

# The Role of Red Music-Assisted Physical Exercise in Guiding Students' Abnormal Psychology

Ke Tian<sup>1</sup>

## Abstract

Contemporary college students are inevitably subject to both external and internal influences, particularly from the realm of online information, in their academic pursuits and personal lives. To investigate the influence of auditory stimuli on the formation of students' aberrant cognitive processes during physical activity. A total of 1084 middle school students underwent measurements using the SCL-90, GSES, and revised PARS-3 scales. The aim was to examine the impact of physical activity on the physical and mental well-being of middle school students. The statistical software AMOS was utilised to test this hypothesis, and a theoretical framework was developed to investigate the mechanisms underlying physical and mental well-being. Physical activity. The social statistical analysis software packages SPSS17.0 and AMOS17.0 were utilised to examine and handle anomalous data and missing data for statistical analysis. Physical activity and self-efficacy both have varying degrees of negative effects on middle school students' physical and mental pleasure ( $r^2 = 0.094$ ,  $P < 0.01$ ). The equation model demonstrates that the path coefficient of the good fitness index, the amount of physical activity, regular exercise, and independence determine the impact of physical activity on middle school students' physical and mental pleasure. This study establishes a correlation between physical activity, self-efficacy, and both physical and mental enjoyment in middle school students across several aspects. It is anticipated that this research will provide valuable insights for physical activity promotion and education among middle school students. The objective of sports research is to enhance individuals' physical and mental well-being by investigating various forms of exercise and their optimal execution. This study aims to gather self-awareness insights and foster personal growth while also contributing to the regulation of physical and mental health. This diverges from the examination of behavioural modification in psychology and behavioural investigations centred on the intrinsic attributes of "perception attitude behaviour" and social exchange theory.

**Keywords:** Red Music; Physical Exercise; Physical and Mental Pleasure; Self-Efficacy.

## Introduction

Red music serves as a vibrant historical documentation of the Chinese people, guided by the CPC, as they explore new territories, transform the globe, pursue personal growth, and accomplish remarkable endeavours. It possesses unique attributes of the era and exerts a powerful spiritual allure, making it a significant component of socialist culture. Despite the changing times and significant transformations in our country, we may still experience an immense sense of power emanating from the passionate and inspiring melodies, as well as the awe-inspiring momentum, when performing these musical compositions. In the modern era, external factors like the internet and students' own internal thoughts and experiences have a significant impact on them, either actively or passively. This influence is particularly evident in their academic pursuits and personal lives. Students' emotional reactions vary based on their unique upbringing, psychological traits, discernment skills, and capacity to handle change. Under this influence, certain

students may have atypical psychological impacts, which can lead to challenges in their study, daily life, and personal growth and development. The author's research on abnormal psychology in college students primarily emphasises the benefits of utilising red music as a coping strategy. Additionally, the author incorporates ideological and political education to enhance emotional adjustment. By leveraging the power of red culture and traditional Chinese culture, the aim is to bolster students' psychological resilience and foster a more positive mindset. Red music draws upon insights gained from previous studies and embodies the enduring traditional values of the Chinese people, such as resilience, perseverance, and the ability to confront challenges. These qualities, which represent positive energy, are manifested both externally and internally, contributing significantly to the promotion of a positive and sound psychological state. Consequently, red music plays a prominent role in assisting and enhancing the resolution of abnormal psychological issues (Abós et al., 2021). Normal psychology in students also contributes to fostering healthy development by effectively utilising the influence of red

<sup>1</sup> School of Music, Nanjing Xiaozhuang University, Nanjing, Jiangsu, 211171, China

\*Corresponding Author's Email: [danfoer137@163.com](mailto:danfoer137@163.com)

education and ideological and political education. This ensures that ideological and political education is not limited to the confines of the classroom but extends beyond traditional monotonous teaching methods (Bessa et al., 2021). Crimson music is an educational and cultural phenomenon that is readily embraced due to its accessible form and its promotion of both physical and mental growth. It has the potential to instill resilience, boost self-assurance, motivate individuals, perpetuate a sense of determination, and seamlessly integrate instruction and enjoyment.

Sports, broadly defined as conscious and organised social activities, serve to foster the development of spiritual civilization, enhance social and cultural life, and promote comprehensive human growth. Specifically, sports, in a limited context, pertains to athletic activities conducted within educational institutions. Physical exercise refers to a planned and regulated physical activity that follows specific movement guidelines. Engaging in regular exercise over an extended period can enhance physiological structure and facilitate growth and development. Engaging in physical exercise is a means of regulating one's mental state. By subjecting the body to a specific level of exertion, physical exercise can effectively alleviate negative feelings arising from work and personal life. It helps to regulate mood, release accumulated psychological stress, and prevent the adverse effects of excessive psychological pressure.

