

RESEARCH ARTICLE

The influence of altruistic behavior of Chinese college students on class cohesion

Yinghao Shen^{1,2}, Man Jiang^{1*}

¹ Chinese International College, Dhurakij Pundit University, Bangkok, 10210, Thailand

² Faculty of Education, Guangdong University Of Petrochemical Technology, Maoming, 510520, China

* Corresponding author: Man Jiang, man.jia@dpu.ac.th

ABSTRACT

Low class cohesion is not conducive to developing a positive academic atmosphere and positive spirit in the class and on the campus. Therefore, class cohesion is of high importance for college students' growth. In recent years, class cohesion has gradually declined, and factors contributing to interpersonal disharmony among students have increased, posing a threat to their physical and mental health. Grounded in organizational identification theory, the study conducted a questionnaire survey and invited 651 college students from universities in Guangdong as participants. The results indicate that college students' altruistic behavior produces a significant positive impact on personal growth initiative and class cohesion; personal growth initiative significantly positively affects class cohesion; and personal growth initiative partially mediates the relationship between college students' altruistic behavior and class cohesion. This study verifies the role of altruistic behavior and personal growth initiative on college students' class cohesion, providing a theoretical basis for universities to enrich management models and maintain faculty stability.

Keywords: College students' altruistic behavior; class cohesion; personal growth initiative

1. Introduction

Strengthening college students' class cohesion, building a sound interpersonal relationship, and fostering personal growth initiative are significant for their physical and mental health, class construction, and school management ^[1]. In recent years, class cohesion in universities has gradually declined, while factors contributing to interpersonal disharmony among students have increased, harming their physical and mental development ^[2]. With rapid social development and changing campus environments, university class cohesion shows a declining trend ^[3]. Reasons contributing to this decline lie in regional differences in culture and custom, the implementation of credit systems, different educational backgrounds, differing values and outlooks on life, an increase in only children, more social activities, and dormitory exclusive behaviors ^[4]. This decline indicates low organizational identification within the class, weak sense of unity, cooperation, and collective honor, and insufficient collective participation ^[5]. For instance, students pay little attention to activities organized by student administration team members, leading to low participation and eventually dampening the enthusiasm of these organizers ^[6]. Subsequently, they would organize fewer activities, further

ARTICLE INFO

Received: 25 June 2025 | Accepted: 11 July 2025 | Available online: 22 July 2025

CITATION

Shen YH, Jiang M. The influence of altruistic behavior of Chinese college students on class cohesion. *Environment and Social Psychology* 2025; 10(7): 3911. doi:10.59429/esp.v10i7.3911

COPYRIGHT

Copyright © 2025 by author(s). *Environment and Social Psychology* is published by Arts and Science Press Pte. Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), permitting distribution and reproduction in any medium, provided the original work is cited.

undermining class cohesion^[7].

Class cohesion is closely related to smooth teaching and management^[8]. Low cohesion leads to disharmony among students, poor class and academic atmosphere, hinders their development, and does harm to class management^[9]. Therefore, it is urgent to enhance class cohesion, which plays an indispensable role in the healthy development of college students. Nevertheless, building strong class cohesion faces many difficulties^[10]. At present, undergraduates are mainly born after 2000, with more only children who are expressive and distinct. They prioritize freedom, hate constraints and preaching, and enjoy individuality over unified collective behaviors^[11].

College students' altruistic behavior refers to their voluntary actions aimed at helping others without obvious benefit to themselves^[12]. More frequent individual altruistic behavior produces more harmonious interpersonal relationships, higher belongingness, less willingness to leave the group, and thus greater vitality within the group^[13]. However, there are relatively few studies devoted to the deeper impact of altruistic behavior on college class cohesion. Relevant literature suggests that altruistic behavior can enhance class cohesion by fostering a friendly and supportive atmosphere, but very little in-depth study is available in other mediating pathways.^[14]

Altruistic behavior benefits personal growth initiative^[15]. Firstly, it not only positively affects others and society but also significantly contributes to the individual's growth and initiative^[16]. Personal growth initiative can enhance students' collective consciousness. Students who actively pursue personal development and participate in class activities are more likely to connect with others within the class^[17]. Xie et al.^[18] propose that students actively pursuing personal growth are more inclined to participate in class activities, thereby enhancing cohesion. Personal growth initiative motivates them to participate in class events, subsequently stimulating other students to participate and eventually fostering a cooperative atmosphere. Huang et al.^[19] proposed that active participation stemming from personal growth effectively boosts group collaboration; proactive students are more likely to establish supportive interpersonal networks, a key factor for class cohesion. Active students can stimulate others, creating a positive class atmosphere, which itself is a component of class cohesion^[20].

Existing literature indicates a close link between college students' personal growth initiative and class cohesion. Personal growth initiative significantly enhances cohesion by strengthening collectivism, promoting participation, and providing social support^[21]. To foster unity and cooperation, universities should encourage students to actively pursue personal growth and participate in class activities^[20]. This study focuses on the mediating role of personal growth initiative in this relationship. Much work so far has focused on the direct link between altruistic behavior and class cohesion^[22], while there is a dearth of literature devoted to the role of personal growth initiative as a mediator. Introducing personal growth initiative as a mediating variable helps examine the psychological mechanism through which altruistic behavior influences class cohesion^[23].

In summary, in China's higher education context, class cohesion is crucial for students' academic achievement and mental health. China's emphasis and investment in education enhance students' sense of belonging, potentially strengthening cohesion. This study aims to investigate the influence of Chinese college students' altruistic behavior on class cohesion and the mechanisms through personal growth initiative.

