

The Impact of Parental Behavioral Control on High School Students' Prosocial Behavior: A Chain Mediation Model

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Abstract

This study investigates the mechanism by which parental behavioral control influences high school students' prosocial behavior, focusing on the mediating roles of psychological resilience and gratitude. Analyzing data from 938 students, the authors find that parental control positively predicts prosocial behavior directly and indirectly through psychological resilience and a chain mediation of resilience to gratitude. However, gratitude alone does not serve as an independent mediator between parental control and prosocial behavior.

Keywords

Parental Behavioral Control, Psychological Resilience, Gratitude, Prosocial Behavior

1. Introduction

Prosocial behavior refers to a series of actions intended to benefit one or more individuals other than oneself [1]. Existing studies have confirmed that prosocial behavior plays a crucial role in maintaining positive interpersonal relationships [2], enhancing mental health [3] [4], and promoting social adaptation [5] [6]. It is not only an important link in maintaining interpersonal relationships and social harmony but also a core indicator of an individual's social growth and development [7]. For example, prosocial behavior can effectively safeguard the mental health of adolescents [8], facilitate the coordinated development of their learning and social skills [9], and promote the establishment of stable and positive intimate relationships with family members and peers [10]. The person-environment interaction theory suggests that the formation and development of individual behavior are the result of the interaction and joint shaping of individual

factors and environmental variables [11]. Prosocial behavior is vital for individual growth and development, and adolescence is a critical window period for the development of an individual's sociality, including prosocial behavior [12]. Therefore, based on the perspective of ecosystem theory, this study explores the impact of parental behavioral control, psychological resilience, and gratitude on high school students' prosocial behavior, aiming to provide a scientific basis for optimizing family interaction patterns and promoting the social development of adolescents.

Parental behavioral control refers to a management strategy implemented by parents to regulate their children's behavior through formulating behavioral norms, clarifying boundary scopes, and actively monitoring their children's daily dynamics, including direct supervision and active inquiry [13]. From the perspective of family systems theory, the mental health development of children is highly associated with the effective functioning of family systems, and good family functioning can promote children to exhibit more prosocial behaviors [14]; the socialization model of prosocial behavior also points out that as the core social interaction partners of adolescents, parents' parenting styles are important psychological supports for the formation and development of adolescents' prosocial behavior [15] [16]. As a relatively positive form of control, the restraint of children's behavior through parental behavioral control can not only make their behavior conform to social norms but also not cause psychological pressure on children [17]. Relevant studies have also confirmed this: Barber [18] found that the degree of parental behavioral control can negatively predict antisocial behavior; Wang *et al.* [19] pointed out that parental behavioral control can bring about positive social behavioral outcomes, such as improved learning ability and reduced disciplinary violations. Based on this, Hypothesis 1 of this study is proposed: Parental behavioral control can significantly and positively predict prosocial behavior.

Psychological resilience refers to an individual's psychological recovery ability displayed after encountering oppression, coercion, or major stress in social life [20]. The resilience system model suggests that the development of psychological resilience is the result of the interaction of internal and external factors, among which external factors include parents' parenting styles [21] [22], and the family, as a core external resource, can provide adolescents with protective factors such as a sense of security, emotional support, and belonging [23] [24]. Baldwin [25] proposed that parental behavioral control is one of the dimensions of positive parenting styles, which can enhance children's responsiveness and agility, thereby promoting the development of psychological resilience [26]. At the same time, individuals with high psychological resilience usually have more abundant psychological resources and are more likely to pay attention to the needs of others when coping with challenges, thus exhibiting more prosocial behaviors [27]. Existing studies have found that positive parenting styles can positively predict the level of psychological resilience of adolescents [28], and there is a significant positive correlation between psychological resilience and prosocial behavior [29].

Based on this, Hypothesis 2 of this study is proposed: Psychological resilience plays a mediating role in the relationship between parental behavioral control and prosocial behavior.