Psychological activities and physical exercise have a reciprocal relationship, where engaging in physical exercise enhances the brain's reward system, leading to increased interest in exercising and creating a positive cycle. Students engage in physical exercises mostly through physical education classes, activity classes, and extracurricular activities facilitated by external organisations or initiated by students themselves. The school serves as the primary venue for students to engage in physical exercise. When students partake in physical activities at school, their participation is typically ensured, and the exercise facilities are adequately equipped, allowing them to fully utilise their personal drive and enthusiasm. The foundation for kids' comprehensive development and optimal growth is a scientific, rational, adaptable, and varied physical training regimen (Min et al., 2021).

The daily emotional difficulties that students face is the main sign of disordered psychology. This study examines the impact of red music on pupils' emotional fluctuations. If we categorise music as positive emotional music and negative emotional music, then red music primarily facilitates the positive progression of emotions. In consideration of the emotional condition of students and the study requirements of this article, the many categories of musical emotions can be further classified as follows: grief, solace, tranquilly, restraint, gratification, reminiscence, exhilaration, and fury.

To achieve a state of relaxation prior to adjustment, it is essential to select instrumental music devoid of any lyrics. However, to facilitate the process of adaptation, it is also essential to incorporate intellectual and political teaching, as well as employ targeted revolutionary music. You have the option to select music that is both original and has lyrics. Simultaneously, it is imperative to consider the music appreciation proficiency of college students and the multifaceted aspects of music. Most pupils have limited exposure to red music culture, thus providing them with psychological adjustment possibilities to engage in ideological instruction. This study aims to identify the music genres that college students prefer, with a focus on well-liked styles, engrossing lyrics, melodious compositions, and music that promotes good values and has positive effects on both physical and mental wellbeing. These selected tracks can be added to the music library for college students (Berendsen, 2022).

Music has a distinct and acceptable regulatory effect on coping with abnormal psychology. Music-assisted regulation is a component of music therapy, which is administered with the guidance of professionals in the field. It is important to note that music alone does not serve as the sole means of psychological regulation but rather plays a supportive role in the process. This includes various aspects of music, such as relaxation, discussion, imagination, rhythm, and more. This article proposes a straightforward and widely accepted method of using music to provide psychological support to students.

Music relaxation, music imagination, music discussion, and guidance are crucial methods in the mediation process. Music discussion, particularly in educational settings, provides a direct means of expressing students' individual ideological perspectives. This is beneficial for teachers, as it allows them to introduce relevant discussion topics, address any abnormal psychological tendencies, and foster the development of appropriate values. The selected music primarily consists of red music, which serves the functional purposes of emotional regulation as well as ideological and political education. During student discussions, facilitate emotional sorting, coping with abnormal psychology, and self-discovery through the analysis of red characters and red stories (Roscoe et al., 2022). Exercise encompasses various factors, including volume, intensity, duration, and frequency, whether performed individually or in a group setting. Exercise can be categorised as either short-term and sporadic involvement or long-term and consistent commitment. Failure to properly differentiate and regulate the psychological impacts of exercise during testing will inevitably lead to ambiguous results. Human mental health

is a dynamic and multifaceted concept that varies across populations due to factors such as historical periods, cultural backgrounds, and customs. Assessing an individual's overall health based solely on a specific aspect of their mental well-being is not a scientifically valid approach. Numerous researchers have incorporated mediating variables to examine the psychological health effects and mechanisms of exercise, yielding significant explanatory capacity.

The research suggests that physical exercise has a direct positive impact on an individual's physical and mental well-being. Additionally, it can also influence their well-being indirectly through social interaction. In life, individuals encounter various challenges, including interpersonal communication, emotional regulation, and role adjustment. Engaging in physical exercise offers opportunities for social interaction and social support. Additionally, consistent and regular exercise can alleviate stress, decrease anxiety and depression, enhance self-confidence and self-esteem, and promote physical and mental well-being (Pruitt & Morini, 2021). Engaging in physical exercise can impact an individual's psychological state by strengthening their self-efficacy. Engaging in exercise enhances an individual's self-regulation and physical fitness. It also improves self-awareness and self-efficacy, which refer to one's perception of their own

abilities. This perception influences how actively and confidently individuals approach challenges and setbacks. Consequently, exercise improves emotional control and prevents the emergence of negative emotions. Overall, participating in physical exercise enhances both physical and mental well-being by boosting self-efficacy (Al-Abri et al., 2021). Therefore, relationships and autonomy serve as crucial links connecting physical functioning with both physical and mental pleasure. H1 hypothesised that relationships mediate the association between physical activity and physical and mental pleasure. H2: Self-efficacy serves as a mediator in the relationship between physical activity and both physical and mental pleasure. H3: Communication and self-efficacy mediate the relationship between physical activity and physical and mental pleasure. Figure 1 depicts a theoretical framework illustrating the role of physical activity in enhancing both physical and mental well-being. The objective of sports research is to enhance individuals' physical and mental well-being by studying various forms of exercise and their effects. This research aims to accumulate self-awareness experiences, promote personal growth, and contribute to the regulation of physical and mental health. This differs from the field of psychology that examines behavioural change and studies behaviour through the lens of perception, attitude, behaviour, and social exchange theory.

