

# INFLUENCES ANALYSIS OF PHYSICAL EXERCISE ON COLLEGE STUDENTS' SATISFACTION AND ITS PSYCHOLOGICAL MECHANISM



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ANÁLISE DA INFLUÊNCIA DO EXERCÍCIO FÍSICO SOBRE A SATISFAÇÃO PESSOAL DOS ESTUDANTES UNIVERSITÁRIOS E SEU MECANISMO PSICOLÓGICO

ANÁLISIS DE LA INFLUENCIA DEL EJERCICIO FÍSICO EN LA SATISFACCIÓN PERSONAL DE LOS ESTUDIANTES UNIVERSITARIOS Y SU MECANISMO PSICOLÓGICO

Qingyun Hou<sup>1</sup>   
(Physical Education Professional)

1. Anhui Finance and Trade Vocational College, Hefei, Anhui, China.

## Correspondence:

Qingyun Hou, Hefei, Anhui, China, 230061. dojpv43@163.com

## ABSTRACT

**Introduction:** Research on the relationship between physical exercise and psychological stress, psychological barriers, and other negative psychological indicators has begun to turn to the relationship with positive psychological indicators, especially personal satisfaction. These tools from positive psychology may be useful for analyzing the subjective effects of physical exercise on college students' perceptions. **Objective:** To verify the impact of physical exercise on college students' physical quality and personal satisfaction. **Methods:** An exposition of the connotation of subjective well-being in college students and the internal relationship between physical exercise and college students' subjective well-being is given, and analyzes the impact of physical exercise on college students' subjective well-being and its psychological mechanism. **Results:** as an important social group, college students are in a critical period of life, and their quality of life and mental health deserve attention. The influence of exercise on physical and mental health has become a consensus. **Conclusion:** Physical exercise can reduce not only stress attacks but also promote the development of mental health and personal satisfaction in college students. **Level of Evidence II; Therapeutic studies - investigation of treatment outcomes.**

**Keywords:** Exercise; Personal Satisfaction; Stress, Psychological.

## RESUMO

**Introdução:** A pesquisa sobre a relação entre exercício físico e estresse psicológico, barreiras psicológicas e outros indicadores psicológicos negativos começou a se voltar para a relação com os indicadores psicológicos positivos, especialmente a satisfação pessoal. Essas ferramentas da psicologia positiva podem ser úteis para analisar os efeitos subjetivos do exercício físico sobre a percepção dos estudantes universitários. **Objetivo:** Verificar o impacto do exercício físico na qualidade física dos estudantes universitários e de sua satisfação pessoal. **Métodos:** É feita uma exposição da conotação do bem-estar subjetivo nos estudantes universitários e a relação interna entre o exercício físico e o bem-estar subjetivo dos estudantes universitários, e analisa o impacto do exercício físico no bem-estar subjetivo dos estudantes universitários e seu mecanismo psicológico. **Resultados:** como um grupo social importante, os estudantes universitários estão em um período crítico de vida, e sua qualidade de vida e saúde mental merecem atenção. A influência do exercício físico sobre a saúde física e mental tornou-se um consenso. **Conclusão:** O exercício físico pode não apenas reduzir os ataques de estresse, mas também promover o desenvolvimento da saúde mental e satisfação pessoal dos estudantes universitários. **Nível de evidência II; Estudos terapêuticos - investigação dos resultados do tratamento.**

