International Journal of Research Studies in Management
2025 Volume 13 Number 3, 265-286

Future self-continuity, intentional self-regulation, and academic grit among Chinese junior high school students

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ISSN: 2243-7770
Online ISSN: 2243-7789

OPEN ACCESS

Received: 13 April 2025 **Revised**: 5 May 2025 **Accepted**: 15 May 2025
Available Online: 20 May 2025 **DOI**: 10.5861/ijrsm.2025.25053

Abstract

In the context of increasing academic stress and China's "double reduction" policy, this study examines the relationships among future self-continuity (FSC), intentional self-regulation (ISR), and academic grit (AG) among Chinese junior high school students. A total of 993 students from six schools across two provinces participated in a descriptive survey using validated instruments. Results show that students exhibit low levels of FSC and moderate levels of ISR and AG. Demographic variables such as birthplace, parental education, occupation, and family income significantly influence these traits. Correlational analyses revealed significant positive associations among FSC, ISR, and AG. Regression analyses further demonstrated that both FSC and ISR significantly and positively predict academic grit. These findings suggest that students with a stronger sense of connection to their future selves and better self-regulation abilities are more likely to persevere in academic tasks. Based on the results, an intervention framework is proposed to enhance students' future orientation and self-regulation skills, thereby improving their academic grit. This study provides empirical support for the integration of psychological development strategies in educational practices to foster long-term academic persistence among Chinese adolescents.

Keywords: future self-continuity, intentional self-regulation, academic grit, junior high school students, educational psychology

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1. Introduction

In recent years, the psychological development and academic performance of Chinese junior high school students have garnered increasing attention. As a crucial stage in education, junior high school lays the foundation for students' future academic pursuits and personal growth. Understanding the psychological constructs that influence their academic journey is essential for educators and policymakers. This study focuses on three key psychological constructs: future self-continuity (FSC), intentional self-regulation (ISR), and academic grit, which are believed to play significant roles in the academic success and emotional adjustment of Chinese junior high school students.

Chinese junior high school students are in a critical period of physical, cognitive, and emotional development. They face unique challenges and pressures due to the educational system and cultural expectations. The transition from primary to junior high school marks an increase in academic workload and competition, which can lead to stress and anxiety. Moreover, the emphasis on academic performance in Chinese society puts additional pressure on students to excel. According to a study by Wang et al. (2023), approximately 16.6% of junior high school students struggle with poor school adaptation, which can affect their academic performance and mental health.

Future self-continuity refers to the degree to which individuals perceive a connection between their current self and their future self. It encompasses dimensions such as similarity, vividness, and positivity. Students with higher FSC are more likely to engage in future - oriented behaviors and make decisions that benefit their long - term goals. Research has shown that FSC is positively related to academic engagement and achievement. For instance, a study by Liu et al. (2024) found that future self - continuity was a significant predictor of college students' online learning engagement. Higher future self-continuity helps students maintain positive behaviors and cope effectively with challenges, yet studies indicate their current levels are low, with vague future self-images (Zhao, 2023; Yan, 2023; Liu, 2023). Enhancing future self-continuity in this group is an urgent priority.

Intentional self-regulation involves the conscious effort to adjust one's thoughts, emotions, and behaviors to achieve desired outcomes. It is a crucial skill for academic success as it enables students to manage their learning processes effectively. Empirical studies have demonstrated the positive impact of ISR on academic engagement. For example, a longitudinal study by Stefansson et al. (2018) showed that intentional self - regulation could positively influence student academic engagement over time. In the Chinese educational context, where students often face high - pressure academic environments, ISR can help them adapt and thrive. However, studies show many junior high school students struggle with intentional self-regulation, unable to allocate time and resources effectively (Sun, 2020; Zhou et al., 2022). Fostering intentional self-regulation is vital for the junior high school students.

Academic grit refers to the perseverance and passion for long - term academic goals. It is characterized by sustained effort and resilience in the face of obstacles. Grit has been consistently linked to better academic performance and reduced academic procrastination. A study by Wolters et. al.,(2015) found that grit was negatively related to academic procrastination in undergraduate students. For Chinese junior high school students, cultivating academic grit is essential for navigating the rigorous academic demands and achieving long-term success. A study showed that academic grit level of Chinese junior high school students was at a medium-low level (Guan et al., 2021). it is crucial to find ways to cultivate academic grit in Chinese junior high school students.

In China, the educational landscape is marked by intense competition and high expectations. The national college entrance examination (Gaokao) is a major determinant of students' future opportunities, leading to a strong focus on academic achievement from an early age. Additionally, the rapid pace of social and technological change requires students to be adaptable and resilient. The COVID - 19 pandemic has further exacerbated these challenges, with students facing disruptions in their learning and increased stress. According to a report by Hu et al. (2023), the pandemic has led to a sense of loss of control and anxiety about the future among students.

The interplay between FSC, ISR, and academic grit is of particular interest in understanding the academic success of Chinese junior high school students. FSC can positively predict grit, as students who see a clear connection between their present and future selves are more likely to develop perseverance. Intentional self-regulation is another important variable to predict academic perseverance, because intentional self-regulation can enhance the adaptability and endurance of individuals in the face of academic challenges by actively setting goals, monitoring progress and adjusting strategies, and thus promote the sustainable development of academic perseverance. This study aims to explore the relationships among future self - continuity, intentional self - regulation, and academic grit among Chinese junior high school students. By examining these psychological constructs within the unique social and educational context of China, the study seeks to provide insights into how these factors influence students' academic performance and emotional adjustment. The findings are expected to contribute to the development of targeted interventions and educational policies that support the holistic development of Chinese junior high school students.

Objectives of the Study - The purpose of this study was to explore the status quo of future self-continuity, intentional self-regulation, and academic grit of Chinese junior high school students, and to analyze the relationship among these three variables. Specifically, it described the profile of the respondents in terms of their sex, grade, place of birth, family income, if the only child, age, father's and mother's education level, and father's occupation; determined the level of future self-continuity, intentional self-regulation, and academic grit of the respondents; tested the differences of the three variables when compared based on their profile; established possible relationships among them; tested which significantly predicted junior high school students' academic grit; and proposed an intervention plan to improve the academic grit quality, future self-continuity and intentional self-regulation among Chinese junior high school students.

2. Methods

Research Design - In this study, the researcher used the descriptive survey method of research. Descriptive Survey Method is a commonly used research method aimed at systematically collecting, analyzing and describing the current situation or phenomenon in order to understand the characteristics or behavioral trends of the research object. This study will adopt the online survey to collect data. This study adopted the paper survey to collect data. This method is suitable for group testing, allowing researchers to collect large amounts of data in a relatively short period of time.The questionnaires used in this study includes: General Population Information, Future Self-Continuity Scale(FSCS), Intentionality Self-regulation Questionnaire (ISRQ), and Academic Grit Scale (AGC). A representative sample of junior high school students across different regions of China selected to ensure generalizability. This can be achieved through stratified random sampling, where schools are chosen randomly within each region, and then students are randomly selected within each school.

Participants of the Study - In six junior high schools from two provinces of China, a cluster sampling method was used to select 993 junior high school students from the total number of 8230 students. Cluster sampling is a probability sampling technique where the researcher divides the population into smaller groups called clusters. Then, a random sample of clusters is selected, and all individuals within the chosen clusters are included in the study sample. In this study, the target population comprises all junior high school students in Guangdong and Shanxi provinces. Instead of individually selecting students across these vast provinces, the researcher opted for a cluster sampling approach. The six junior high schools represent the clusters. To make the sample more representative. Among the six junior high schools selected, three are key junior high schools and

three are general junior high schools. Three are urban junior high schools and three are rural junior high schools. In these six junior high schoolss, there are students with different grades, including advanced Class and regular classes.