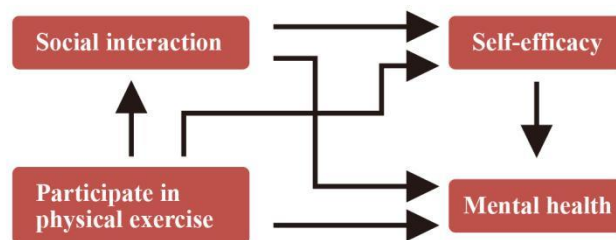


Figure 1. Theoretical Model of Participating in Physical Exercise to Promote Physical and Mental Pleasure.

## Literature Review

Self-efficacy is a fundamental concept in Albert Bandura's social cognitive theory. It pertains to an individual's belief in their capability to perform effectively in a particular situation. Expectation serves as the link between cognition and behaviour, influencing behaviour and representing cognitive responses. Self-efficacy is a construct that is intricately connected to the interplay between the environment, behaviour, and individual in the context of social learning. Bandura posits that self-efficacy significantly influences human

health. Beliefs about one's ability to cope with stress impact both physical and mental health through their influence on the body's and mind's regulation systems. Additionally, personal health habits and the perception of control over physical ageing affect health by shaping motivation and behaviour. Numerous studies have corroborated this correlation. Biddle, S., has conducted extensive research on various aspects of the sports lifestyle, encompassing mental health, the significance of sports activity, intervention strategies, sedentary behaviour, and guidelines. The precise definition of sports psychology remains unclear.

The field of sports activities and public health research has embraced a behavioural medicine approach, which encompasses psychology as one component (Biddle, 2021). Hargreaves, E. A.'s study aims to examine variations in physical activity levels across different intensities among individuals with varying pre-lockdown activity levels. The study also seeks to analyse changes in physical activity during three distinct time periods: before, during, and after the implementation of lockdown restrictions. This study also investigated the degree to which daily troubles contribute to changes in physical activity. Convenient samples recruited via social media were used to collect data through online surveys conducted over a period of 2–3 weeks during a 5-week lockdown. After the lockdown, a total of 231 participants provided complete data once again, six weeks later. Participants completed two measures: the International Sports Activity Questionnaire—Short Form and the Daily Hassles Scale (Hargreaves et al., 2021). The relationship between self-efficacy, physical exercise, and mental health is evident. Core beliefs that support the continuity and longevity of self-motivated physical activity are significant in comprehending and elucidating the psychological impacts of exercise. Sports research aims to enhance individuals' physical and mental well-being by investigating various exercise forms and methods. Its objective is to accumulate self-awareness experiences, foster personal growth, and contribute to the regulation of physical and mental health.

## Research Objects and Methods

### Research Object

A total of 22 middle school students were randomly chosen for this study. Out of the 1100 questionnaires that were distributed, 1084 valid questionnaires were collected, resulting in a recovery rate of 98.5%. The group consists of 540 male and 544 female students, with 556 attending high school and 528 attending junior high school. Additionally, there are 444 students from urban areas and 640 students from rural areas. Out of the total number of individuals, 1,084 were chosen.

### Measuring Tools

1. Symptom Checklist (SCL-90). The SCL-90 questionnaire, consisting of 90 items and 10 factors, was chosen to assess both physical and mental pleasure. The validity coefficient of the questionnaire ranges from 0.77 to 0.90. This test is suitable for both junior high school students and adults. The purpose of the test is to assess the presence and severity of psychological symptoms in individuals. It examines various aspects, ranging from superficial psychological factors to deeper levels, including

behaviour, lifestyle habits, and interpersonal relationships. Additionally, the test aims to effectively differentiate between individuals with psychological symptoms. The SCL-90 assesses each item on a scale ranging from none to serious, with corresponding point values of 1 to 5. The symptom checklist (SCL-90) is as follows:

Guidance: Below is a compilation of potential inquiries that individuals may possess. Please evaluate each question and assign a score based on how the listed situations have influenced your emotions in the past week. Among them, select 1 for "none", 2 for "very light", 3 for "medium", 4 for "heavy", and 5 for "severe".