2. Literature review

2.1. Organizational identification theory

As a theory of social psychology, organizational identification originates from Cheney's [24] organizational identification model. Subsequent researchers proposed definitions different from March's from different aspects. Caban et al. [25] viewed it as an extreme relational model where individuals define their identity based on characteristics of their social groups. Ravasi and Rekom [26] saw it as a self-defining relationship aimed at maintaining emotional satisfaction and self-identity. Hidneori [27] defined it as the consistency between an individual's self-perception and their organizational identity. Considering cognitive and affective factors, he proposed organizational identification as a relationship linking an individual's self-conception to their organizational identity through cognitive and affective factors [28].

A class is an organization where students' identification with the class directly impacts its cohesion. Class cohesion is influenced by individual qualities, internal construction, and external support [28]. Cohesion is affected by individuals, such as values, goals, age, understanding of the organization, status/image within it, relationships with members, presence of leaders, satisfaction, [27], internal class factors (communication atmosphere, goals, values, culture, internal competition) [29], and external factors (class prestige, external support, inter-class competition, class image).

2.2. Impact of college students' altruistic behavior on class cohesion

College students' altruistic behavior refers to selfless concern and help for others [30]. Altruistic behavior benefits recipients and enhances class cohesion, which refers to the unity and shared purpose among members. In highly cohesive classes, students have a strong sense of belonging and deep emotional bonds with each other [31].

When one helps others, the recipients will feel warm and supported, consequently fostering trust in the helper. Trust helps establish reciprocal relationships, leading to their willingness for mutual support and a harmonious atmosphere [4]. Altruistic behavior encourages members to pursue common goals, strengthening collective consciousness [11]. It promotes emotional exchange and connection, increasing class identification and belonging. Widespread altruism creates a supportive, positive learning environment [32]. An improved atmosphere encourages participation in group activities and extracurricular communication. Inspired by others' positive actions, students are more willing to participate and express opinions, promoting exchanges and interaction [33]. Zhang et al. [34] found that altruism is related to social support and belonging. Altruistic behavior strengthens group ties, a key component of group cohesion [35].

Consequently, college students' altruistic behavior positively impacts class cohesion by building trust, enhancing a sense of belonging, and creating a sound learning environment. Encouraging altruism is a key strategy. Teachers and schools can organize group activities and volunteer services to promote mutual support and improve cohesion. The following hypothesis is proposed:

H1: The Altruistic behavior of college students in Guangdong has a significant positive impact on class cohesion.

2.3. Impact of college students' altruistic behavior on personal growth initiative

Altruistic behavior often enhances one's feelings of self-worth and achievement [36]. Gordon et al. [37] argued that successfully helping others boosts their confidence, motivating active pursuit of goals in areas like academics and careers. Saraswati and Winarsunu [38] suggested that college students can gain new experiences and skills by helping others, which promotes personal growth and increases self-efficacy. The sense of accomplishment and fulfillment motivates them to seek growth opportunities and challenges [36].

Grover et al. [39] proposed that altruism requires good communication skills. As a result, students can improve their social skills by helping others, which is essential for their personal development. Participating in altruistic activities can help them understand others' emotional needs, improve their emotional intelligence, and thus boost their sense of empathy and care, ultimately making them more proactive and successful in their future studies and careers. Individuals who engage in altruistic behaviors often experience greater life satisfaction and well-being, laying a strong psychological foundation for personal growth [38]. In an educational setting, students involved in teamwork and volunteer activities are more likely to exhibit higher self-efficacy and independent learning abilities, both of which are closely linked to the active pursuit of personal growth [39].

To conclude, college students' altruistic behavior significantly boosts their growth initiative by strengthening self-efficacy, internal motivation, and enhancing social skills and emotional intelligence. Therefore, promoting altruistic activities encourages personal development. Based on the above literature, the following hypothesis is proposed:

H2: The Altruistic behavior of college students in Guangdong produces a significant positive impact on personal growth initiative.

2.4. Impact of personal growth initiative on class cohesion

Xiao et al. [30] argue that proactive students tend to have stronger interpersonal skills and are more likely to build solid relationships with others. These positive relationships help strengthen trust and support among class members, boosting class cohesion [13]. Horn et al. [33] suggest that in a class where students are active, they are more willing to share insights, knowledge, and experiences, which fosters a positive learning atmosphere. Through cooperative learning and growth, the connections among class members become stronger, thereby enhancing class cohesion.

Shared efforts towards the same goals strengthen a strong collective identity, which enhances cohesion. In the face of problems and challenges, proactive students are more willing to propose solutions and promote implementation [16]. Zhang et al. [12] note that their positive attitude and innovation encourage the involvement of other students, building a cooperative atmosphere and consequently enhancing class cohesion. Proactive students are more likely to become leaders and role models, positively influencing others and promoting a positive class culture that attracts further participation and enhances cohesion [21].

In conclusion, students' growth initiative significantly strengthens class cohesion by increasing participation, building sound relationships, sharing knowledge and resources, fostering shared goals, enhancing the capacity for solving problems, and establishing a positive culture. Encouraging students to be active in their growth also enhances group consciousness and class collaboration. Based on this, hypothesis H3 is proposed:

H3: The Personal growth initiative of college students in Guangdong has a significant positive influence on class cohesion.