Measures

Future Self-Continuity Scale(FSCS). This is the standardized test to be used in measuring Chinese Junior High School students future self-continuity. It was compiled by Sokol et. al.,(2019), which was translated into Chinese and revised by Suo (2021) of Hebei University. The questionnaire mainly measures the closeness and consistency of the association between the future self and the present self. The questionnaire consists of 10 items and three dimensions, including similarity, vividness and initiative. The scale uses 6 points. The higher the total score, the closer the relationship between the future self and the present self, and the higher the continuity of the future self. Confirmatory factor analysis was performed for the scale in the study, and the result index was good $\chi 2$ / df = 1.77, RMSEA = 0.04, SRMR = 0.03, CFI = 0.99, TLI=0.98. The Cronbach 'α internal consistency coefficient of the scale was 0.85, indicating good reliability and validity. Zhao(2023) conducted this scale to study Chinese college students and found that the score of future self-continuity of Chinese college students was 37.50±7.71, which was at a medium level.

Intentionality Self-regulation Questionnaire(ISRQ). This was the tool used in measuring respondents intentionality self-regulation. The questionnaire was based on the SOC Questionnaire for Adults compiled by Freund and the Adolescents' Intentional Self-Regulation Questionnaire adapted by Gestsdottir (2007), combined with the Chinese cultural background, adopted Chinese samples, and modified the expression habits of the questionnaire to make it more suitable for Chinese adolescents. After translation and sorting, the internal consistency of the modified scale is 0.87, and the validity has been well verified (Liu, 2023). The questionnaire consists of 9 items. It is divided into 3 dimensions, 2 items are selected, 4 items are optimized, and 3 items are compensated. The scale is scored at 5 levels, without reverse scoring questions. 1 means completely inconsistent with the question, 5 means completely consistent with the question. The higher the score, the higher the level of intentional self-regulation. Liu(2023) used this scale to investigate Chinese senior high school students, and the results showed that the level of intentional self-regulation of senior high school students in China was above the medium level.

Academic Grit Scale(AGC). This is the questionnaire that used to determining respondents academic grit. It is is a 10-question questionnaire compiled by Clark et. al.,(2019). A 5-point scale is used, with 1 indicating complete non-compliance and 5 indicating complete compliance. The higher the score, the higher the level of academic grit. This is a single-dimensional scale that measures the extent to which individuals consistently work hard for academic goals. Clark et. al.,(2019) tested the scale among students aged 6-8 and found that the scale had high internal consistency reliability and validity. The internal consistency of AGS was 0.92. The fitting indexes of the single-factor model were as follows: RMSEA=0.05 [95%CI (0.04,0.06)], CFI = 0.98 and SRMR = 0.02. Clark et. al.,(2019) used this scale to test 13-17 year old students in the United States, with an average score of 4.82 ±1.17.

Data Gathering Procedure - According to the nature of junior high school students in China, surveys were conducted with junior high school students, which allowed the researcher to become familiar with their living and learning conditions. This process clarified the study setbacks in their lives and identified the types of help they needed to seek for their growth and development. The research direction was gradually determined. The researcher read relevant literature in the library, reviewed available information, and clarified the research topic, eventually determining the focus of the study and seeking permission from the teacher. Afterward, the researcher selected relevant measurement tools based on the research purpose. The chosen scale had been professionally validated and showed good reliability and validity, ultimately becoming the measurement tool for the study. The researcher emailed the scale creators to obtain their consent and used the corresponding measurement tools. Data were collected from surveys conducted at six junior high schools in Guangdong and Jiangxi provinces. Data

collection, analysis, and discussion were carried out based on the research results, and relevant suggestions were made to improve junior high school students' future self-continuity, intentional self-regulation, and academic grit.

Data Analysis - In terms of data processing, SPSS29.0, which is a software package used for statistical analysis, was used by the researcher. Due to the non-normal distribution, the statistical methods employed included descriptive statistics, Mann-Whitney U test, Kruskal-Wallis test, Spearman Rank Correlation, and regression analysis. SPSS offered a wide range of statistical tools, from basic descriptive statistics to complex multivariate analyses. Frequency and percentage were used to describe the profile of the respondents, whereas the weighted mean was utilized to determine respondents' future self-continuity, intentional self-regulation, and academic grit. To test differences among the three variables when compared based on their profile, Mann-Whitney U and Kruskal-Wallis H was employed, Spearman rank correlation was used to test the relationships among the three variables being studied, regression analysis was employed to examine the predictive effects of future self-continuity and intentional self-regulation on academic grit.

Ethical Consideration - In conducting this study, several ethical guidelines were followed to ensure the protection of participants and the integrity of the research process. Firstly, Prior to data collection, informed consent was obtained from all participants and their parents or legal guardians. Detailed explanations about the purpose, procedures, and potential risks of the study were provided, ensuring that participants fully understood their involvement Consent forms were given in clear, accessible language, and participants were informed that they could withdraw from the study at any time without consequences. Next, to ensure participants' privacy, all data was anonymized. No personally identifiable information was collected, and all data was coded using unique identifiers. Confidentiality was strictly maintained, and all data was securely stored and accessible only to the research team. Furthermore, the research ensured that no individual responses could be traced back to specific participants. Additionally, special care was taken to avoid any psychological distress or discomfort for participants. The study did not include sensitive topics that could cause harm. Participants were informed that they could skip any questions or withdraw from the study at any time without negative consequences. This approach helped reduce the risk of harm and ensured that participants felt comfortable during the research process. Moreover, participation in this study was completely voluntary, and students were assured that their involvement would not affect their academic performance or standing in any way. The study's procedures were designed to eliminate any coercion, ensuring that participants chose to participate freely. Finally, the research was reviewed and approved by the ethics committees of LPU. This approval ensured that the study adhered to ethical standards for research involving minors, in line with international guidelines for protecting human subjects. By adhering to these ethical principles, the study aimed to ensure that participants' rights and well-being were respected, while contributing valuable insights into academic grit and self-regulation in Chinese junior high schools students.

3. Results and discussion

Table 1 shows the frequency of the responses' demographic profile. Through this table, the researcher can discover the situation of junior high school student’s in terms of age, sex, grade, place of birth, whether they are only children, their father's education level, their mother's education level, their father's occupation, and their average monthly household income. Next, here analyzed the details of each aspect in detail.

In terms of age, the junior high school students have a minimum age of 12 and a maximum age of 16. The main age groups are 13 (25.7%), 14 (42.4%), and 15(20.8%), with only 4.1% students being 12 years old and 7.2% students being 16 years old, both of which are minority groups. It indicated majority of junior high school students are 13-15 , a small number are 12 or 16 .

In terms of sex, males accounted for 51.3% and females for 48.7%, with males slightly higher than females. The sex ratio is relatively balanced.