1. Headache. 1-2-3-4-5
2. Nervous and insecure. 1-2-3-4-5
3. Unnecessary thoughts or words hovering in the mind. 1-2-3-4-5
4. Dizziness or fainting. 1-2-3-4-5
5. Decreased interest in the opposite sex. 1-2-3-4-5
6. Be accountable to others. 1-2-3-4-5
7. Feel that others can control your thoughts. 1-2-3-4-5
8. Blame others for causing trouble. 1-2-3-4-5
9. Forgetfulness is high. 1-2-3-4-5
10. Worried about the neatness of one's clothing and proper demeanor. 1-2-3-4-5
11. Easy to worry and get excited. 1-2-3-4-5
12. Chest pain. 1-2-3-4-5
13. Fear of open spaces or streets. 1-2-3-4-5
14. Feel a decrease in energy and activity. 1-2-3-4-5
15. Wanting to end one's own life. 1-2-3-4-5
16. Hear a voice that others cannot hear. 1-2-3-4-5
17. Trembling. 1-2-3-4-5
18. I feel that most people are untrustworthy. 1-2-3-4-5
19. Poor appetite. 1-2-3-4-5
20. Easy to cry. 1-2-3-4-5
21. Feeling shy and uncomfortable when interacting with the opposite sex. 1-2-3-4-5
22. Feeling deceived, trapped, or someone trying to catch you. 1-2-3-4-5
23. Suddenly feeling scared for no reason. 1-2-3-4-5
24. I lose my temper uncontrollably. 1-2-3-4-5
25. Afraid of going out alone. 1-2-3-4-5
26. Often blame oneself. 1-2-3-4-5
27. Low back pain. 1-2-3-4-5
28. Feeling difficult to complete the task. 1-2-3-4-5
29. Feeling lonely. 1-2-3-4-5
30. Feeling depressed. 1-2-3-4-5
31. Excessive worry. 1-2-3-4-5
32. Not interested in things. 1-2-3-4-5
33. Feeling scared. 1-2-3-4-5
34. Your emotions are easily hurt. 1-2-3-4-5
35. Others can know your private thoughts. 1-2-3-4-5

2. Measurement of physical exercise. The assessment comprises the Physical Exercise Rating Scale (PARS-3) and the examination of exercise adherence. The PARS-3 assesses physical activity levels by analysing three key factors: exercise intensity, frequency, and duration. Physical activity volume score = effort × (Time - 1) × Frequency, each part is divided into five levels, with 1-5 points, standard level: small exercise ≤ 19 points, medium exercise 20-42 points, exercise range ≥ 43 points. Exercise persistence primarily pertains to the consistent exercise habits of middle school students. In contrast, PARS-3, which spans only one month, is insufficient to accurately gauge exercise persistence on its own. The scale encompasses the definition of teenagers' consistent fitness behaviour, specifically in terms of exercise persistence: Exercise frequency ≥ 3 times per week, exercise time ≥ 30 minutes per time, moderate or above exercise intensity, and exercise duration more than 6 months, the higher the score, the better the persistence of exercise. Following the scale revision, experts conducted a content validity review and assessed its feasibility. The reliability test utilised the split-half method, resulting in a Spearman-Brown coefficient of 0.805, indicating good consistency.

3. Self-efficacy scale (GSES). The General Self-Efficacy Scale (GSES) is a unidimensional scale that employs Likert's 4-point scoring method. In the evaluation process, only the total scale scores are considered, with higher scores indicating a greater sense of self-efficacy. The scale's validity coefficient ranges from 0.60 to 0.77, indicating high reliability and validity of the evaluation results.

### Survey and Data Processing

The research team members, who were trained, conducted investigations at various locations. They followed the instructions provided before conducting tests, interpreted the scale, and collected the questionnaires on-site upon completion. The eligible questionnaires were excluded during the data sorting process, and the corresponding

questionnaire numbers were recorded. The social statistical analysis packages SPSS17.0 and AMOS17.0 were utilised to examine and handle anomalous and missing data during the statistical analysis process. The structural equation model was constructed and analysed using Mplus 7.4 software. The mediation effect of coping mode, psychological resilience, and their combined effects were examined. The Bootstrap method was employed to test the mediation effect and chain multiple mediation effect.