Gratitude, as a positive personality trait, refers to an individual's grateful emotion generated from the experience of receiving help on the basis of recognizing others' helping behaviors, accompanied by a tendency to repay [30]. The family is the core field for an individual's early socialization, and parents, as key interaction partners in the family system, their parenting models have an important impact on the shaping of their children's gratitude [31]. From the perspective of specific mechanisms, positive family interaction is an important support for the development of gratitude: when parents adopt appropriate parenting strategies and establish supportive connections with their children, they can effectively activate their children's gratitude awareness [32]; on the contrary, if parents exhibit rejecting parenting behaviors, it will reduce the level of gratitude of adolescents [33]. From a theoretical perspective, the moral emotion theory defines gratitude as an emotional trait with moral attributes, believing that its improvement can directly promote an individual's moral prosocial tendency, thereby reducing the occurrence of deviant behaviors. Existing empirical studies have shown that gratitude can positively predict prosocial tendencies [34], and the improvement of gratitude level can promote individuals to generate more prosocial behaviors [35]. Based on this, Hypothesis 3 of this study is proposed: Gratitude plays a mediating role in the relationship between parental behavioral control and prosocial behavior.

Both psychological resilience and gratitude are key protective factors for individuals to cope with negative life events [36] [37], and together they constitute the core psychological resource system for individuals to resist adversity and maintain mental health. From the perspective of conservation of resources theory, individuals with high psychological resilience have more efficient psychological resource management capabilities and can maintain the stability of resource reserves in stressful situations. This resource advantage enables them to more easily perceive positive cues in daily scenarios, thereby triggering gratitude emotions. Previous studies have shown that there is a significant negative correlation between the level of psychological resilience and the risk of psychological problems [38] [39]. Under adverse conditions, psychological resilience can also positively predict the development of positive personality traits such as extraversion, conscientiousness, and gratitude [40], and individuals with high resilience have a more prominent ability to perceive and express gratitude [41]. At the same time, individuals with high gratitude levels tend to reframe negative situations through positive cognition and enhance their ability to cope with adversity by actively constructing diverse personal resources [42]. They can not only obtain a higher level of subjective well-being [43] but also further promote the generation of prosocial behaviors by optimizing the quality of social relationships [44] [45]. Based on this, Hypothesis 4 of this study is proposed: Parental behavioral control indirectly affects prosocial behavior through the chain mediating role of psychological resilience and gratitude.

2. Research Methods

2.1. Participants

A total of 1,000 questionnaires were collected from a middle school in Shangrao City, Jiangxi Province, and 938 valid questionnaires were obtained, with an effective rate of 93.8%. Among them, 483 were male and 455 were female; 419 had rural household registration and 519 had urban household registration; the average age was 16.28 ± 0.86 years old; 311 were in Grade 10, 318 in Grade 11, and 309 in Grade 12.

2.2. Research Instruments

2.2.1. Parental Behavioral Control Subscale

The Parental Behavioral Control Subscale from the Chinese version of the Parental Control Scale compiled by Wang *et al.* [19] was used, which was self-reported by students and includes 16 items covering two dimensions: active inquiry and restrictive discipline. A 5-point Likert scale was adopted, ranging from 1 (completely inconsistent) to 5 (completely consistent). Higher scores indicate a higher degree of parental behavioral control. In this study, the Cronbach's α coefficient of this scale was 0.88.

2.2.2. Psychological Resilience Scale

The Psychological Resilience Scale compiled by Hu and Gan [20] was used, which includes 27 items. A 5-point Likert scale was adopted, ranging from 1 (completely inconsistent) to 5 (completely consistent). After reverse scoring some items, the sum of the scores of all items was taken as the total score of psychological resilience. Higher scores indicate better psychological resilience. In this study, the Cronbach's α coefficient of this scale was 0.81.

2.2.3. Dispositional Gratitude Scale

The Dispositional Gratitude Scale compiled by He *et al.* [30] was used, which includes 23 items. A 5-point Likert scale was adopted, ranging from 1 (completely inconsistent) to 5 (completely consistent). After reverse scoring some items, the sum of the scores of all items was taken as the total score of dispositional gratitude. Higher scores indicate a higher degree of dispositional gratitude. In this study, the Cronbach's α coefficient of this scale was 0.91.