**Descritores:** Exercício físico; Satisfação Pessoal; Estresse Psicológico.

## RESUMEN

**Introducción:** La investigación sobre la relación entre el ejercicio físico y el estrés psicológico, las barreras psicológicas y otros indicadores psicológicos negativos ha comenzado a dirigirse a la relación con los indicadores psicológicos positivos, especialmente la satisfacción personal. Estas herramientas de la psicología positiva pueden ser útiles para analizar los efectos subjetivos del ejercicio físico en las percepciones de los estudiantes universitarios. **Objetivo:** Verificar el impacto del ejercicio físico en la calidad física y la satisfacción personal de los estudiantes universitarios. **Métodos:** Se hace una exposición de la connotación del bienestar subjetivo en los estudiantes universitarios y la relación interna entre el ejercicio físico y el bienestar subjetivo de los estudiantes universitarios, y se analiza el impacto del ejercicio físico en el bienestar subjetivo de los estudiantes universitarios y su mecanismo psicológico. **Resultados:** como grupo social importante, los estudiantes universitarios se encuentran en un período crítico de la vida, y su calidad de vida y salud mental merecen atención. La influencia del ejercicio físico en la salud física y mental se ha convertido en un consenso. **Conclusión:** El ejercicio físico no sólo puede reducir los ataques de estrés, sino también promover el desarrollo de la salud mental y la satisfacción personal en los estudiantes universitarios. **Nivel de evidencia II; Estudios terapéuticos - investigación de los resultados del tratamiento.**

**Descriptor:** Ejercicio Físico; Satisfacción Personal; Estrés Psicológico.



## INTRODUCTION

With the economic development and social progress, more and more people begin to pay attention to the improvement of the quality of life. At present, the rapid development of positive psychology makes the research of subjective well-being more and more attention. The effect of physical exercise on physical and mental health has become a consensus. It can not only reduce people's stress response, but also promote the development of mental health.<sup>1</sup> From the history of human thought, people have never stopped thinking and pursuing happiness. Today, with the continuous development of economy and society, the party and government pay more attention to the happiness of the people, and become the main melody of economic and social development in some regions.<sup>2</sup> For college students, they are the backbone of the future social development and the indispensable key driving force for social progress.<sup>3</sup> If the subjective well-being of college students is not good, it will affect the quality of their study and life. Nowadays, with the continuous improvement of people's material living standards and the increasing enrichment of life content, people are no longer satisfied with the existing spiritual and material cultural life, and their awareness of all-round physical and mental health requirements is becoming more and more prominent.<sup>4</sup> As an important group in the society, college students are in a critical period of life. Their quality of life and mental health should be concerned. College Students' subjective experience of well-being directly affects their learning, emotion, life and future expectations.

The relationship between physical exercise and mental health is a hot topic in sports psychology research in recent years, and a large number of valuable research results have been obtained, such as the influence of physical exercise on personality and self-concept, the improvement of physical exercise and emotion, and the mechanism of physical exercise producing psychological benefits.<sup>5</sup> With the rise of positive psychology, people's research on the relationship between physical exercise and psychological pressure, psychological barriers and other negative psychological indicators began to shift to the relationship with positive psychological indicators, especially with subjective well-being.<sup>6</sup> People's well-being, especially college students' well-being, and the relationship between material living standards and values are also discussed strongly.<sup>7</sup> These problems have great influence on the development of education and the construction of students' value system. As a kind of psychological experience and subjective evaluation of people's social life, subjective well-being is a very important comprehensive psychological index to measure the quality of life.<sup>8</sup> This paper expounds the connotation of College Students' subjective well-being, as well as the internal relationship between physical exercise and college students' subjective well-being, and analyzes the influence of physical exercise on College Students' subjective well-being and its psychological mechanism.

### The connotation of college students' subjective well being

Subjective well-being is defined by psychologists from a unique perspective. Compared with the method of measuring subjective well-being only from economic, social and other objective indicators, the study of subjective well-being emphasizes the influence of individual unique values, emotions, psychological factors, life experience, expectations on the quality of life. People feel happy in their own emotions, even in a difficult environment, they also have a good subjective well-being. The study of subjective well-being, in-depth grasp of the subjective state of life, to improve the quality of life, to help individuals adapt to social life, access to life happiness has important value. Social environment will affect individual's subjective emotion and thinking consciousness, which will directly affect the cognition and feeling of well-being. A person with positive emotions and thinking consciousness, then subjective well-being will be relatively strong.