## Results

### Demographic Differences in Physical Exercise, Self-efficacy, and Physical and Mental Pleasure of Middle School Students

The demographic test results of middle school students were analysed for four variables. The results, as shown in Table 1, indicate that boys engaged in more physical exercise than girls (19.18 ± 18.31, 10.84 ± 11.70). Additionally, urban students exhibited higher levels of self-efficacy compared to rural students (2.81 ± 0.59, 2.66 ± 0.48), with a significant difference (P<0.01). However, the test results for the other variables did not show any statistically significant differences. Junior high school students outperformed senior high school students in terms of physical exercise, exercise persistence, and self-efficacy. They also exhibited fewer physical and mental pleasure symptoms compared to senior high school students, with a significant difference (P<0.01). The higher level of learning and social pressures that senior high school students experience is to blame for this difference. The four variables exhibit consistent patterns across various statistical measures, aiding in the comprehension of the influence of physical exercise and self-efficacy on physical and mental well-being, as well as their interrelationship (Olave et al., 2021).

Table 1

Demographic Differences in Physical Exercise, Self-efficacy, and Physical and Mental Pleasure Status Among Middle School Students

	Physical Exercise	Exercise Persistence	Efficacy	Physical and Mental Pleasure
Man student	19.18±18.31	2.86±1.41	2.755±0.52	1.57±0.48
Woman student	10.84±11.70	2.85±1.42	2.69±0.55	1.55±0.44
t	6.111	0.090	1.195	0.574
P	0.000* *	0.929	0.233	0.566
City	14.28±15.29	2.80±1.40	2.81±0.59	1.53±0.46
Rural area	15.52±16.33	2.90±1.43	2.66±0.48	1.58±0.46
t	-0.863	-0.794	3.244	-1.128
P	0.389	0.428	0.001* *	0.260
Junior middle school	17.82±17.16	3.04±1.46	2.79±0.53	1.44±0.41
Senior school	12.49±14.26	2.69±1.36	2.65±0.53	1.67±0.48
t	3.819	2.812	2.959	-5.795
P	0.000* *	0.005**	0.0003* *	0.000* *

Note: \* \* means p <0.01, the same below.

### Effects of Different Physical Exercises on Self-efficacy and Physical and Mental Pleasure of Middle School Students

A multivariate analysis of variance was conducted to examine the main effects and interactions of independent variables (levels of physical exercise and exercise persistence) on dependent variables (self-efficacy and physical and mental pleasure). The results are presented in Table 2. Figure 2 demonstrates that physical exercise

significantly influenced self-efficacy but did not have a significant impact on physical and mental pleasure ( $F(1.1082) = 1.165, P = 0.259 > 0.05$ ), main effect of exercise persistence on self-efficacy and physical and mental pleasure is significant. Additionally, the interaction between the amount of physical exercise and exercise persistence has varying levels of impact on self-efficacy and physical and mental pleasure scores ( $F$  self-efficacy  $(1.1082) = 1.967, P < 0.01$ ;  $F$  physical and mental pleasure  $(1.1082) = 1.538, P < 0.05$ ) (Cohen & Panebianco, 2022).

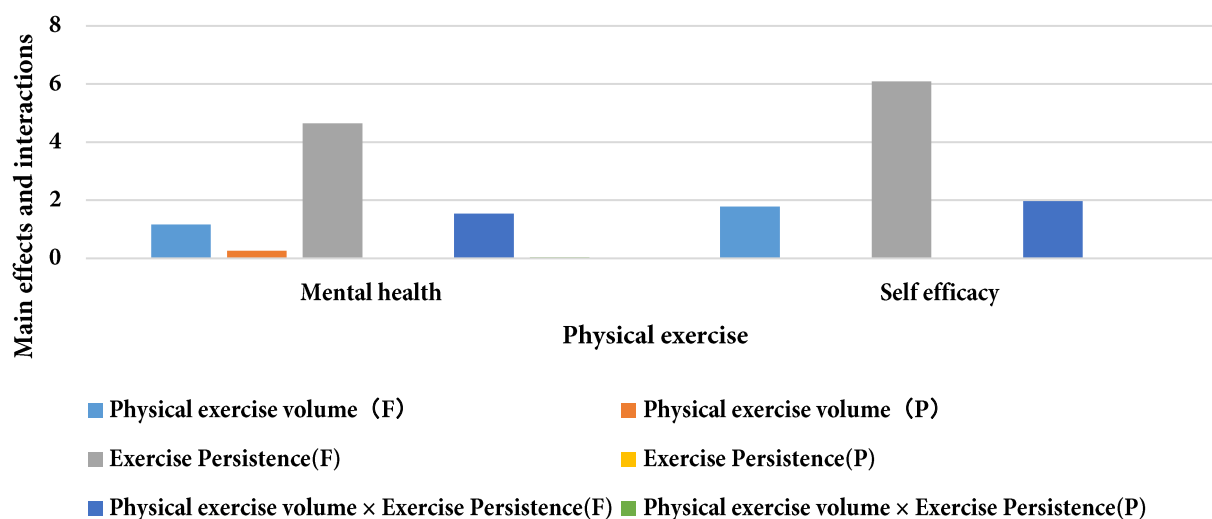


Figure 2. Main Effects and Interactions of Physical Exercise on Self-efficacy and Physical and Mental Pleasure.