2.2.4. Prosocial Behavior Scale

The Prosocial Behavior Scale compiled by Kou's research team [46] was used, which includes 15 items. A 7-point Likert scale was adopted, ranging from 1 (very inconsistent) to 7 (very consistent). The sum of the scores of all items was taken as the total score of prosocial behavior. Higher scores indicate a higher degree of prosocial behavior. In this study, the Cronbach's α coefficient of this scale was 0.89.

2.3. Data Analysis

SPSS 26.0 was used for common method bias test, descriptive statistics, and cor-

relation analysis, and PROCESS 3.0 was used for mediation effect test.

3. Results

3.1. Common Method Bias Test

This study collected data through self-reported scales, which may have the problem of common method bias [47]. Therefore, methods such as positive and reverse scoring and emphasizing confidentiality were adopted during the survey to control for it. Harman's single-factor test was used, and the results showed that there were 15 factors with eigenvalues greater than 1, and the first factor explained 20.53% of the total variance, which was less than the standard of 40%, indicating that there was no obvious common method bias in this study.

3.2. Descriptive Statistics and Correlation Analysis

Correlation analysis was conducted on parental behavioral control, psychological resilience, gratitude, prosocial behavior, and some demographic variables, and the specific results are shown in **Table 1**. The results showed that there were significant correlations between parental behavioral control, psychological resilience, gratitude, and prosocial behavior.

Table 1. Means, standard deviations, and correlation coefficients of variables.

Variables	$M \pm SD$	1	2	3	4	5	6
1. Parental behavioral control	2.77 ± 0.73	1					
2. Psychological resilience	3.01 ± 0.34	0.25***	1				
3. Gratitude	3.53 ± 0.57	0.13***	0.37***	1			
4. Prosocial behavior	4.96 ± 0.92	0.18***	0.33***	0.67***	1		
5. Gender	–	0.023	–0.04	0.05	0.07*	1	
6. Grade	–	–0.01**	0.03	–0.07	–0.08**	0.11**	1

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, the same below.

3.3. Mediation Effect Test

Model 6 of the SPSS plug-in PROCESS was used to test whether the chain mediating effect of psychological resilience and gratitude was significant. Gender and grade were used as control variables, and Bootstrap repeated sampling 5,000 times was used to test the mediation effect. The results of path coefficients are shown in **Figure 1**. Except that the direct effect of parental behavioral control on prosocial behavior was not significant ($p > 0.05$), all other paths reached a significant level ($p < 0.01$). The results of mediation effect analysis are shown in **Table 2**. Parental behavioral control had a significant positive predictive effect on high school students' prosocial behavior (effect value = 0.23, $p < 0.001$); when considering psychological resilience and gratitude, the direct effect of parental behavioral control on high school students' prosocial behavior was still significant (effect value = 0.10, $p < 0.01$). In addition, parental behavioral control can also have an indirect

impact on prosocial behavior through two indirect paths: Path 1: Parental behavioral control → Psychological resilience → Prosocial behavior (effect value = 0.03, 13.04%); Path 2: Parental behavioral control → Psychological resilience → Gratitude → Prosocial behavior (effect value = 0.07, 30.44%).

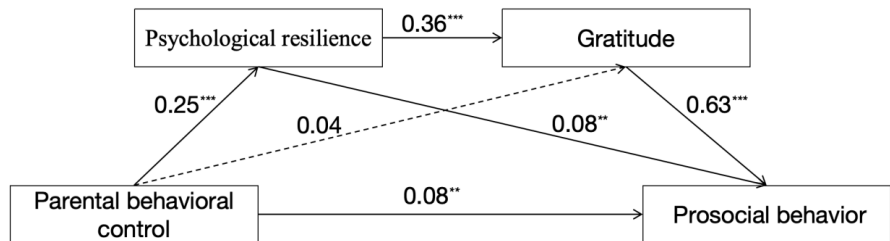


Figure 1. The impact of parental behavioral control on prosocial behavior: the chain mediating role of psychological resilience and gratitude.

Table 2. Results of the chain mediation effect test of parental behavioral control predicting prosocial behavior.