Table 1

Profile Distribution of the Respondents (N=993)

Profile	Frequency (*f*)	Percentage (%)
Sex		
Male	487	51.3
Female	462	48.7
Age		
12	39	4.1
13	244	25.7
14	403	42.4
15	197	20.7
16	68	7.2
Grade		
Grade 7	426	42.9
Grade 8	443	44.6
Grade 9	119	12.0
Place of Birth		
Rural	635	43.1
Town	102	44.8
City	199	12.0
If only Child		
Yes	76	8.0
No	870	92.0
Father's Education Background Level		
Primary School	96	10.02
Junior high schools	486	51.6
senior High School	141	15.0
Vocational School	83	8.8
Bachelor's Degree	122	13.0
Master's Degree	8	0.9
Doctorate	5	0.5
Mather's Education Background Level		
Primary School	220	23.3
Junior high schools	404	42.9
senior High School	121	12.8
Vocational School	79	8.4
Bachelor's Degree	107	11.4
Master's Degree	7	0.7
Doctorate	4	0.4
Father's Occupation:		
Temporary Worker/Migrant Worker/Unemployed	253	27.9
Manual Laborer	304	33.5
Skilled Worker	91	10.0
Office Staff	89	9.8
Junior Management/Junior Technical Staff	76	8.4
Middle Management/Middle Technical Staff	55	6.1
Senior Management/Senior Technical Staff	39	4.3
Average Monthly Household Income:		
Below 5000	242	26.7
5001-10000	372	41.1
10001-15000	109	12.0
15001-20000	99	10.9
20001-25000	32	3.5
25001-30000	21	2.3
30001-50000	16	1.8
Above 50000	15	1.7

In terms of grade, the main grade groups are grade7 (43.1%), and grade 8 (44.8%), with only 12% students being grade 9. This is due to the high learning pressure of grade9 students in China, and there is a certain difficulty in sampling.

In terms of whether they are only children, there are just 8% junior high school students who belong to only children and 92% belong to non-only children. It can be found that junior high school students from non-only children families are significantly more than those from only children. In Chinese families, they all hope for both

children, so there are relatively more families with two children than those with only one child.

In terms of place of birth, there are 67.8% junior high school student from urban areas,10.9% from town areas, and 21.3% from city. The reason why there are fewer junior high school students from town and city areas than from rural areas is mainly because the current town and city population in China is relatively small compared to the rural population, so there are relatively more junior high school students from rural families.

In terms of father's education, the highest proportion is junior high school (51.6%) and senior high school (15.0%).The lowest proportion is master's(0.9%) and doctoral degrees(0.5%). The medium proportion is bachelor's degree(13.0%), vocational School(8.8%), Primary School(8.6%), Illiterate or barely literate (1.6%). In terms of mother's education, the highest proportion is junior high school (42.9%) and primary school (19.7%).The lowest proportion is master's(0.7%) and doctoral degrees(0.4%). The medium proportion is senior high school(12.8%), bachelor's degree(11.4%), vocational School(8.4%), Illiterate or barely literate (3.6%).This shows that the proportion of father and mother of junior high school with low education is much higher than the proportion with high education, and the proportion who did not go to college is much higher than the proportion who went to college. This may be because the entry standard of college education is relatively high in China, so that most people do not have the opportunity to take the college education. Data also show that the educational level of mothers in junior high school is lower than that of their fathers. This may be related to the traditional Chinese view of love and marriage, men are used to looking down when looking for a partner, but women are used to looking up. Thus, in the educational level of parents, there is an overall male-female phenomenon.

In terms of father's Occupation, the highest proportion is Manual Laborer (33.5%) and Temporary Worker/Migrant Worker/Unemployed (27.9%). The medium proportion is Skilled Worker (10%), Office Staff (9.8%), and Junior Management/Junior Technical Staff (8.4%). The lowest proportion is Middle Management/Middle Technical Staff(6.1%), and Senior Management/Senior Technical Staff(4.3%). This shows that the proportion of the proportion of fathers engaged in physical work is higher than that engaged in mental work. This may be related to China's industrial structure, which is mainly labor-intensive. Therefore, in China, the proportion of manual workers is high.

In terms of Average Monthly Household Income, the highest proportion is 5001-10000(41.1%), and Below 5000(26.7%). The medium proportion is 10001-15000(12.0%), and 15001-20000(10.9%). The lowest proportion is 20001-25000(3.5%), 25001-30000(2.3%), 30001-50000(1.8%), and Above 50000(1.7%). This shows that the proportion of low monthly family income is higher than that of high monthly family income. China's population is too large, most people can only achieve poverty alleviation or well-off, but the proportion of rich people is still small.

Table 2

The Level of Future Self-Continuity of the Respondents

Items	Weighted Mean	Std Dev.	Verbal Interpretation
Similarity	13.2722	4.36727	
Vividness	10.4866	3.34779	
Positivity	12.1314	3.82163	
FSCQ	35.8711	9.50532	Below Median

Legend: Md=36

Table 2 provides descriptive statistics on the future self-continuity for Chinese junior high school students. The future self-continuity is divided into three dimensions, with an average score of 13.27 for similarity and a standard deviation of 4.37; The average score for vividness is 10.49, with a standard deviation of 3.35; The average score for positivity is 12.13, with a standard deviation of 3.82; Finally, the average score for junior high school students' future self-continuity is 35.87, with a standard deviation of 9.51. The above data indicates that in this study, the future self-continuity of Chinese junior high school students was at a relatively low level. Consistent with previous research results, it indicates that the overall future self-continuity among Chinese junior high school students is in the low level (Zhang et al. , 2022). In all dimensions, the score of vividness is lower

than similarity and positivity, indicating that most Chinese junior high school students can not form in their minds when they process the future self.

Through analysis, it can be concluded that the overall level of future self-continuity of Chinese junior high school students is below median. This is likely closely related to the multiple pressure environments and cultural cognitive characteristics of contemporary Chinese adolescents. First, the high-intensity academic competition (such as the pressure of tracking in the high school entrance examination) forces adolescents to focus on short-term goals, weakening their long-term imagination and emotional connection with their future selves (Zhang et. al.,2021). Second, the culture of instant gratification brought by digital media (such as short videos) has fragmented the perception of time, leading to the vagueness of the representation of the future self (Wang et al., 2023). In addition, family inter-generational control (such as excessive planning by parents) suppresses adolescents' autonomous exploration, reducing their sense of control over their future selves (Li et. al,2021). The sense of losing control caused by the pandemic and the anxiety about social mobility during the economic transformation period (Hu et al., 2023) have further exacerbated this trend. It is worth noting that the norm of "obeying the present" in collectivist culture may interact with the incomplete development of the pre frontal lobe during adolescence (Liu et al., 2023), jointly limiting the cognitive integration of the continuity of the future self. This result suggests that it is necessary to enhance adolescents' future narrative ability in educational reform and alleviate the constraints of structural stress on their psychological development.

Table 3

The Level of Intentional Self-Regulation of the Respondents

	Weighted Mean	Std Dev.	Verbal Interpretation
Selection	9.7909	2.59495	
Optimization	10.4241	2.34338	
Compensation	9.7459	2.09278	
ISRQ	29.9432	5.57249	Median

Legend: Md=30

Table 3 provides descriptive statistics on the intentional self-regulation for Chinese junior high school students. The intentional self-regulation is divided into three dimensions, with an average score of 9.79 for selection and a standard deviation of 2.59; The average score for optimization is 10.42, with a standard deviation of 2.34; The average score for compensation is 9.75, with a standard deviation of 2.09; Finally, the average score for junior high school students' intentional self-regulation is 29.94, with a standard deviation of 5.57. The above data indicates that in this study, the intentional self-regulation of Chinese junior high school students was at a relatively low level. Consistent with previous research results, it indicates that the overall intentional self-regulation among Chinese junior high school students is in the low level (Wang et al., 2025; Liu et. al.,2023). In all dimensions, score of compensation is lower than selection and optimization, indicating that most Chinese junior high school students can not choose to find alternative ways to offset the loss in order to maintain functional levels when faced with blocked path to a goal or failure to achieve the goal, most students.