2.5. The mediating role of personal growth initiative

Personal growth initiative refers to an individual's tendency to take active action to promote development and achieve goals [40]. Among college students, it may mediate the relationship between altruistic behavior and class cohesion [32]. Altruistic behavior refers to actions benefiting others without direct personal benefit [41], such as helping others or doing voluntary work [40]. Class cohesion means the degree of connection, trust, and support among members, characterized by strong belonging and shared purpose [42].

Altruistic behavior helps students recognize the importance of helping others, stimulating their personal growth initiative ^[42]. Weigold et al. ^[43] found that personal growth initiative encourages more interaction and cooperation, strengthening connections among class members. It reinforces internal support networks, promoting resource sharing and mutual assistance, and consequently enhancing cohesion. When they engage in altruistic activities, they garner recognition and gratitude and strengthen trust through interaction ^[16]. Personal growth initiative reinforces it, focusing their attention on group interests rather than the single pursuit of personal goals ^[44]. Hypothesis H4 is proposed:

H4: Personal growth initiative of college students in Guangdong mediates the relationship between altruistic behavior and class cohesion.

3. Research methods

3.1. Research framework

Grounded in organizational identification theory, the study establishes altruistic behavior as the independent variable, class cohesion as the dependent variable, and personal growth initiative as the mediating variable. The research framework is shown in Figure 1.

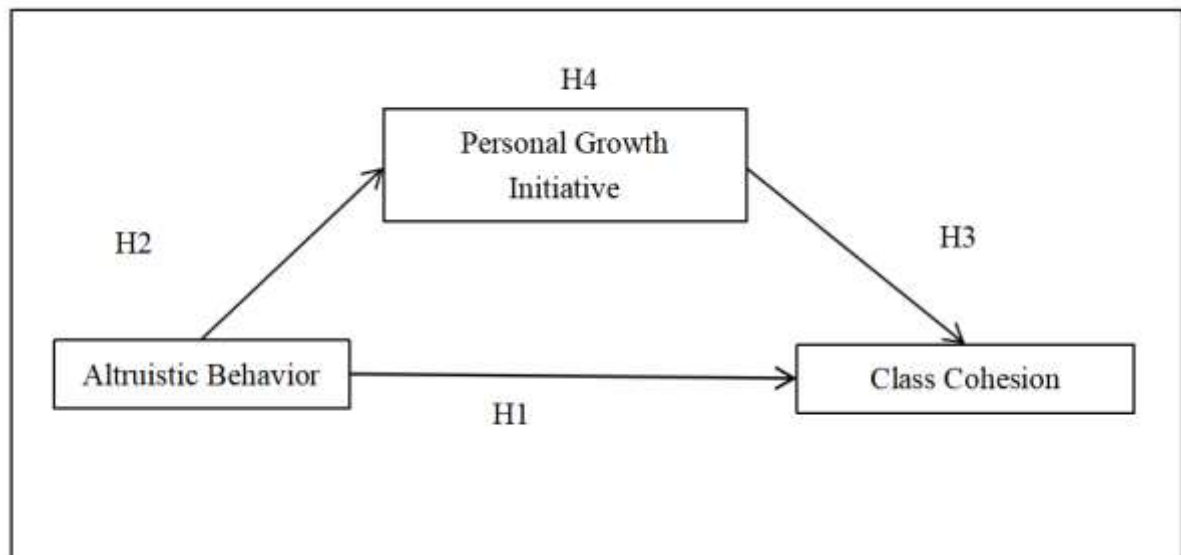


Figure 1. Research framework

3.2. Research subjects

Students from three universities in Guangzhou, Guangdong Province, were selected as research subjects. As one of the most advanced regions in China, Guangdong has maintained leadership in the manufacturing and service sectors, building an economic environment distinct from other areas. Selecting Guangzhou students enables the study to obtain an in-depth understanding of university students' psychological states and behaviors against the background of advanced economic development.

By employing convenience sampling, the study distributed 650 online formal questionnaires to students at three universities in Guangzhou. Invalid responses have been excluded. Data collection was conducted from January 15 to February 15, 2025.

Of 651 respondents ($n=651$), 312 were male (47.9%) and 339 were female (52.1%). Regarding year-level distribution, freshmen accounted for 200 participants (30.7%), sophomores 133 (20.4%), juniors 157 (24.1%), and seniors 161 (24.7%). See Table 1.

Table 1. Sample Demographic Statistics ($n=651$)

Statistical Variable	Category	Sample Size	Percentage
Gender	Male	312	47.900
	Female	339	52.100
Grade	First Year	200	30.700
	Second Year	133	20.400
	Third Year	157	24.100
	Fourth Year	161	24.700

3.3. Research instrument

This study employed the Altruistic Behavior Questionnaire designed by Rushton et al. [45], which consists of 22 items. It was scored on a 5-point scale, where 1 indicated “Strongly Disagree” and 5 indicated “Strongly Agree.” Higher total scores on the scale indicate a higher degree of altruistic behavior. The Cronbach’s Alpha was .952. The results of the goodness-of-fit indices are as follows: χ^2/df (1.356), SRMR (.020), RMSEA (.023), GFI (.967), AGFI (.959), NFI (.968), IFI (.992), CFI (.991), PNFI (.866), and PGFI (.783).