Effect	Path	Effect Value	Effect Size	95% CI	
				LLCI	ULCI
Direct Effect	Parental behavioral control → Prosocial behavior	0.10	43.48%	0.04	0.17
	Parental behavioral control → Psychological resilience → Prosocial behavior	0.03	13.04%	0.01	0.05
Mediation Effect	Parental behavioral control → Gratitude → Prosocial behavior	0.03	13.04%	-0.03	0.08
	Parental behavioral control → Psychological resilience → Gratitude → Prosocial behavior	0.07	30.44%	0.05	0.10
Total Mediation Effect		0.13	56.52%	0.06	0.19
Total Effect		0.23	100.00%	0.14	0.31

4. Discussion

4.1. The Impact of Parental Behavioral Control on Prosocial Behavior

The research results found that parental behavioral control significantly and positively predicted high school students’ prosocial behavior, verifying Hypothesis 1. This is consistent with previous research results. In the process of parents actively communicating with their children about their daily whereabouts and friendship status, children can not only obtain more guidance on behavioral norms and social development but also more clearly perceive their parents’ active care, thereby strengthening the emotional bond between parents and children, and ultimately promoting the improvement of their social adaptability and the development of prosocial behavior [48] [49]. In addition, self-determination theory holds that the full satisfaction of an individual’s basic psychological needs for autonomy, competence, and relatedness is the core prerequisite for obtaining intrinsic pleasure and satisfaction from activities themselves, and the satisfaction of these three basic

psychological needs will significantly promote the expression of an individual's prosocial behavior. Specifically, parents' behavioral control delineates clear behavioral boundaries for their children. Within the framework of rules, children can obtain space for independent decision-making and action, thus satisfying their need for autonomy; when children act in accordance with the rules guided by their parents and achieve positive results, they can often receive affirmation and recognition from their parents, thereby strengthening their need for competence; in the process of the above positive interactions, the trust and understanding between parents and children are continuously deepened, a high-quality parent-child relationship is constructed, and the children's need for relatedness is also satisfied. Parental behavioral control enables these three needs to be well met, so children are more likely to exhibit prosocial behaviors.

4.2. The Independent Mediating Role of Psychological Resilience

Parental behavioral control can indirectly affect prosocial behavior through the mediating role of psychological resilience, which is consistent with Hypothesis 2. Parental behavioral control is not the suppression and confinement of individual autonomy, but by building a stable and predictable growth environment for adolescents, guiding them to gradually master key adaptive skills such as emotion regulation and problem-solving in daily interpersonal interactions and life practices, thereby promoting the systematic improvement of individuals' psychological resilience levels. When individuals have a high level of psychological resilience, they are more likely to respond actively with a positive and resilient attitude when coping with the responsibility and empathy requirements in various interpersonal scenarios; when others are in trouble and in urgent need of support and assistance, they will not avoid interpersonal interactions due to potential pressure, and can also more flexibly coordinate the relationship between their own needs and the needs of others, ultimately transforming their internal adaptive traits into specific prosocial behavior performances. This mechanism is also consistent with the dynamic model of psychological resilience. The family is a crucial external protective resource for adolescents' growth. Through continuous positive attention to meet their children's multi-dimensional development needs, parents can effectively help them form good psychological qualities and cultivate a high level of psychological resilience [50], thereby enabling adolescents to reserve sufficient psychological resources to provide timely and effective help and support to others [51].

4.3. The Independent Mediating Role of Gratitude

The research results found that gratitude is not a mediator in the impact of parental behavioral control on prosocial behavior, which is inconsistent with Hypothesis 3. According to the "environment-cognition-behavior" interaction model, the effect of parental behavioral control, as an external environmental variable, on adolescents' behavior essentially depends on adolescents' cognitive evaluation and subjective interpretation of this parenting behavior. In the Chinese cultural con-

text, although adolescents tend to interpret their parents' behavioral control as a concrete expression of care and emotion [52], they are also very likely to attribute such behaviors to the parenting responsibilities that parents should fulfill, rather than additional efforts that need to be actively repaid. In addition, the multi-dimensional structure theory of gratitude also points out that the formation and development of gratitude are the result of the joint action of multiple factors, and its occurrence mechanism includes multiple links such as "emotional perception-intention attribution-value recognition". However, parental behavioral control can only provide children with a stable growth environment and guidance on behavioral norms, and a single dimension of behavioral constraint is difficult to cover the complete psychological process required for the generation of gratitude. Therefore, parental behavioral control is difficult to effectively stimulate adolescents' gratitude experience, so gratitude is not a mediator in the impact of parental behavioral control on prosocial behavior.