Subjective well-being is an individual's overall evaluation of their quality of life according to their own standards. Subjective well-being consists of three dimensions: positive emotion, negative emotion and life satisfaction. For individuals, work and study is the source of stress, which is the main factor affecting personal emotions. Work pressure or learning pressure, then the mood will be relatively negative, subjective well-being will be relatively weak, can not form a strong happiness experience. The evaluation of subjective well-being depends on the subjective experience of the subjects, rather than the standards of the outside world and others, which distinguishes it from the traditional clinical psychology.<sup>9</sup> A harmonious and happy family atmosphere can make people's subjective well-being stronger. On the contrary, the subjective well-being of single parent families and families with contradictions will be relatively weak. Fourth, interpersonal relationship. Subjective well-being is not a state of mind at a particular moment, but a long lasting state, although people's state of mind will change with the changes of external events. College students are already adults, and they are also facing an important stage of transition from study to work. The comprehensive influence of various factors will cause obvious differences in subjective well-being of college students. And physical exercise, in this aspect of subjective well-being, will have some influence, need to be clear to grasp the cognition.

### The internal relationship between physical exercise and subjective well being of College Students

With the great improvement of the overall quality of college students, people's awareness of physical exercise is also enhanced, and people's living standard is also greatly improved. Physical exercise can enhance physical fitness, improve health, but also a positive and active activity process, long-term exercise can promote the development of people's memory ability, thinking ability and perception ability. An obvious effect of physical exercise is to relieve stress. In reality, whether it's study or work, it will produce pressure and make people feel tired. For college students, the busy professional study brings a lot of burden pressure to students, which reduces the subjective well-being of college students. The subjective well-being of the whole group of college students is living in a relatively single group. Under the same learning pressure and competitive environment, they can not be separated from their parents and can not get economic independence. Therefore, there is no significant difference between male and female students in terms of negative emotions and life satisfaction.<sup>10</sup> Under the pressure of learning, college students can effectively relieve physical and mental fatigue and relieve their own pressure through appropriate sports. When the pressure is relieved, the emotion of college students will become positive, and the subjective well-being experience will be more intense. It can be seen that physical exercise has a positive effect on College Students' subjective well-being. College students are in the fierce social competition, the pursuit of wealth and other aspects of consciousness, has had a certain impact on college students, and directly affect their life satisfaction. According to previous studies, people's sense of happiness and satisfaction with life are relative, which has a lot to do with personal feelings and confidence in the future.

According to the change curve of life satisfaction from dissatisfaction to satisfaction 1-7, it shows that the overall life satisfaction of college students is between satisfaction and dissatisfaction, with a slight tendency of dissatisfaction. The overall situation of College Students' subjective well-being is shown in Table 1.

For college students, if they want to effectively improve their subjective well-being through physical exercise, they need to make a reasonable physical exercise plan to guide the development of physical exercise. The variance analysis of different degrees of direct participation in sports activities and subjective well-being is shown in Table 2.

**Table 1.** Overall status of subjective well-being of college students.

	Number of people	Mean value	Standard deviation
Life satisfaction	889	3.86	1.08
Positive emotion	889	4.17	1.11
Negative emotion	889	2.95	0.95

**Table 2.** Variance analysis of the frequency of student participation in sports and subjective well-being.

Frequency of sports participation	Subjective well-being index		
	Life satisfaction	Positive emotion	Negative emotion
Never	3.88±0.96	4.16±0.96	2.70±0.77
Occasionally	3.79±1.29	4.38±1.22	2.99±0.97
Sometimes	3.78±1.18	4.54±1.18	2.80±0.95
Often	3.85±1.15	4.66±0.95	2.76±0.94