It can be concluded that the overall level of intentional self-regulation of Chinese junior high school students is at the median. This finding may reflect the interaction between stage-specific developmental characteristics during early adolescence and contextual support systems. Research indicates that junior high school is a critical period for the development of intentional self-regulation, yet its maturation requires a gradual transition from passive to active regulatory strategies. For example, a longitudinal study by Chang et al. (2020) revealed a linear increasing trend in intentional self-regulation among junior high school students, though their baseline levels may be constrained by limited early developmental resources, manifesting as a moderate starting point. Further research by Zhang et al. (2024) demonstrated that the predictive effect of intentional self-regulation on mental health is significantly weaker in junior high students compared to senior high students, likely due to incomplete neuro cognitive maturation, which limits the efficiency of self-regulatory strategies.

Future studies should adopt a dynamic developmental lens to explore qualitative shifts in intentional

self-regulation during the transition to senior high school (Chang et al., 2020). Educators are advised to implement tiered interventions, such as cognitive strategy training for low-resource groups and goal optimization programs for high-resource cohorts (Zhang et al., 2024).

In conclusion, the moderate levels of intentional self-regulation found in this study suggest that Chinese junior high school students have the potential to develop stronger self-regulatory skills. By providing targeted support and opportunities for practice, educators can help students cultivate higher levels of self-regulation, which in turn could enhance their academic achievement.

Table 4

The Level of Academic Grit of the Respondents

Variable	Weighted Mean	Std Dev.	Verbal Interpretation
AGS	32.29	7.71	*Median*

Legend: Md=32

Table 4 provides descriptive statistics on the academic grit of Chinese junior high school students. It can be noticed that the average score of academic grit among Chinese junior high school students in this study is 32.29, with a standard deviation of 7.71, which is generally at the median. The above data indicates that in this study, the academic grit of Chinese junior high school students was at a medium level. This research finding is highly consistent with the results of Peng (2025) survey of 466 junior high school students in Shangrao City, indicating that junior high school students generally exhibit a moderate level of academic grit when facing academic challenges. This result is somewhat more conservative compared to the study conducted by Wu et al. (2023) in Heilongjiang and Inner Mongolia, which reported a "moderately high level." The discrepancy may arise from differences in educational resource allocation across sample regions or variations in the sensitivity of the measurement tools employed.

The moderate level of academic grit among Chinese junior high school students may be attributed to a combination of educational, cultural, and socio-economic factors. First, China's exam-oriented education system emphasizes high-stakes standardized testing (e.g., the Zhongkao), which may lead students to prioritize short-term performance goals over long-term perseverance (Lei et. al.,2021). While this system fosters diligence, it might inadvertently suppress intrinsic motivation and sustained passion for learning, key components of grit. Second, socio-economic disparities likely play a role. Students from rural or low-income families often face resource constraints and lower parental educational investment, which correlate with reduced non-cognitive skill development, including grit (Lei et. al.,2021). Third, teacher support and classroom environments mediate this relationship. Wang (2022) found that teacher academic support enhances learning engagement, which partially explains grit's impact on achievement. However, uneven distribution of quality educational resources across urban and rural schools may limit consistent teacher-student interactions, weakening grit cultivation. Culturally, collectivist values emphasizing conformity and effort might mask true grit levels, as students may outwardly adhere to perseverance norms without internalizing sustained goal-directed passion. This aligns with findings that Chinese students' self-reported non-cognitive skills often show mid-range scores despite strong academic performance (He et. al.,2024). Future research should explore longitudinal changes in grit trajectories and contextual moderators like curriculum reforms under the "Double Reduction" policy.

Table 5 indicates the difference in respondents' future self-continuity when compared to their profile. The analysis of demographic variables in future self-continuity of junior high school students in this study found that there were no significant differences in future self-continuity among junior high school students in terms of sex, age, grade, if only child, and father's education lever. This is consistent with previous research results (Chen, 2023; Shang, 2022). However, there were significant differences in future self-continuity among junior high school students in terms of place of birth, mother's education level, father's occupation and the average monthly household income.

In terms of place of birth, the total score of future self-continuity and the score of similarity and vividness has significant difference in terms of place of birth.the score of who was born in town and city were significant higher than who was born in rural. This is in contrast to the findings of Shang (2022) and Chen (2023), who showed no significant difference in future self-continuity at birth. This difference in results may be due to the fact that the two studies only divided birth places into urban and rural areas. This study further classifies it into urban, urban and rural areas. Towns are between rural and urban in economy, education and size. After refinement, the post-test results show that the differences mainly exist between cities and rural areas, and the differences between towns and cities, and between towns and rural areas are not significant.

Table 5

Differences of Responses on Future Self-Continuity When Grouped According to Profile

Profile Variables/ FSCQ	*H/U*	*p-Value*	Interpretation
sex			
Similarity	105453.000	0.719	Not Significant
Vividness	103152.500	0.595	Not Significant
Positivity	104584.500	0.995	Not Significant
FSCQ	96333.500	0.819	Not Significant
AGE			
Similarity	0.726	0.948	Not Significant
Vividness	8.963	0.062	Not Significant
Positivity	5.206	0.267	Not Significant
FSCQ	4.852	0.303	Not Significant
GRADE			
Similarity	0.092	0.955	Not Significant
Vividness	1.553	0.460	Not Significant
Positivity	1.162	0.559	Not Significant
FSCQ	0.051	0.975	Not Significant
PLACE OF BIRTH			
Similarity	8.399	0.015	Significant
Vividness	11.489	0.003	Significant
Positivity	1.902	0.386	Not Significant
FSCQ	9.487	0.009	Significant
ONLY CHILD			
Similarity	31820.500	0.869	Not Significant
Vividness	28679.500	0.197	Not Significant
Positivity	29933.500	0.481	Not Significant
FSCQ	27945.000	0.369	Not Significant
FATHER'S EDUCATIONAL LEVEL			
Similarity	12.395	0.088	Not Significant
Vividness	9.193	0.239	Not Significant
Positivity	10.648	0.155	Not Significant
FSCQ	13.424	0.062	Not Significant
MOTHER'S EDUCATIONAL LEVEL			
Similarity	16.442	0.021	Significant
Vividness	8.739	0.272	Not Significant
Positivity	15.518	0.030	Significant
FSCQ	18.148	0.011	Significant
FATHER'S OCCUPATION			
Similarity	10.443	0.107	Not Significant
Vividness	22.807	0.001	Significant
Positivity	9.727	0.137	Not Significant
FSCQ	21.422	0.002	Significant
AVERAGE MONTHLY HOUSEHOLD INCOME			
Similarity	15.550	0.030	Significant
Vividness	16.010	0.025	Significant
Positivity	14.359	0.045	Significant
FSCQ	23.039	0.002	Significant

This may be due to the following reasons: First, differences in educational resources: urban areas are rich in educational resources, more learning opportunities, and high quality of education, which is conducive to students' future planning and self-continuity. The limited educational resources, poor learning conditions and low quality of education in rural areas affect students' future planning and self-continuity. Second, the difference in

family environment: urban junior high school students get more care and support from parents, have more opportunities and resources to develop interests and clear future direction. Rural junior high schools students may be due to limited family economic conditions, lack of opportunities and resources, future planning and self-continuity is relatively weak. The atmosphere of urban family education is open and inclusive, focusing on children's all-round development and personality training; The rural family education atmosphere is conservative and traditional, and pays more attention to academic performance and obedience. Third, social environment and interpersonal relations: urban junior high school students have a wide social circle, and diversified social experience helps to broaden their horizons and enrich their experiences. Rural junior high schools students have limited social circles, which may be unable to have extensive social contact due to geographical location and family conditions. Urban junior high school students have access to more information and resources to help them understand the world, understand themselves and plan for the future. Junior high schools students in rural areas may lack opportunities and experiences due to the lack of information and resources. It can also be seen from Table 5 that there are differences in similarity and vividness, but no differences in positivity. This may be because the differences in school, family and social education will affect the cognitive differences in the future self-continuity of individuals, but have little impact on the emotional differences.