4.4. The Chain Mediating Role of Psychological Resilience and Gratitude

The research results found that parental behavioral control can affect high school students' prosocial behavior through the chain mediating role of psychological resilience and gratitude, verifying Hypothesis 4. According to ecosystem theory, the family microsystem is the core field for adolescents' physical and mental development. Parental behavioral control is not a purely restrictive force, but creates a safe and orderly growth environment for high school students by formulating clear behavioral norms and providing stable emotional support [17]. This control model that combines support and guidance can not only reduce the environmental uncertainty in adolescents' growth process but also enable them to have the internal confidence to actively explore and respond positively when encountering setbacks such as academic pressure and interpersonal conflicts, thereby laying a key external foundation for the cultivation of positive psychological qualities such as psychological resilience. Relevant studies have also shown that individuals with higher psychological resilience have a relatively lower probability of experiencing psychological problems [38] [39] and a more acute ability to perceive positive and kind cues in the environment [51], thus being more likely to trigger gratitude emotions. In addition, gratitude has significant moral attributes, and the motivation-stimulating and behavior-strengthening functions of morality can effectively drive and consolidate an individual's prosocial tendencies [53]. Therefore, parental behavioral control can affect high school students' prosocial behavior through the chain mediating role of psychological resilience and gratitude.

4.5. Research Limitations and Implications

This study reveals the mediating mechanism of psychological resilience and gratitude between parental behavioral control and high school students' prosocial behavior, providing a theoretical basis for clarifying the impact of family education

on adolescents' prosocial development and practical guidance for the cultivation of high school students' prosocial behavior. However, this study still has certain limitations: First, the study collected data through self-report methods, which are susceptible to subjective cognitive biases. In the future, multi-source data such as parents' and teachers' evaluations can be included to improve the objectivity of the results; second, this study adopted a cross-sectional design, which is difficult to clarify the causal relationship between variables. In the future, longitudinal tracking or intervention experiments can be used to further verify the causal relationship between variables; finally, this study focused on testing the mediating mechanism and did not examine the role of moderating factors. In the future, variables such as emotion regulation strategies can be introduced to deepen the understanding of the impact mechanism of prosocial behavior.

To promote the healthy development of high school students' prosocial behavior, it is necessary to rely on the joint efforts of families, schools, and society, focus on the positive guiding role of parental behavioral control, and activate the mediating effect of psychological resilience and gratitude. At the family level, parents should optimize their behavioral control strategies, abandon authoritarian control, adopt democratic and rational parenting styles, regulate their children's behavior on the basis of respecting their independent wishes, pay attention to cultivating their children's psychological resilience, guide them to learn to adjust in setbacks, and arouse their gratitude awareness to others and society through daily gratitude education. At the school level, psychological resilience training courses and gratitude-themed activities can be offered to systematically improve the psychological resilience level and gratitude tendency of children; at the same time, a home-school communication platform can be built to guide parents to implement behavioral control scientifically and form a joint force of home-school co-education. At the social level, the social support system should be improved, and practical scenarios for prosocial behavior should be created through community public welfare activities, peer mutual assistance groups, etc., to help them transform their internal psychological qualities into external prosocial behaviors. Only through multi-party coordination and precise policies can we effectively promote the development of prosocial behavior and help adolescents grow up healthily.

5. Conclusion

This study mainly draws three conclusions: (1) Parental behavioral control can significantly and positively predict prosocial behavior; (2) Psychological resilience plays a significant independent mediating role in the relationship between parental behavioral control and high school students' prosocial behavior; (3) Parental behavioral control affects prosocial behavior through the chain mediating path of "psychological resilience-gratitude".

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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