The Class Cohesion Scale, developed by Carron et al. [22], was employed in the study, which consists of six dimensions: group consciousness, shared group goals, acceptance of class rules and regulations, activity participation, teacher-student rapport, and harmony among students. Class cohesion was primarily measured with a questionnaire, which comprises 23 items with a 5-point Likert scale. All items are positively scored, with “Strongly Disagree” rated as 1, “Disagree” as 2, “Neutral” as 3, “Agree” as 4, and “Strongly Agree” as 5. The Cronbach’s Alpha for the overall scale was .799, and the coefficients for each dimension are as follows: group consciousness (.755), shared group goals (.795), acceptance of class rules and regulations (.810), activity participation (.786), teacher-student rapport (.766), and harmony among students (.836). The results of the goodness-of-fit indices are as follows: χ^2/df (1.231), SRMR (.018), RMSEA (.019), GFI (.968), AGFI (.959), NFI (.979), IFI (.979), CFI (.996), PNFI (.839), and PGFI (.733).

This study employed the Personal Growth Initiative Scale developed by Robitschek et al. [40] to measure personal growth initiative among college students. It consists of 16 items with a 5-point scoring system. The Cronbach’s Alpha was .941. The results of the goodness-of-fit indices are as follows: χ^2/df (1.231), SRMR (.018), RMSEA (.019), GFI (.968), AGFI (.959), NFI (.979), IFI (.979), CFI (.996), PNFI (.839), and PGFI (.733).

3.4. Data analysis methods

SPSS was used for reliability and validity analysis, descriptive statistics, common method bias (CMB) assessment, correlation analysis, regression analysis, and PROCESS modeling.

4. Research results

4.1. Common Method Bias (CMB) analysis

The Harman single-factor test was utilized to examine common method bias among the research variables ^[46]. In this method, a single method factor could account for the shared variance across all items measuring different constructs in a study. The greater the variance explained by this factor, the more severe the bias. The study examined the results of the non-rotated factor analysis by conducting exploratory factor analysis on the impact of altruistic behavior and personal growth initiative of college students on class cohesion in Guangdong. The results indicated that the variance explained by the first unrotated factor was 32.039%, below the critical threshold of 50%, suggesting that there is no significant common method variance ^[46].

4.2. Correlation analysis

Descriptive statistics and correlation analyses for all variables are shown in Table 2, suggesting altruistic behavior ($M = 3.229$, $SD = .916$), class cohesion ($M = 3.210$, $SD = .719$), and personal growth initiative ($M = 3.174$, $SD = .948$), indicating medium-high levels.

Furthermore, according to Pearson correlation analysis, statistically significant relationships were revealed among college students' altruistic behavior, class cohesion, and personal growth initiative ($p < .001$), with correlation coefficients ranging from .481 to .624. All coefficients remained below .700, indicating no multicollinearity issues ^[47]. Discriminant validity was confirmed through the Fornell-Larcker criterion, as the square root of the two variables' AVE exceeded their correlation coefficients ^[48].

Table 2. Descriptive Statistics and Correlation Analysis

Variable	<i>M</i>	<i>SD</i>	Altruistic Behavior	Class Cohesion	Personal Growth Initiative
Altruistic Behavior	3.229	.916	.707		
Class Cohesion	3.210	.719	.624***	.712	
Personal Growth Initiative	3.174	.948	.481***	.591***	.717

Note 1: $p < .001$.

2: Diagonal elements represent the square root of AVE, and entries below the diagonal refer to Pearson correlation coefficients.

4.3. Hypothesis testing

4.3.1. Impact of altruistic behavior and personal growth initiative on class cohesion

As can be seen from Table 3, multiple linear regression analysis was conducted to investigate the impact of altruistic behavior and personal growth initiative on class cohesion, with altruistic behavior and personal growth initiative as the independent variables and class cohesion as the dependent variable. According to the results, the model was significant ($F=323.634$, $p<.001$), and adjusted $R^2=.498$, suggesting that the two independent variables explained 49.800% of the variance in class cohesion. Altruistic behavior significantly positively affects class cohesion ($B= .442$, $p< .001$), supporting H1. Personal growth initiative has a significant positive impact on class cohesion ($B= .378$, $p<.001$), supporting H3.

Table 3. Regression analysis of altruistic behavior and personal growth initiative on class cohesion

Dependent Variable: Class Cohesion							
	Unstandardized Coefficient		Standardized Coefficient	<i>t</i>	<i>p</i>	Collinearity diagnostics	
	<i>B</i>	<i>SE</i>	<i>Beta</i>			<i>VIF</i>	Tolerance
Altruistic Behavior	.347	.025	.442***	13.947	.000	1.302	.768

Personal Growth Initiative	.287	.024	.378***	11.929	.000	1.302	.768
R ²			.500				
Adj. R ²			.498				
F			323.634***				

Note: $p < .001$; B = Unstandardized Coefficient, SE = Standard Error.

4.3.2. Impact of altruistic behavior on personal growth initiative

Linear regression analysis (Table 4) was conducted to examine the effect of altruistic behavior on personal growth initiative, with altruistic behavior as the independent variable and personal growth initiative as the dependent variable. The results suggest that the model was statistically significant ($F = 196.089$, $p < .001$), with an adjusted $R^2 = .231$, indicating that the two independent variables explained 23.100% of the variance in class cohesion. Altruistic behavior demonstrated a significant positive effect on personal growth initiative ($B = .482$, $p < .001$), suggesting that stronger altruistic behavior among Guangdong university students results in higher personal growth initiative. The results support Hypothesis H2: The Altruistic behavior of college students in Guangdong produces a significant positive impact on personal growth initiative.