In terms of parent education level, the total score of future self-continuity and the score of similarity and vividness has significant difference, however it has no significant difference in terms of father's education level. This may be because in China, the sex division of labor in the family is still very clear, in most families, the father is mainly responsible for earning the family, and the mother does most of the work of raising children. Therefore, the mother's education level has a greater impact on the child. More educated mothers may pay more attention to all aspects of their children's education, as well as lead their children's future planning, and motivate their children with a positive future. As a result, there is a higher level of similarity in future visions and a higher level of positive emotions.

In terms of father's occupation, the total score of future self-continuity and the score of vividness has significant difference. Post-examination found that the children whose fathers had stable jobs were more active in imagining the future than those whose fathers had unstable jobs (Temporary Worker/Migrant Worker/Unemployed). This may be because the father's occupation provides a reference role for the child's future planning, and the father's stable occupation can improve the child's clarity of future self-imagination, so the score of vitality dimension is higher.

In terms of average monthly household income, the total score of future self-continuity and the score of similarity and vividness have significant difference. Junior high school students with higher family income score higher on the similarity dimension of future self-continuity, which may be due to the following two reasons. First, the education path is the same. Superior family economic conditions enable junior high school students to receive more stable and systematic education, and the family has planned a clear education path for them, whether it is domestic or international education, which has pointed out the direction for them, resulting in similar expectations and plans for the future. Second, social role expectations are clear. High-income families have clear expectations of their children's future social roles, such as professionals, entrepreneurs, etc., and promote the development of children towards these goals, enhancing the similarity of self-continuity. Junior high school students with high family income have a higher vitality in the future self-continuity, which may be because: first, they have the opportunity to contact with diverse experiences such as travel, art, and social practice, to broaden their horizons and visualize future life scenes. Second, family financial support enables them to have an in-depth understanding of different careers, plan a clear career path through internships, volunteer services, etc., and enhance their future self-identity and vitality.Junior high school students from high-income families have a higher enthusiasm for future self-continuity, which may be due to the following reasons: First, children from high-income families have more support and encouragement in the process of growing up and build up a confident attitude. They are not only confident in their studies, but also have a positive attitude towards their future life and believe that they can achieve their goals. Second, due to the family financial support, they are more courageous in pursuing their dreams, dare to try new things and challenge themselves, and this

spirit makes them more positive to face the future and push themselves to keep moving forward.

Table 6

Differences of Responses on Intentional Self-Regulation When Grouped According to Profile

Profile Variables/ ISRQ	*H/U*	*p-Value*	Interpretation
sex			
Selection	100766.000	0.008	Significant
Optimization	108418.000	0.715	Not Significant
Compensation	106071.500	0.347	Not Significant
ISRQ	104525.500	0.484	Not Significant
AGE			
Selection	12.016	0.017	Significant
Optimization	1.124	0.890	Not Significant
Compensation	1.874	0.759	Not Significant
ISRQ	1.307	0.860	Not Significant
GRADE			
Selection	4.845	0.089	Not Significant
Optimization	5.252	0.072	Not Significant
Compensation	0.531	0.767	Not Significant
ISRQ	3.999	0.135	Not Significant
PLACE OF BIRTH			
Selection	9.678	0.008	Significant
Optimization	0.840	0.657	Not Significant
Compensation	0.603	0.740	Not Significant
ISRQ	2.888	0.236	Not Significant
ONLY CHILD			
Selection	30028.500	0.261	Not Significant
Optimization	30313.000	0.305	Not Significant
Compensation	30133.000	0.355	Not Significant
ISRQ	29650.000	0.441	Not Significant
FATHER'S EDUCATIONAL LEVEL			
Selection	3.602	0.824	Not Significant
Optimization	8.974	0.254	Not Significant
Compensation	5.231	0.632	Not Significant
ISRQ	5.712	0.574	Not Significant
MOTHER'S EDUCATIONAL LEVEL			
Selection	8.288	0.308	Not Significant
Optimization	2.346	0.938	Not Significant
Compensation	4.455	0.726	Not Significant
ISRQ	3.675	0.816	Not Significant
FATHER'S OCCUPATION			
Selection	10.651	0.100	Not Significant
Optimization	10.962	0.090	Not Significant
Compensation	8.005	0.238	Not Significant
ISRQ	12.853	0.045	Significant
AVERAGE MONTHLY HOUSEHOLD INCOME			
Selection	14.605	0.041	Significant
Optimization	12.997	0.072	Not Significant
Compensation	6.556	0.477	Not Significant
ISRQ	11.269	0.127	Not Significant

Table 6 indicates the difference in respondents' intentional self-regulation when compared to their profile. The analysis of demographic variables in intentional self-regulation of junior high school students in this study found that there were no significant differences in intentional self-regulation among junior high school students in terms of grade, if only child,father's education level, and Mother's education level. Sun's (2020) study also found that intentional self-regulation did not have significant differences in grades.

However, there were significant differences in intentional self-regulation among junior high school students in terms of sex, age, place of birth, father's occupation and the average monthly household income.

In terms of sex,the score of the sub-scale selection have significant differences. the score of male was higher than female significantly. This is inconsistent with the results of Liu's (2023) study, which showed that girls scored significantly higher on intentional self-regulation than boys. But the study looked at high school students.

This difference in results may be due to the fact that in junior high school, the social and educational environment may be more inclined to encourage boys to show more initiative and independence, which may contribute to their higher scores on intentional self-regulation. At the high school level, as sex roles solidify and social expectations increase, girls may face more academic and social pressures, prompting them to invest more in self-regulated learning to meet these challenges.

In terms of age, the score of the sub-scale of selection have significant difference. The score of age 15 was significant higher than the score of age 14 and 13. This may be because most 15-year-old students have entered the third grade and are facing greater psychological pressure, but in the third grade, they belong to the younger age, and some of their classmates are 16 years old. In contrast, in order not to have a disadvantage in learning in the class, he needs to work harder and be more persistent. Therefore, the 15-year-old students showed a significant improvement in their scores on the choice dimension of intentionality self-conditioning.

In terms of place of birth, the score of the sub-scale of selection have significant differences. The score of city and town were significantly higher than the score of rural. This may be because junior high school students born in cities and towns receive more information, have more knowledge, are clearer about their future goals, and are better at choosing suitable goals and sticking to them.