To assess the impact of various physical exercises on the self-efficacy and physical and mental pleasure of middle school students, the average values of the two dependent variables were analysed (Table 2). The study found a significant increase in self-efficacy among middle school students with increased physical exercise ( $P < 0.01$ ). The impact on physical and mental pleasure exhibited a V-shaped pattern, with moderate physical exercise showing the most pronounced changes. However, there was no statistical difference observed ( $P = 0.292 > 0.05$ ). Regular exercise has been found to have a

positive impact on middle school students' sense of self-efficacy and can reduce physical and mental symptoms. Notably, the effects are most pronounced in students who have been exercising for more than 6 months, with statistical significance ( $P < 0.01$ ) based on F test results. The findings indicate that optimal psychological health outcomes are achieved through consistent engagement in a moderate amount of physical exercise over an extended period. These results align with previous research conducted both domestically and internationally (Gao, 2021).

Table 2

Comparison of the Differences of Different Levels of Physical Exercise

		Efficacy	
Physical exercise	Small exercise volume n=367	2.65±0.54	1.58±0.47
	Medium exercise volume n=105	2.89±0.46	1.50±0.43
	Big exercise volume n=35	2.93±0.54	1.56±0.42
	F	11.212	1.234
	P	0.000**	0.292
Exercise persistence	<3 Months n=248	2.62±0.53	1.60±0.48
	3~6 Months n=102	2.78±0.51	1.63±0.51
	> 6 Months n=157	2.84±0.54	1.44±0.38
	F	8.559	7.838
	P	0.000**	0.000**

**Correlation and Regression Analysis of Physical Exercise, Self-efficacy and Physical and Mental Pleasure of Middle School Students**

To investigate the association between physical exercise, exercise persistence, self-efficacy, and the physical and mental pleasure of middle school students, a correlation analysis was performed. The learning period was used as a control variable during the analysis (Table 3). The results of the study indicate a strong positive correlation between the level of physical exercise, exercise persistence, and self-efficacy among middle school students; The study found that there was a significant negative correlation between physical and mental pleasure status, exercise persistence, and self-efficacy. The correlation coefficients were -0.119 and -0.159, respectively. However, there was no significant correlation between physical and mental pleasure status and the amount of physical exercise ( $P > 0.05$ ), with a correlation coefficient of 0.01.

Measurement errors can occur when dealing with complex and difficult-to-measure variables. However, if the correlation coefficient passes the significance test, even a smaller correlation coefficient can still confirm the presence of a correlation between the variables. The effects of physical exercise and physical and mental pleasure are continuously changing and influenced by various factors. The correlation coefficient between the variables in Table 4 tends to have a low absolute value. This is not only due to the large sample size but also related to the specific characteristics of physical exercise and physical and mental pleasure (gray, difficult to measure). The multivariate analysis of variance revealed a significant correlation between physical exercise, self-efficacy, and physical and mental pleasure. Specifically, there was an interaction between the amount of physical exercise and self-efficacy in relation to scores of physical and mental pleasures ( $F(1.1082) = 1.699, P = 0.002 < 0.01$ ). This finding aligns with previous research (Rasheduzzaman et al., 2021).

**Table 3**

*The Correlation Analysis of Physical-exercise Self-efficacy and Physical and Mental Pleasure Among Middle School Students*

	Physical Exercise	Exercise Persistence	Efficacy	Physical and Mental Pleasure
Physical exercise	1.00			
Exercise persistence	0.264**	1.000		
Efficacy	0.199**	0.171**	1.000	
physical and mental pleasure	0.010	-0.119**	-0.159**	1.000

The stepwise regression method, also known as the stepwise method, was employed to conduct a multiple linear regression analysis. The dependent variable was physical and mental pleasure, while the other variables served as independent variables. The F test was used as the criterion for selecting variables (with a significance level of  $P < 0.05$  for inclusion in the regression equation and  $P > 0.1$  for exclusion). Independent variables that did not make a significant independent contribution to physical and mental

pleasure were eliminated. Table 4 demonstrates that three variables, namely school age, self-efficacy, and exercise persistence, were included in the regression equation. These variables collectively accounted for 9.4% of the variation in physical and mental pleasure. The regression model successfully passed the test ( $R^2 = 0.094, F(1.1082) = 17.427, P < 0.01$ ). Furthermore, all of the standardised regression coefficients were negative, indicating a negative predictive effect on physical and mental pleasure.