Table 4. Regression Analysis of Altruistic Behavior on Personal Growth Initiative

Dependent Variable: Personal Growth Initiative							
	Unstandardized Coefficient		standardized Coefficient	t	p	Collinearity diagnostics	
	B	SE	Beta			VIF	Tolerance
Altruistic Behavior	.498	.036	.482***	14.003	.000	1.000	1.000
R ²				.232			
Adj. R ²				.231			
F				196.089***			

4.3.3. Mediating role of personal growth initiative

This study utilized the SPSS PROCESS plugin developed by Hayes [49], employing the mediation model (Model 4) to examine the effect of altruistic behavior on class cohesion, the effect of altruistic behavior on personal growth initiative, and the mediating role of personal growth initiative in the relationship between altruistic behavior and class cohesion. Background variables were not included in the regression analyses. According to Becker's [50] recommendation, control variables should be excluded from the model because they do not significantly impact the dependent variable.

To verify the mediating effect of personal growth initiative in the relationship between altruistic behavior and class cohesion, this study conducted the Bootstrap analysis, which Hayes [49] views as an effective approach for accurately testing mediation effects. Following Combs and Griffith's [51] advice, it was conducted with 5,000 samples and a 95% confidence interval. Mediation effect assessment criteria were as follows. A significant mediation effect is indicated when the 95% confidence interval of the indirect effect excludes zero. Full mediation occurs when the 95% confidence interval of the direct effect contains zero (indicating non-significance) while the indirect effect remains significant. Partial mediation is indicated when both direct and indirect effects have 95% confidence intervals excluding zero (reaching significance), with the total effect also showing significance [49].

Bootstrap results for the personal growth initiative are as follows. The total effect value was 0.490 ($p < .001$) with a 95% confidence interval of 0.442 to 0.537 (excluding zero). The direct effect value was 0.347 ($p < .001$) with a 95% confidence interval of 0.298 to 0.395 (excluding zero), accounting for 70.816% of the total effect. The indirect effect value was 0.143 ($p < .001$) with a 95% confidence interval of 0.019 to 0.184 (excluding zero), representing 29.183% of the total. The results reverify that personal growth initiative partially mediates the relationship between altruistic behavior and class cohesion, as shown in **Table 5**.

Table 5. Bootstrap test for mediation effect

Path	Effect	95% CI	
		LLCI	ULCI
Direct Effect: Altruistic Behavior => Class Cohesion	.347	.298	.395
Indirect Effect: Altruistic Behavior => Personal Growth Initiative => Class Cohesion	.143	.019	.184
Total Effect: Altruistic Behavior => Class Cohesion	.490	.442	.537

Note: *** $p < .001$; Bootstrap random samples = 5000.

5. Discussion and conclusion

5.1. Relationship between altruistic behavior and class cohesion

The study found that altruistic behavior significantly positively affects class cohesion among college students in Guangdong, China, supporting the hypothesis and remaining consistent with previous literature findings^[4,30,31]. It indicates that altruistic behavior is an important factor affecting college students' class cohesion by enhancing trust among classmates. When class members engage in altruistic behavior, they tend to work toward common goals, thereby strengthening the collective consciousness^[11]. Altruistic behavior promotes emotional communication, strengthens emotional bonds between classmates, enables students to be more identified with their class, and thus generates a strong sense of belonging. It helps create a helpful and positive learning atmosphere^[52].

5.2. Relationship between altruistic behavior and personal growth initiative

This study found that altruistic behavior positively and significantly influences students' personal growth initiative, supporting the study's hypothesis and remaining consistent with previous research findings^[39]. When college students achieve positive outcomes by helping others, they tend to have more self-confidence, which stimulates them to actively pursue goals in other fields such as academics and career development. Saraswati and Winarsunu^[38] suggest that through helping others, college students can acquire new experiences and skills, providing support for their personal growth and further enhancing self-efficacy when facing other challenges.

5.3. Relationship between personal growth initiative and class cohesion

According to the study, personal growth initiative positively and significantly influences class cohesion, supporting the hypothesis and remaining consistent with previous research findings^[1,13,16]. When every member actively participates and contributes their efforts, the overall cohesion will increase accordingly^[1]. Proactive students tend to have stronger interpersonal skills, and they are more likely to build sound relationships with others^[30]. Sound interpersonal relationships help strengthen trust and support among class members, thereby enhancing class cohesion^[13].

5.4. Relationship between altruistic behavior, personal growth initiative, and class cohesion

Based on the study findings, personal growth initiative plays a mediating role between altruistic behavior and class cohesion, supporting the hypothesis of this study and aligning with previous research findings^[16,40,44]. Students establish positive interactive relationships in the class by participating in various altruistic behaviors such as voluntary services and group activities. When they exhibit altruistic behavior, they often recognize the importance of helping others, stimulating their personal growth initiative^[42]. Personal growth initiative encourages them to engage in more interaction and cooperation, deepening emotional connections among class members^[43], which strengthens the internal network, enabling them to be more willing to share resources and support each other, thereby enhancing class cohesion. When students actively engage in altruistic behavior, they not only gain recognition and gratitude from others but also garner trust in each other through exchanges^[16], which fix their attention on the collective interests rather than mere pursuit of personal goals^[44].