In terms of father’s occupation, the total score of intentional self-regulation has significantly difference. The score of junior management /Junior Technical Staff was significant lower than the score of temporary worker/migrant worker/unemployed,Manual Laborer and Middle Management/Middle Technical Staff. The score is low in the middle and high at both ends. In families where the father is temporary Worker/Migrant Worker/Unemployed,and Manual Laborer, students can feel the hardships of their father's work and have a higher motivation to improve their own situation through hard study, and do not repeat the hard work of their father. Therefore, the scores of intentional self-regulation are higher. In Middle Management/Middle Technical Staff families, the father's work has a better social status, higher power and higher pay, which can give junior high schools students a better role model. These fathers are usually role models who change their fate through education, and they also pay more attention to their children's education, so their children have a higher intention to self-regulate. The father is Middle Management/Middle Technical Staff of the family, most of them also rely on hard study to find a job, but their work is relatively busy, the pressure is still relatively large, the economy is still relatively limited, which gives the child a negative message, even if work hard in study may not be able to live a good life. Therefore, the score on intentional self-regulation was the lowest.

In terms of average monthly household income, the score of the sub-scale of selection have significant difference. The family which income is 20000-25000 has the lowest score on the sub-scale of selection, it is lower than other options. The score is also low in the middle and high at both ends. Children from middle-income families have the lowest score on the selection dimension of intentional self-regulation, which may be because middle-income families are very eager for children to maintain their class through education, and have the highest anxiety and strongest control over children's education, which may suppress children's ability to develop independently. Children from low-income families, seeing their parents' hard work, will have a higher drive to work hard in study. High-income families, with sufficient resources and information, can lead children to have clearer plans and goals, which will also improve children's drive for goal pursuit and improve the ability of intentional self-regulation.

Table 7 indicates the difference in respondents' academic grit when compared to their profile. The analysis of demographic variables in academic grit of junior high school students in this study found that there were no significant differences in academic grit among junior high school students in terms of age, if only child,father’s education level, Mother’s education level, father’s occupation, and average monthly household income.This is consistent with the results of Cao et al.(2023), which showed that academic grit has no significant difference in the place of birth and if they are the only child.

Table 7

Differences of Responses on Academic Grit When Grouped According to Profile

Profile Variables/ AGS	*H/U*	*p-Value*	Interpretation
Sex	93549.500	0.002	Significant
Age	3.499	0.478	Not Significant
Grade	6.960	0.031	Significant
Place Of Birth	0.327	0.849	Not Significant
Only Child	30090.000	0.827	Not Significant
Father'S Educational Level	4.867	0.676	Not Significant
Mother'S Educational Level	4.332	0.741	Not Significant
Father'S Occupation	11.364	0.078	Not Significant
Average Monthly Household Income	5.085	0.650	Not Significant

However, there were significant differences in academic grit among junior high school students in terms of sex,and grade. In terms of sex, this study indicated the score of female was higher than male significantly. This is inconsistent with the results of Liu(2023), which show that the sex difference in academic grit of junior high school students is not significant. This may be due to the different tools used. This study uses a single dimensional academic grit scale to test the persistence of academic effort of junior high school students. But the tools used in other studies are multidimensional scales that measure, in addition to persistence of academic effort, awareness of goals and academic attitudes, including goals clarity, positive beliefs, and conscientiousness. It may well be that women have an advantage in behavioral effort, but in goal awareness, learning beliefs and attitudes, it may be that the sexes are more balanced. There may be the following reasons why junior high school girls score higher in academic grit: First, with the development of junior high school students' self-awareness, girls may have higher expectations and requirements for their academic performance. They may be more motivated to get good grades and therefore willing to put in more effort to achieve their goals. Second, the mental development of girls in junior high school is usually more mature than that of boys. They may realize the importance of learning earlier and be better able to manage their study time and tasks.

In terms of grade, the academic grit of junior high school students varies significantly in grade, and the scores of grade7 and 9 students are significantly higher than that of grade 8, which is partially consistent with the existing research results. Recent studies have shown that academic grit is closely related to students' age, academic pressure and developmental stage (Wang et al., 2020). Grade 7 students who have just entered the junior high school stage, are usually full of expectations and motivation for the new environment and learning, so they show high academic grit (Li et al., 2021). However, the grade 8 students is considered a "middle grade slump" in junior high school learning and psychological development, and students may face increased academic pressure, changes in peer relationships, and psychological fluctuations during adolescence, which may lead to a temporary decline in academic grit. In contrast, when grade 9 students are facing upward pressure, external goals and internal dynamics may promote a rebound in academic grit (Wang et al., 2020).This result suggests that educators should pay attention to the academic and psychological support needs of Grade 8 students, and help them through this critical period by adjusting the academic pressure, providing more emotional support and cultivating positive learning motivation. Future research could further explore the specific mechanisms by which academic grit declines at this stage and test the effectiveness of interventions.

Table 8 indicates the Correlation between the three variables of the study. The correlation analysis results of future self-continuity，intentional self-regulation, and academic grit among junior high school students show that there is a significant positive correlation between future self-continuity and intentional self-regulation, a significant positive correlation between future self-continuity and academic grit, and a significant positive correlation between intentional self-regulation and academic grit.

The results of this study indicate that there is a significant positive correlation between future self-continuity and intentional self-regulation among junior high school students. This result is consistent with previous studies. Hong et al. (2022) suggests that a sense of continuity across time facilitates goal pursuit by linking past experiences, present motivations, and future aspirations. Shen et al.,(2023) also used the scale method to explore

the possible mechanism by which future self-continuity affects self-control, and found that future self-continuity affects an individual's state self-control ability by influencing future outcome consideration. The higher the future self-continuity, the more the future consequences will be considered. Thus, higher levels of state self-control are reported. Chen's (2023) research indicates that future self-continuity is positively correlated with learning self-control. Yang et. al.,(2022) found that future self-continuity is positively correlated with learning engagement. Self-control, learning self-control and learning engagement all belong to the category of intentional self-control. It can be seen that future self-continuity is related to individual self-control and behavioral regulation, and thus to individual intentional self-regulation.

Table 8

Relationship of the Variables

		ISRQ SEL			OPT			*COM*			*ISRQ*		
		r_s	*p-value*	I	r_s	*p-value*	I	r_s	*p-value*	I	r_s	*p-value*	I
FSCQ	SIM	.159**	0.000	S	.172**	0.000	S	.089**	0.006	S	.182**	0.000	S
	VIV	.213**	0.000	S	.192**	0.000	S	.110**	0.001	S	.223**	0.000	S
	POS	.216**	0.000	S	.280**	0.000	S	.097**	0.003	S	.257**	0.000	S
	FSCQ	.239**	0.000	S	.263**	0.000	S	.121**	0.000	S	.271**	0.000	S
ISRQ	S												
	O												
	C												
	ISRQ												

		AGS		
		r_s	*p-value*	I
FSCQ	SIM	.157**	0.000	S
	VIV	.206**	0.000	S
	POS	.256**	0.000	S
	FSCQ	.253**	0.000	S
ISRQ	S	.550**	0.000	S
	O	.539**	0.000	S
	C	.212**	0.000	S
	ISRQ	.561**	0.000	S

*. *Correlation is significant at the 0.05 level (2-tailed).*

**. *Correlation is significant at the 0.01 level (2-tailed).*

According to the results of this study, the significant correlation between future self-continuity and academic grit suggests that an individual's clear perception and identification with their future self may play an important role in the persistence of academic behavior. This is consistent with previous findings, for example, that future self-continuity is thought to enhance the emphasis on long-term goals, thus promoting delayed gratification and effort behaviors (Hershfield et. al.,2011). Specifically, students with a high level of future self-continuity may be more able to view current academic challenges as a necessary way to achieve future goals, and this sensitivity to future rewards boosts their perseverance in the face of difficulties. In addition, academic grit, as a psychological quality, emphasizes goal orientation and frustration resistance, while future self-continuity provides an intrinsic motivation mechanism that helps students maintain focus and persistence in the face of academic tasks. Taken together, these findings not only provide support for the intrinsic motivational model of academic grit, but also provide a theoretical basis for interventions that boost student academic performance, such as enhancing learning by enhancing students' sense of clarity and empathy for future goals.

