 ***	0.076 **	0.296 ***	-	
5 Altruistic Behavior	5.621	1.061	-0.019	0.057 *	0.532 ***	0.231 ***	-

Note: Standard deviation in brackets; *** $P<0.001$, ** $P<0.01$, * $P<0.05$, the same as below.

4.3 Mediation Effect Test

Based on the research premise, the purpose of this study is to examine how life satisfaction among teenagers from ethnic minorities influences the relationship between prosocial behavior and gratitude. Utilizing altruistic behavior as the mediating variable, gratitude as the independent variable, and life satisfaction as the dependent variable, a simple mediation model was constructed. Following Model 4 in PROCESS 4.2 of SPSS plug-in program. The mediating effect was investigated using the bootstrap method. The results showed that altruistic behavior was strongly and favorably predicted by gratitude ($\beta =0.389$, $t=12.262$, $P<0.001$).When simultaneously considering both gratitude and altruistic behavior's impact on life satisfaction, it was found that gratitude had a noteworthy favorable impact on life satisfaction($\beta =0.313,t=8.386,P<0.001$),while altruistic behavior also significantly predicted life satisfaction ($\beta = 0.136,t=3.833,P < 0.001$),as presented in Table 2.

Table 2. Test of the mediating effect of altruistic behavior (N = 1553)

Outcome variable	Predictor variables	Overall fit index		Regression coefficient significance			95%CI
		R2	F	β	SE	t	
Altruistic behavior	Gender			0.108	0.046	2.343 ***	[0.018, 0.198]
	age			0.005	0.015	0.367	[0.235, 0.343]
	Gratitude	0.534	309.890	0.562	0.023	24.755 ***	[0.517, 0.606]
Life satisfaction	Gender			-0.134	0.066	2.016 *	[0.264, 0.003]
	Age			-0.133	0.021	6.304 ***	[0.175, 0.092]
	Gratitude	0.306	80.073	0.389	0.032	12.262 ***	[0.327, 0.451]
Life satisfaction	sex			-0.211	0.064	3.278 ***	[0.338, 0.085]
	Age			-0.135	0.021	6.539 ***	[0.176, 0.095]
	Gratitude			0.313	0.037	8.386 ***	[0.240, 0.386]
	Altruistic behavior	0.320	58.751	0.136	0.035	3.833 ***	[0.066, 0.205]

Zero is not included in the Bootstrap 95% confidence interval for a mediation model with altruistic behavior as the mediator. This suggests that all of the effects in the model—the total effect, the direct effect, and the intermediate effect—are statistically significant. Among teenagers from ethnic minorities, altruism plays a role in mediating the relationship between life satisfaction and gratitude. According to Table 3, the mediating impact's size is assessed to be 0.076, or 19.54% of the total effect.

Table 3. Bootstrap results of the mediating effect of altruistic behavior (N=1553)

	Effect size	Bootstrap Standard Error	Bootstrap 95% CI Lower	Bootstrap 95% CI Upper	Proportion of mediating effects
Direct Effects	0.313	0.037	0.240	0.386	80.46%
Intermediate effects	0.076	0.021	0.035	0.117	19.54%
Total effect	0.389	0.032	0.327	0.451	100%

Note: At the 0.001 level (two-tailed), the association was significant.

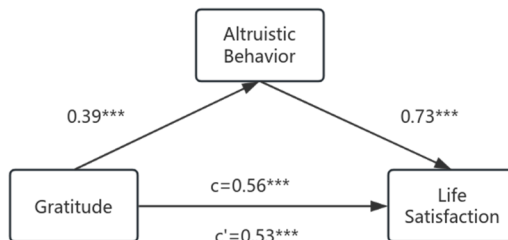


Fig. 2. Mediating model incorporating control variables
 Note: Non-standardized coefficients are reported; **p < 0.001

The aforementioned findings suggest that altruistic behavior plays a significant role in the impact of gratitude on life satisfaction, with altruistic behavior serving as a partial mediator. Thus, hypothesis 2 is supported. The mediating effect model of altruistic behavior is illustrated in Figure 2.

5 Discussion

5.1 The Relationship between Gratitude and Life Satisfaction

According to this study, life satisfaction is significantly predicted by appreciation. As a positive emotion, gratitude enhances individuals' psychological adaptability, fosters the development of psychological resources, and stimulates altruistic behavior. Moreover, apart from its own positive emotional experience, gratitude also facilitates the acquisition of additional psychological resources such as life satisfaction[6].As an influential force advocated by positive psychology, gratitude contributes to human flourishing. College students with better levels of gratitude are more inclined to cultivate hope and appreciate the overlooked beauty in real life while experiencing heightened positive emotions, thereby promoting healthier and happier lifestyles[7].

5.2 The Mediating Role of Altruistic Behavior

The results showed a robust correlation between these students' acts of altruistic behavior and gratitude, underscoring the important and favorable predictive role that gratitude plays in encouraging such action. Gratitude possesses a remarkable capacity to inspire individuals towards engaging in acts of altruistic behavior, including assisting others, cooperating, and making donations. When individuals experience profound feelings of gratitude, their inclination towards kindness is further stimulated and intensified, leading them to engage more frequently and enthusiastically in altruistic behaviors[8].Studies conducted by positive psychologists have demonstrated that gratitude has the potential to enhance individuals' subjective well-being and foster prosocial behavior. Individuals with a higher level of gratitude tend to exhibit increased altruistic tendencies when they receive benevolent assistance from others[9].This propensity for altruism not only facilitates the development of robust interpersonal networks but also contributes to an enhanced sense of support received.

Altruistic behavior concurrently plays a constructive role in fostering life satisfaction. At an individual level, altruistic behavior serves to enhance personal life satisfaction and imbue a sense of purpose[10],aiding individuals in effectively confronting negative emotions and maintaining mental well-being. On an interpersonal level, altruistic behavior facilitates improved communication, fosters stronger relationships, promotes social adaptation, and sustains harmonious interactions.

6 Conclusions

The present study investigates the underlying mechanism of life satisfaction, providing a more precise understanding of the intrinsic motivation and manifestation of life satisfaction. The key findings are as follows:(1)Gratitude, life satisfaction, and altruistic behavior exhibit a significant correlation.(2)Gratitude serves as a positive predictor for the life satisfaction levels among ethnic minority adolescents.(3)Altruistic behavior plays a partially mediating role in the association between life satisfaction and gratitude among adolescents from ethnic minority backgrounds. The focus of this study is on adolescents from ethnic minority backgrounds. For these groups, the findings can facilitate a deeper understanding and recognition of their own social behavior patterns, thereby promoting more proactive and altruistic behaviors in social interactions.

Notwithstanding the successes of this study, there are still several shortcomings and room for development. Firstly, questionnaire survey is mainly used in this study. Although it has high reliability and validity, it may still be affected by factors such as sample selection and subjective bias. Future studies can be combined with experimental methods, observation methods and other methods to obtain more comprehensive and in-depth data. Secondly, this study mainly uses cross-sectional data, which can not fully reflect the dynamic change relationship between variables. Subsequent research endeavors may employ longitudinal designs to delve deeper into the enduring impacts of gratitude, life contentment, and altruistic conduct. Finally, this study focuses on the effect of gratitude on the altruistic dimension of prosocial behavior, and while this dimension has important research value, prosocial behavior also includes multiple other dimensions. Future studies can further explore the impact of gratitude on other dimensions, as well as the interaction and synergy mechanisms between different dimensions.

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