6. Research contributions

6.1. Theoretical contributions

Organisational identification theory has been extensively studied and developed across disciplines such as psychology, management, sociology, and education. However, the field of altruistic behaviour among university students remains underexplored, and its impact should be examined in the context of class cohesion^[28]. Building upon existing literature, this study introduces personal growth initiative as a mediating variable between altruistic behaviour and class cohesion, thereby contributing new insights into the relationship between these constructs. The findings serve as a theoretical supplement to organisational identification theory and enhance the understanding of how these variables interact, thus improving the applicability of the theory.

Moreover, class cohesion is a widely studied topic in the field of education. To date, most research and theoretical development regarding class cohesion have been conducted in Western contexts, particularly in the United States. By situating the study within universities in Guangdong, China, this research provides a novel cultural and regional perspective, offering valuable insights for local university administration and future academic inquiry. Therefore, this study contributes to the application of organisational identification theory within higher education and promotes research and practical use of altruistic behaviour among students in educational settings. It also supports the broader applicability of the theory across different cultural and institutional contexts.

6.2. Practical contributions

This study finds that university students' altruistic behaviour and personal growth initiative significantly influence class cohesion. In practical terms, higher education institutions should consider measures to enhance class cohesion among students. These may include initiatives related to class culture development, the promotion of mutual assistance and care, and effective class management strategies aimed at fostering altruistic behaviours^[15].

The mediating role of personal growth initiative suggests that institutions should encourage student interaction and communication, thereby creating an environment that supports personal development. In addition, efforts should be made to cultivate students' interpersonal efficacy to strengthen class cohesion^[16], ultimately promoting students' holistic development. Altruistic behaviour, personal growth initiative, and psychological resilience are vital to students' academic, social, and personal development in university life^[35].

Enhancing students' altruistic behaviour and class cohesion not only facilitates better adaptation to academic and social life but also supports the establishment of positive career planning and long-term personal growth ^[34].

7. Recommendations

7.1. Guide and stimulate college students' altruistic behavior to enhance their comprehensive competence

College students' altruistic behavior can enhance class cohesion. Therefore, universities should create a campus environment of mutual assistance, sharing, and care. By participating in campus cultural activities, such as volunteer service and social practice, students are able to experience the joy of helping. team activities, such as collaborative games, class volunteering, and mutual aid study groups, help enhance team spirit and cohesion.

7.2. Guide personalized learning to enhance college students' personal growth initiative

Personal growth initiative can enhance class cohesion. Therefore, universities should foster a learning environment that encourages exploration and experimentation, where students feel safe and supported. Teachers and counselors should listen to their ideas and meet their needs, providing reasonable support and feedback. Helping them set personal goals can provide them with a clearer sense of direction ^[39]. By designing personal development plans, they can learn to reflect on themselves and set short-term and long-term goals, eventually promoting personal initiative.

Conflict of interest

The authors declare no conflict of interest.

References

1. Wang, H. (2024). Green mind and mental health among chinese college students: A chain mediating model of eco-generativity. *Sustainability*, 9(16), Article e20919. <https://doi.org/1.3390/su16177680>
2. Yang, Y., & Wang, C. (2022). Research on the effects of family rituals on subjective well-being of Chinese college students. *Current Psychology*, 23(9), 1-15. <https://doi.org/1.1007/s12144-022-03858-6>
3. Arnold, R. A., Burlingame, G. M., & Olsen, J. A. (2022). Supplemental material for the relationship of alliance, cohesion, and climate with outcome among college counseling populations. *Journal of Counseling Psychology*, 9(12), 109-112. <https://doi.org/1.1037/cou0000613.supp>
4. Albarosa, E., & Elsner, B. (2023). Forced migration and social cohesion: Evidence from the 2015/16 mass inflow in Germany. *World Development*, 12(9), 167-192. <https://doi.org/1.1016/j.worlddev.2023.106228>
5. Arthur, C., Graesser, Katja, Wiemer-hastings, & Roger, E. (2000). Quaid: A questionnaire evaluation aid for survey methodologists. *Behavior Research Methods Instruments & Computers*, 8(12), 209-211. <https://doi.org/1.3758/BF03207792>
6. Yu, J., Wang, Y., Tang, X., & Huang, J. (2021). Impact of family cohesion and adaptability on academic burnout of Chinese college students: Serial mediation of peer support and positive psychological capital. *Frontiers in Psychology*, 8(12), 218-222. <https://doi.org/1.3389/fpsyg.2021.767616>
7. Son, E., Lee, H., Cho, H., Choi, Y. J., & Seon, J. (2021). The effects of disability status and perceived neighbourhood cohesion and safety on adverse childhood experiences among college students. *Health & Social Care in the Community*, 9(13), 56-89. <https://doi.org/1.1111/hsc.13656>
8. Badash, M. (2021). Topic shifts in spontaneous interaction of speakers with schizophrenia: Cohesion and thematic structures. *Text and Talk*, 41(2), 141-163. <https://doi.org/1.1515/text-2019-0113>
9. Huang, L., Wang, Y., & Huang, H. (2020). Factors associated with family cohesion and adaptability among Chinese registered nurses. *Journal of Clinical Nursing*, 5(4), 73-92. <https://doi.org/1.1111/jocn.15527>
10. Plenty, S. M., & Jonsson, J. O. (2020). Students' occupational aspirations: Can family relationships account for differences between immigrant and socioeconomic groups? *Child Development*, 12(9), 309-341. <https://doi.org/1.1111/cdev.13378>