**Table 4**

*Multiple Regression Analysis of the Factors Affecting Physical and Mental Pleasure Among Middle School Students*

	Constant (Quantity)	Phase of Studying	Efficacy	Insist on Exercise
B	2.265	-0.202	-0.119	-0.030
Std.Error	0.112	0.040	0.037	0.014
Beta		-0.220	-0.139	-0.093
t	20.293	-0.5113	-3.200	-2.136
P	0.000**	0.000**	0.001**	0.033*
95%Confidence Interval for B	Lower	2.045	-0.280	-0.192
	Upper	2.484	-0.124	-0.046
R	0.307			
R2	0.094			
ADR2	0.089			

Music-assisted regulation operates by engaging both the psychological and physiological dimensions of the human body, promoting a harmonious equilibrium between physical and mental growth.

Psychological regulation involves meeting the psychological needs of the thing being governed. In order to fulfil psychological needs using music, it is important to consider the aesthetic requirements and how well the chosen music aligns with one's imagination. The aspects of music, such as speed, harmony, timbre, rhythm, and melody, collectively contribute to the creation of imagination. To effectively excite the imagination of the controlled object, direct the discharge of negative emotions, increase positive emotions, and meet their demands, it is important to create a pleasant setting and shape a favourable image.

The modulation of music frequency induces a "massage" effect on the nerves and the body, hence facilitating physiological regulation. Through the process of nerve stimulation, the body releases chemical substances that induce a feeling of joy or contentment. Research conducted both domestically and internationally has demonstrated that listening to calming, uplifting, and pleasurable music can effectively decrease an individual's levels of adrenaline, leading to a greater likelihood of experiencing a sense of calmness and reasonable thinking. The oscillation of music at various frequencies can align with the collective resonance of the human nervous system, muscles, bones, and other bodily components, resulting in a malleable "massage" effect. This can enhance disorder, promote bodily harmony, induce relaxation and calmness in the nerves, and foster a state of happiness.

## Discussion

### Changing Characteristics of Physical Exercise and Self-efficacy Affecting Physical and Mental Pleasure of Middle School Students

The study discovered that physical activity and self-efficacy had varying impacts on the physical and mental satisfaction of different groups of middle school students. Male students exhibit a greater level of physical activity compared to female students, whereas urban students demonstrate higher self-reliance than rural students. However, there is no notable alteration in physical activity or overall physical and mental well-being. The physical activity, exercise, and self-efficacy scores of high school students are lower compared to those of college students. Additionally, high school students have higher mental-symptom SCL-90 scores. The most prevalent emotional difficulties among high school students are related to

academic and social standing, which are characterised by various values. The primary impacts of physical activity on the performance and overall well-being of middle school kids are diverse. Exercise affects both physical and mental enjoyment, as well as physical strength.

Additionally, it fosters self-reliance. Research indicates that it plays a crucial part in the entire process. Exercise can have an impact on both physical and mental enjoyment. The concept of autonomy is highly salient in mental exercises for patients. An analysis of outdoor behaviour change research indicates that the level of confidence in adolescents grows as they advance through the stages of exercise behaviour change, which is a crucial phase of transformation. These findings are corroborated by studies carried out by researchers within the country, indicating that the alteration in exercise habits and the progressive enhancement of self-efficacy among university students are integral components of the association between cognitive processes, behaviour, and the degree of transformation.

The study found that perceived self-efficacy steadily grew as exercise duration and degree of activity increased. However, there was no simultaneous decline in physical and mental enjoyment scores. These combined characteristics were observed in middle school children. Engaging in physical activity for a duration beyond 6 months is of utmost significance. Physical activity the term "exercise quality" is commonly defined as engaging in moderate and balanced physical activity for a duration of more than 6 months. The American Sports Medicine Association also adopts this definition as a standard for a person's consistent participation in physical activity, as described in Prochaska's theory of personality change during the "maintenance phase" of behaviour modification (Brender et al., 2021).

### Relationship Between Physical Exercise, Self-Efficacy, and Physical and Mental Pleasure of Middle School Students

According to the theory of behaviour change, at different stages of behaviour change, the process of behaviour change is always accompanied by the change of psychological factors. From the initial or short-term physical exercise to the formation of long-term regular exercise habits, changes in exercise behaviour have different effects on physical and mental pleasure. 1. Adhering to regular exercise has significant psychological effects, which has been widely recognized by the theoretical circle. This study has established that exercise persistence significantly influences both physical and mental pleasure, and there exists a noteworthy correlation between these two factors. 2) Physical exercise does not



have a direct impact on physical and mental pleasure, but it can indirectly influence these aspects through self-efficacy. This study determined that physical exercise does not have a significant impact on physical and mental pleasure. The correlation between exercise and pleasure was found to be insignificant, and the structural equation model revealed no significant independent contribution of exercise to physical and mental pleasure.