This study found that there is a significant correlation between intentional self-regulation and academic grit, which indicates that individuals can better adhere to academic goals through effective goal setting, plan execution and behavior monitoring when facing academic tasks. This result is consistent with recent studies. For example, intentional self-regulation is thought to be an important factor influencing individuals to remain goal-oriented and sustain efforts in challenging situations, and through clear planning and self-monitoring, individuals can cope more effectively with setbacks and distractions (Crede, 2018). In addition, studies have shown that intentional self-regulation can also support performance of academic gritby enhancing time

management and reducing task procrastination (Schunk et. al.,2020). This ability enables students to make behavioral adjustments within the framework of long-term goals, resulting in greater resilience and persistence in task execution (Hagger et. al.,2022). Notably, academic grit involves not only persistent pursuit of goals, but also resilience in the face of difficulties, and intentional self-regulation provides behavioral and cognitive support for this resilience (Wolters et. al.,2020). For example, students with higher self-regulation skills are often able to recover from failure more quickly and achieve continuous improvement through adjustment plans.

Table 9

Predictors of Academic Grit

Predictor Variable	Dependent Variable	Beta	p-value	Interpretation
Future Self-continuity	Academic Grit	0.102	.000	Predictor
Intentional Self-regulation	Academic Grit	0.535	.000	Predictor

Legend：$R=0.569$,$R^2=0.324$, $F=210.227$ ，$P=0.000$

A regression analysis was conducted with future self-continuity and intentional self-regulation as independent variables, and academic grit as the dependent variable. The results are presented in Table 9, indicating that the regression equation for academic grit is statistically significant. The regression analysis provides valuable insights into the relationships between future self-continuity, intentional self-regulation, and academic grit. In this analysis, the regression coefficient for future self-continuity is 0.102, while the coefficient for intentional self-regulation is 0.535, with an R-squared value of 0.569.

The study found that future self-continuity significantly positively predicted academic grit in junior high school students, which is consistent with the results of recent studies. Future self-continuity refers to an individual's perception of the connection between the current self and the future self, which can help students form long-term goals and enhance persistence and effort in facing academic tasks (Adelman et al., 2021). Specifically, high levels of future self-continuity incentivize individual behavior toward more long-term outcomes, improving academic performance through more effective behavior regulation and goal setting. Syropoulos et. al.,(2020) further point out that future self-continuity helps to enhance an individual's sense of identity with future goals, thus showing higher tenacity and endurance in the face of academic challenges. In addition, the study of Zhao (2021) also found that future self-continuity can significantly enhance students' academic achievement and psychological tendency by enhancing intrinsic motivation and behavioral consistency. Theoretically, future self-continuity provides critical psychological support for academic grit by enhancing students' goal trends and perception of the meaning of current behavior. This finding provides a theoretical basis for intervention education, which can further improve students' academic performance and psychological behavior by guiding students to construct clear future goals and strengthen the link between current behavior and future achievement (Adelman et al., 2021; Syropoulos et. al.,2020).

The results of this study still shows that the intentionality self-regulation significantly positively predicts the academic grit of junior high school students, which further validates the close relationship between self-regulation ability and academic grit. Intentional self-regulation involves individuals actively setting goals, making learning plans and monitoring their own behaviors in the learning process to improve academic performance and task completion. Self-regulation not only helps students cope with difficulties in academic tasks, but also promotes long-term goal orientation and persistence in the face of setbacks . Recent research further supports this view. Schunk et. al.,(2020) mention that intentional self-regulation helps students enhance their self-efficacy and goal-setting skills, thereby improving their sustained effort and goal adherence in academic tasks. This process involves not only emotional and motivational regulation, but also strategic learning behaviors such as time management and task prioritization, which are highly correlated with academic grit (Capa-Aydin, 2020). In particular, students with strong self-regulation ability are usually more active in coping with academic pressure and adjusting learning strategies, thus showing stronger persistence and resilience in the face of academic challenges.In addition, research shows that self-regulation not only helps to cope with short-term

academic challenges, but also promotes long-term academic goal pursuit.In summary, the results of this study not only strengthen the positive impact of intentional self-regulation on academic grit, but also provide important implications for educational practice. In academic intervention, educators should focus on cultivating students' self-regulation ability, especially in the aspects of goal setting, learning planning, emotional regulation, etc., so as to improve their persistence and perseverance in the face of academic challenges.

Table 10

Proposed intervention Plan For Chinese Junior High School Students

Key Concern Area	Program Objectives	Strategies	Activities	Persons Involved	Success Indicators
Below Median Future self-continuity	- Develop a future self-image that aligns with one's current values and interests. - Develop a future self-image that aligns with current values and interests. - Inspire students to have a positive, optimistic, and hopeful outlook on their future selves.	**Consulting:** explore the individual's values and interests through conversations, guide them to visualize a future self - image that matches these, and help set tailor - made goals. **Future Mirror Seminar - Workshop :** organize group activities for members to share values and interests, engage in role - playing and other exercises to build a collective understanding of creating a future self - image in line with these factors, and offer mutual support and feedback.	One-on-one counselling Group counseling Group Discussion	Junior high school students Psychologists/mental health professionals Some excellent students	-Have a clear sense of planning and action for the future. -Have a better understanding and identification of their future self. -cope with the confusion and pressure in the process of self-growth, and have a positive attitude and adaptability.
At Median Intentional self-regulation	-Enhance self-awareness and goal setting skills -Improve the ability to use self-regulation strategies -Establish a positive self-feedback and adjustment mechanism	**Self-Control Training Course：** Define the direction of personal growth and develop a plan. Self-regulation **Self-Regulation Workshop:** Provide self-regulation strategies and resources, and establish feedback mechanisms. **Consulting** : Provide personalized self-regulation counseling and programs.	One-on-one counselling Group counseling Training	Junior high school students Individuals with expertise in mental health Participation from family, friends, or classmates	-Be able to set specific, clear and achievable short and medium term learning goals . -Can make and stick to a daily study plan and record the completion of the plan. -Show steady growth in their weekly target completion rate .
At Median Academic grit	-Have clear and specific academic goals to enhance the sense of commitment and motivation to academic tasks. -Improve students' resilience and emotional management ability in the face of difficulties. -Develop the habit of consistently completing academic tasks.	**Career exploration Workshop:** draw a "future goal map" (including mid-term goals such as exam results and long-term goals such as future career direction). **-Adversity training sessions:** frustration simulation and resistance training. **-Consulting** : Provide personalized counseling and encouragement. **Family Counseling:** using "love and reason" emotional communication methods, and developing growth thinking, while strengthening academic grit through parental example and timely encouraging feedback.	Group counseling One-on-one counselling Family Counseling Training	Junior high school students Individuals with expertise in mental health Participation from family, friends, or classmates	-Continuous pursuit of academic goals and perseverance and efforts in the face of difficulties. -Focus on studies, actively participate in class activities, complete assignments on time, and score better on exams. -Be able to better regulate emotions and remain calm and positive in the face of difficulties and setbacks.

Table 10 describes the intervention measures aimed at enhancing the future self-continuity · intentional self-regulation, and academic grit of junior high school students. Mainly by developing these intervention plans to enhance the participants' quality of grit when facing the learning setbacks.