11. Jinhua, L., & Beibei, M. (2021). The influence of family cohesion on shyness of contemporary college students: The mediation role of emotional warmth. *Journal of Psychology & Behavior Research*, 3(1), 20-29. <https://doi.org/1.22158/JPBR.V3N1P9>
12. Zhang, H., Zhao, S., Peng, K., & Hu, X. (2024). Multicultural experience enhances altruistic behavior and mind perception toward robots: The mediating role of humanity. *Acta Psychologica Sinica*, 56(2), 146–160. <https://doi.org/1.3724/SP. J.1041.2024.00146>
13. Jia, H., Chuang, Y., Zheng, L., Xie, X., Song, Z., & Lai, L. (2024). Correction: The role of altruistic behavior and genetic influence of drd4 in resource gain and resource loss spirals. *Asia Pacific Journal of Management*, 41(2), 743-743. <https://doi.org/1.1007/s10490-023-09887-4>
14. Zheng, X., Zhu, X., Zhou, X., Xie, F., & Huang, L. (2022). Internet altruistic motivation promotes internet altruistic behavior: A moderated mediation model. *Current Psychology*, 2(9), 1-9. <https://doi.org/1.1007/s12144-022-03918-x>
15. Cartwright, E., Guo, Y., Wei, L., & Xue, L. (2023). Medical occupation preference under the influence of the covid-19 pandemic: The role of risk and altruistic preferences. *Health Economics*, 8(12), 302-309. <https://doi.org/1.1002/hec.4733>
16. Kaye, S. A., Rodwell, D., Watson-Brown, N., Rose, C., & Buckley, L. (2022). Road users? Engagement in prosocial and altruistic behaviors: A systematic review. *Journal of Safety Research*, 20(1), 63-70. <https://doi.org/1.1016/j.jsr.2022.06.010>
17. Fatma, U., Gülen, & Ahin, E. (2023). Gender difference in the relationship between academic self efficacy, personal growth initiative, and engagement among turkish undergraduates: A multigroup modeling. *Psychology in the Schools*, 8(12), 26-29. <https://doi.org/1.1002/pits.22952>
18. Xie, X., Tan, J., He, J., Du, J., He, C., & Li, Z., et al. (2024). The moderating role of work environment in the relationship between proactive personality and personal growth initiative among nurses: A cross-sectional study. *BMC Nursing*, 23(1), 62-78. <https://doi.org/1.1186/s12912-024-02040-6>
19. Huang, X., Lam, S. M., Wang, C., & Xu, P. (2023). Striving for personal growth matters: The relationship between personal growth initiative, teacher engagement and instructional quality. *British Journal of Educational Psychology*, 7(12), 39-42. <https://doi.org/1.1111/bjep.12583>
20. Tomi, M., & Macuka, I. (2023). Identity styles in emerging adulthood: The role of perfectionism and personal growth initiative. *Zdravstveni Glasnik*, 2(3), 10-18. <https://doi.org/1.47960/2303-8616.2023.17.45>
21. Wang, Y., Wang, Z., & Wang, F. (2024). Breaking the “insider’s dilemma”: A study on mindful intervention with wisdom—The role of personal growth initiative and reflection. *Psychological Development and Education*, 40(1), 142–152. <https://doi.org/1.16187/j.cnki.issn1001-4918.2024.01.15>
22. Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The group environment questionnaire. *Journal of Sport Psychology*, 7(3), 244-266. <https://doi.org/10.1002/job.4030060410>
23. Zhu, Y., Wang, J., Chen, T., Crant, M. J., Yang, X., & Li, C., et al. (2024). Can high performers take charge? The effects of role breadth self-efficacy and hostile interpersonal environment. *Journal of Business Research*, 34(2), 179-198. <https://doi.org/1.1016/j.jbusres.2024.114709>
24. Cheney, G. (1983). The rhetoric of identification and the study of organizational communication. *Quarterly Journal of Speech*, 69(2), 143-158. <https://doi.org/1.1080/00335638309383643>
25. Caban, S., Makos, S., & Thompson, C. M. (2022). The role of interpersonal communication in mental health literacy interventions for young people: A theoretical review. *Health Communication*, 3(12), 1-15. <https://doi.org/1.1080/10410236.2022.2121473>
26. Ravasi, D., & Rekom, J. V. (2003). Key issues in organizational identity and identification theory. *Corporate Reputation Review*, 6(2), 118-132. <https://doi.org/1.1057/palgrave.crr.1540194>
27. Hidneori, S. (2012). Emergence and development of organizational identity theory. *Transactions of the Academic Association for Organizational Science*, 8(9), 201-222. https://doi.org/1.11207/taaos.1.2_85
28. Georgallis, P. P., & Lee, B. (2020). Toward a theory of entry in moral markets: the role of social movements and organizational identity. *SAGE Publications Sage UK: London, England*, 3(1), 90-92. <https://doi.org/1.1177/1476127019827474>
29. Wakabayashi, T., & Kuroki, M. (2020). Organizational identity and performance in compensation contracts: Theory and evidence. *Behavioral & Experimental Accounting Journal*, 7(9), 101-109. <https://doi.org/1.2139/ssrn.3687868>
30. Xiao, S. X., Shi, Q., & Liew, J. (2022). Young adults’ intergroup prosocial behavior and its associations with social dominance orientation, social identities, prosocial moral obligation, and belongingness. *Journal of Social and Personal Relationships*, 4(17), 52-59. <https://doi.org/1.1177/02654075221096398>
31. Zhang, H., Liu, X. L., Cai, Y., & Sun, X. (2022). Paved with good intentions: Self-regulation breakdown after altruistic ethical transgression. *Journal of Business Ethics*, 186(2), 385-405. <https://doi.org/1.1007/s10551-022-05185-z>