Therefore, it has been established that exercise does not directly affect physical or mental pleasure. The study found that there is a significant relationship between the level of physical exercise, self-efficacy, and physical and mental pleasure. The structural equation model supports the idea that the amount of physical exercise influences physical and mental pleasure by affecting self-efficacy. This demonstrates that while the level of physical exercise does not significantly influence long-term and overall physical and mental well-being, it does have a positive effect on short-term and localised psychological measures. 3) Forecasting the impact of physical activity and self-efficacy on both physical and mental enjoyment. In the stepwise regression model, exercise duration, self-efficacy, and school stage collectively account for 30.7% of the variance in physical and mental pleasure responses. All three variables make significant independent contributions and have a negative predictive effect on physical and mental pleasure. This finding is highly significant in guiding targeted physical exercises for middle school students (Munisa et al., 2021).

Red songs emerged, were performed, and evolved from the viewpoint of the proletariat and in the context of the widespread proletarian revolution. They represented the protection of the working class's social status and core interests. The authors were actively engaged in the political fight at that period, consistently adopting a proletarian stance and employing their thoughts and emotions to compose songs. Create widely disseminated publications that align with the desires and core interests of the population. It has been stated that in today's society, all forms of culture, literature, and art are associated with a specific social class and political ideology. He added: "Also, what we mean by literature and art is subject to politics, which means class politics, mass politics, not the politics of the so-called few politicians. Politics, whether revolutionary or counter revolutionary, is class to class struggle, not the behaviour of a few individuals." Red songs are a literary and artistic form that serve the revolution, construction, and people, including workers, peasants, and soldiers. The phenomenon possesses inherent political and socioeconomic characteristics that are inextricable and indelible.

## Conclusion

This study aims to enhance the psychological well-being of college students by utilising musical aesthetic appreciation as a means of intervention for common psychological abnormalities. Including the colour red is necessary in educational philosophy within the framework of ideological and political education, as it promotes a comprehensive development of students' ideological perspectives. In the implementation of coping strategies for abnormal psychological problems, it is crucial to not solely rely on music but also incorporate other complementary methods. This is because the primary objective is to effectively address students' psychological issues.

The impact of physical activity on long-term variations in self-efficacy and physical and mental pleasure among middle-grade students varies among different experimental populations. Studies have demonstrated that engaging in moderate and well-rounded physical activity for a duration of 6 months yields the most significant physical and mental satisfaction advantages. The regression analysis indicates that regular exercise, self-reliance, and study time have a negative impact on the physical and mental pleasure experienced by middle school students. On the other hand, physical activity and independence have a positive effect on both physical and mental pleasure. Physical activity is a multifaceted phenomenon. The author presents a comprehensive model that outlines the relationship between physical activity and both physical and mental pleasure. Exercise has an impact on both physical and mental well-being. Long-term exercise has notable effects on physical and mental pleasure, while short-term exercise influences the well-being of individuals and communities.

However, simply engaging in cognitive activities is insufficient to alter the neurological condition associated with the disease. It is crucial to incorporate physical exercise, as it plays a pivotal role in promoting both physical and mental well-being. Physical exercise can predict the mental health of junior high school students by mediating the relationship between coping methods and psychological initiation. The thinking process of junior high school students in overcoming difficulties and coping with adversity during physical exercise has a positive impact on their lives and academic performance. It helps alleviate the accumulated tension in the learning process and enhances their ability to cope with challenges. During physical exercise, individuals frequently face challenges arising from internal factors, opponents, and the surrounding environment. Consequently, it becomes imperative to harness one's subjective

determination and strive to surmount obstacles and difficulties with unwavering resolve. The sports spirit discussed here has a subtle impact on fostering the psychological well-being of junior high school students. Specialised teachers are essential for ensuring effective physical exercise and achieving desired outcomes. Physical education teachers must possess the skills to develop and execute physical exercise programmes, as well as demonstrate proficiency in their own practice. To address the lack of experience and knowledge in physical exercise among most physical education teachers in higher

education institutions in China, it is essential to provide training to these teachers prior to their instruction of physical exercise classes. Physical education teachers should acquire a solid foundation in the theoretical knowledge of physical exercise before seeking practical training from specialised physical exercise companies. Integrating the training methods of social professional sports training companies with physical education teaching in universities can enhance teachers' comprehension of physical exercise and facilitate the development of scientifically designed exercise content.

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