Junior high school students in China have lower future self-continuity, and the intentional self-regulation, and academic grit is just at a medium, it need to enhance to a high leverl. A considerable number of jonior high school students have lower future self-continuity, which means individuals have difficulty connecting their present self-identity, values, goals, and expectations with their future self. This can undermine individuals' pursuit of long-term goals. At the same time, junior high school students have a low level of intentional

self-regulation, which means that individuals are less able to set goals, make plans, monitor progress, and adjust behavior to achieve goals. This may result in junior high school students being more likely to deviate from their original goals in the face of temptation or interference, thus failing to achieve personal growth and development. Junior high school students have low level of academic grit, indicating that students lack lasting determination, perseverance and resilience in the face of academic challenges and difficulties, and are easy to give up or lack the motivation for continuous efforts, which may affect their learning progress, and lifelong learning attitude and ability. Based on the above situation, the intervention plan of this study mainly aims to enhance the future self-continuity, intentional self-regulation, and academic grit of junior high school students, help them gradually form an understanding of future development goals, learn to adjust their behavior according to goals, and persist in studying hard when they encounter academic setbacks.

In terms of the future self-continuity, our goals include: firstly, to help junior high school students to develop a future self-image that aligns with your current values and interests. Secondly, to help junior high school students to develop a future self-image that aligns with your current values and interests. Thirdly, to inspire students to have a positive, optimistic and hopeful outlook on their future selves.The strategy to achieve these goals is to provide Consulting, Lecture and Seminar - Workshop.The strategy of consulting is to explore the individual's values and interests through conversations, guide them to visualize a future self - image that matches these, and help set tailor - made goals.The strategy of future mirror seminar - workshop is to organize group activities for members to share values and interests, engage in role - playing and other exercises to build a collective understanding of creating a future self - image in line with these factors, and offer mutual support and feedback. This can take the activities of one-on-one counselling,group counseling, and group Discussion. Participants include junior high school students, professional practitioners of psychology, and parents of the students. The specific indicators of success mainly include: firstly, having a clear sense of planning and action for the future. Secondly, having a better understanding and identification of their future self. Thirdly, coping with the confusion and pressure in the process of self-growth, and have a positive attitude and adaptability.

Another key area of focus for intervention projects is intentional self-regulation. The intentional self-regulation intervention projects fist aims to enable junior high school students to enhance self-awareness and goal setting skills. Second, is to improve the ability to use self-regulation strategies.Third, to establish a positive self-feedback and adjustment mechanism. These intervention goals can be achieved through activities such as one-on-one counselling, group counseling, and training. The strategy to achieve these goals is to provide self-control training course, self-regulation workshop, and consulting. The self-control training course is to define the direction of personal growth and develop a plan. The self-regulation Workshop is to provide self-regulation strategies and resources, and establish feedback mechanisms.The consulting is to provide personalized self-regulation counseling and programs. Participants include junior high school students, Individuals with expertise in mental health, participation from family, friends, or classmates. Specific indicators of success mainly include be able to set specific, clear and achievable short and medium term learning goals, can make and stick to a daily study plan and record the completion of the plan, show steady growth in their weekly target completion rate.

What needs to be interfered with is academic grit. The goal of intervention for academic grit is to have clear and specific academic goals to enhance the sense of commitment and motivation to academic tasks, to improve students' resilience and emotional management ability in the face of difficulties, and is to develop the habit of consistently completing academic tasks. This can take the activities of training, group counseling, workshop, and one-on-one counselling. The strategy to achieve these goals is to provide career exploration workshop, adversity training sessions, family Counseling, and consulting. Career exploration Workshop is to draw a "future goal map" (including mid-term goals such as exam results and long-term goals such as future career direction). Adversity training sessions is provide the frustration simulation and resistance training.Consulting is to provide personalized counseling and encouragement. Family Counseling is to using "love and reason" emotional communication methods, and developing growth thinking, while strengthening academic grit through parental example and timely encouraging feedback.Participants include junior high school students, Individuals with

expertise in mental health, and participation from family, friends, or classmates. The specific indicators of success mainly include continuous pursuit of academic goals and perseverance and efforts in the face of difficulties, focus on studies, actively participate in class activities, complete assignments on time, and score better on exams, and be able to better regulate emotions and remain calm and positive in the face of difficulties and setbacks.

4. Conclusions and recommendations

The majority of the junior high school students are male, ranging from 12 to 16 years of age, in grade 7 and 8, residing in the countryside, with siblings, with father's and mother's education level is juinor high schools, with father's occupation is manual laborer, and with average monthly household income is rang from 5001 to 10000. Junior high school students have a low level of future self-continuity and a moderate level of intentional self-regulation and academic grit, which indicates that they have certain shortcomings and room for improvement in future planning, self-management and academic challenges. Place of birth, mother's education level, father' occupation and family income have significant effects on future self-continuity. Students born in cities, whose mothers have higher levels of education, whose fathers have stable careers, and whose families have higher incomes score higher on future self-continuity. Sex, age, place of birth, father's occupation and family income have significant effects on intentional self-regulation of junior high school students. Students who is male, 15-year-old, born in city and town, with median family income scored higher on the selectivity dimension, with the lowest overall scores for fathers in occupations belonging to junior management Academic grit is influenced by sex and grade, students who is boys, grade 7 and grade 9 scoring higher. There is a significant positive correlation between future self-continuity and intentional self-regulation , a significant positive correlation between future self-continuity and academic grit, and a significant positive correlation between intentional self-regulation and academic grit.This means that the clearer the student's sense of future self-continuity, the higher the level of self-regulation and academic grit in facing academic challenges; At the same time, the greater the ability to self-regulate, the higher the level of academic grit. The future self-continuity and intentional self-regulation significantly positively predicts the score of academic grit. meaning that a stronger sense of future self and better self-regulation skills are associated with higher levels of academic.A proposed intervention plan was developed to promote future self-continuity and intentional self-regulation, and academic grit among Chinese junior high school students.

Junior high school students should set both short-term and long-term goals to enhance their awareness of future planning and self-positioning. This process helps them develop a clear image of their future selves and strengthens their sense of future self-continuity. Simultaneously, they should work on improving their self-monitoring and adjustment abilities by participating in time management and goal-setting training. These efforts can enhance their intentional self-regulation, enabling them to demonstrate greater perseverance when facing academic challenges, ultimately improving their level of academic grit. Parents can help children enhance future self-continuity by encouraging them to set goals and envision their future. Through daily activities, they can teach time management skills and provide supervised feedback to develop intentional self-regulation. Promoting positive coping strategies helps build resilience and academic grit. A supportive home environment with regular check-ins fosters a sense of security and boosts children's confidence in tackling academic challenges. School administrators can set up psychological subject courses to teach students career development planning, time management, emotional regulation and other courses to enhance students' imagination of the future self and the ability of intentional self-regulation, and cultivate the quality of academic grit. Teachers can guide students to set their own learning goals, teach time management, task decomposition and study plan making methods, and encourage students to grow from setbacks. Learn ways to self-regulate and improve academic grit. Guidance Counselors can provide students with one-on-one career planning counseling and counseling on learning psychological problems, help students solve the pressure and frustration encountered in the learning process, and encourage them to persist. Future researchers may explore the longitudinal relationship between these constructs and investigate how future self-continuity and intentional self-regulation and academic

grit change over time and how these changes influence each other. The proposed intervention plan may be checked, reviewed, and validated by experts first before its utilization for further improvement.

5. References

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