32. Weigold, I. K., Porfeli, E. J., & Weigold, A. (2013). Examining tenets of personal growth initiative using the personal growth initiative scale-ii. *Psychological Assessment*, 25(4), 1396-1403. <https://doi.org/1.1037/a0034104>
33. Horn, D., Kiss, H. J., & Lenard, T. (2022). Gender differences in preferences of adolescents: Evidence from a large-scale classroom experiment. *Journal of Economic Behavior & Organization*, 3(9), 194-201. <https://doi.org/1.1016/j.jebo.2021.12.015>
34. Zhang, Y., Lin, X., Li, X., & Han, Y. (2023). The impacts of altruism levels on the job preferences of medical students: A cross-sectional study in china. *BMC Medical Education*, 23(1), 102-113. <https://doi.org/1.1186/s12909-023-04490-z>
35. Wang, C., Fu, W., Wu, X., & Wang, Y. (2023). Just world beliefs and altruistic behaviors of college students during the covid-19 pandemic: The mediating role of empathy. *Current Psychology*, 4(9), 1-11. <https://doi.org/1.1007/s12144-023-04233-9>
36. Niles, J. K., Gutierrez, D., Dukes, A. T., Mullen, P., & Goode, C. D. (2022). Understanding the relationships between personal growth initiative, hope, and abstinence self efficacy. *Journal of Addictions & Offender Counseling*, 9(12), 37-42. <https://doi.org/1.1002/jaoc.12099>
37. Gordon, A. S., Miller, D. I., Giesen, J. M., & Carskadon, T. (1982). Effects of equity and models on helping behavior in a non-threatening environment. *Psychology (Savannah, Ga.)*, 19(6), 32-34. <https://doi.org/1.1007/BF00830867>
38. Saraswati, P., & Winarsunu, T. (2021). Personal growth initiative and self-regulated learning in students with low intelligence potential. *Sains Humanika*, 4(8), 109-122. <https://doi.org/1.11113/sh.v13n2-3.1916>
39. Grover, P., Vashisht, A., Singh, L., & Mehdi, S. A. (2022). Entrepreneurial learning and entrepreneurial intention the mediating role of personal growth initiative. *International Journal of Business Innovation and Research*, 9(10), 389-452 <https://doi.org/1.1504/ijbir.2022.10050079>
40. Robitschek, C., Ashton, M. W., Spering, C. C., Geiger, N., Byers, D., & Schotts, G. C., et al. (2012). Development and psychometric evaluation of the personal growth initiative scale-ii. *Journal of Counseling Psychology*, 59(2), 274-287. <https://doi.org/1.1037/a0027310>
41. Patanapu, S. K., Doshi, D., Kulkarni, S., Reddy, P., & Reddy, S. (2018). Does academic performance influence personal growth initiative? An institutional-based study among undergraduate dental students. *Journal of Education and Health Promotion*, 7(1), 83-90. https://doi.org/1.4103/jehp.jehp_204_17
42. Matsuo, M. (2019). Personal growth initiative as a predictor of psychological empowerment: The mediating role of job crafting. *Human Resource Development Quarterly*, 30(3), 12-15. <https://doi.org/1.1002/hrdq.21347>
43. Weigold, I. K., Weigold, A., Dykema, S. A., Drakeford, N. M., Ethridge, E. T., & Fave, A. D. (2024). Personal growth initiative: Relation to coping styles, strategies, and self-efficacy. *Journal of Happiness Studies*, 25(6), 1-22. <https://doi.org/1.1007/s10902-024-00782-3>
44. Robitschek, C., Cukrowicz, K., Brown, S. L., & Ciavaglia, A. (2022). Personal growth initiative as a buffer against suicide ideation severity in psychotherapy outpatients with depressive symptoms. *Journal of Clinical Psychology*, 78(9), 1752-1763. <https://doi.org/1.1002/jclp.23333>
45. Rushton, E., Philippe, R., & Roland, D. (1981). The altruistic personality and the self-report altruism scale. *Personality and Individual Differences*, 2(4), 293-302. [https://doi.org/10.1016/0191-8869\(81\)90084-2](https://doi.org/10.1016/0191-8869(81)90084-2)
46. Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544. <http://dx.doi.org/1.1177/014920638601200408>
47. Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., & Lautenbach, S. (2013). Collinearity: A review of methods to deal with it and a simulation study evaluating their performance. *Ecography*, 36(1), 27-46. <https://doi.org/10.1111/j.1600-0587.2012.07348.x>
48. Guilford, J. P. (1950). *Fundamental statistics in psychology and education (2nd ed.)*. McGraw-Hill.
49. Hayes, A. (2013). Introduction to mediation, moderation, and conditional process analysis. *Journal of Educational Measurement*, 51(3), 335-337. <https://doi.org/10.1111/jedm.12050>
50. Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8(3), 274-289. <https://doi.org/10.1177/1094428105278021>
51. Combs, G. M., & Griffith, J. (2007). An examination of interracial contact: The influence of cross-race interpersonal efficacy and affect regulation. *Human Resource Development Review*, 6(3), 115-119. <https://doi.org/1.1177/1534484307303990>
52. Hui, Z., & Wenan, H. (2022). Egoism or altruism? the influence of cause-related marketing on customers' extra-role behavior. *Frontiers in Psychology*, 13(9), Article e799336. <https://doi.org/1.3389/fpsyg.2022.799336>