Physical exercise can effectively exercise students' character, so that students can form firm character, exercise perseverance and hone courage in physical exercise. These qualities have positive effects on students' subjective well-being. College students often get their income from their parents, and they are at the peak of their physical and mental development. They hope that they can be independent, especially economically. However, the intense study life in school does not allow and is unlikely to make students break away from their dependence on their parents economically. Especially in the case of successfully solving difficulties, college students can get a stronger feeling of happiness and get emotional satisfaction in their hearts, which is the basis of subjective well-being. Specifically, it is necessary to choose the spare time to design physical exercise activities according to one's own study arrangement, that is, the fixed curriculum arrangement and one's own extracurricular study arrangement, so as to enrich the spare time and make up for the spare time through exercise, so as to make the university life more colorful. Drawing lessons from the research ideas and methods of subjective well-being and other factors, and combining with the relevant research results and research theories in the field of sports, this paper enriches and broadens the thinking and vision of the research on the relationship between physical exercise and subjective well-being. Only in this way can the research in this field stop at the level of phenomenon description, mechanism guess or inference.

### The influence of physical exercise on College Students' subjective well being

Physical exercise can enhance students' physical fitness. Through physical exercise, students' overall quality will reach a higher level, which also plays a positive role in improving students' subjective well-being. If a college student is in poor health and often falls ill, his subjective well-being will be lower, because illness will greatly reduce people's happiness. Through physical exercise, the physical quality can reach a better state, reduce the invasion of various diseases, and keep a healthy state all the time. This can satisfy students' psychological feelings and improve their subjective well-being. Only when the range of research objects is wide, and the number of representative ones is more likely, the research results will have more popularization and practical value. Subjective well-being will be influenced by interpersonal relationship, and interpersonal communication is also very important for college students. Physical exercise is an excellent carrier of interpersonal communication. Whether it is basketball or football, it is a group sport, which requires students to cooperate with each other and take physical exercise as a group. Physical exercise is to actively participate in the collaborative process of others, which can promote people's communication, effectively improve interpersonal relationships and enhance their social adaptability.<sup>11</sup>

College students taking part in physical exercise can not only relieve the mental tension and fatigue caused by study, work and life, but also improve themselves, and get spiritual satisfaction and enjoyment from them, so as to gain more positive emotional experience, and then have more confidence in life. Through this collective physical exercise, students can interact with each other, get emotional satisfaction and form a more penetrating interpersonal relationship, which can stimulate the development of college students' subjective well-being. The differences of subjective well-being between PE majors and non-PE majors are shown in Table 3.

Training students' creative thinking through sports classroom teaching is conducive to promoting students' all-round development, and is also an effective way to train students to feel and understand sports. The linear regression curve is calculated according to the stepwise multiple linear regression equation, as shown in Figure 1.

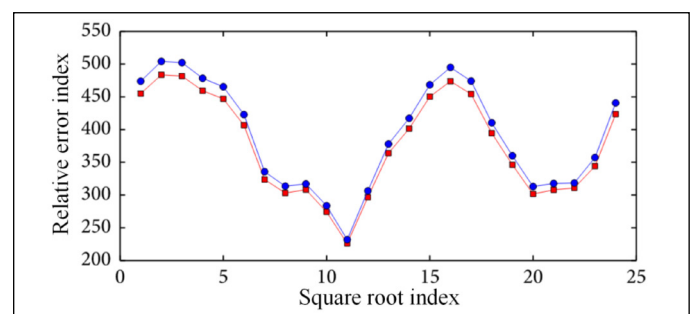
In physical exercise, the physical exercise quantity represents the comprehensive action of exercise intensity, exercise frequency and one-time exercise time. When the exercise frequency in the exercise quantity leaves the exercise duration, the exercise quantity at this time more represents one-time physical exercise. For college students' subjective well-being, physical exercise can play a positive role in many aspects, so it is necessary to design reasonable physical exercise activities to cultivate college students' subjective well-being, so that college students can get a more positive happiness experience.<sup>12</sup> Judging from the influence of exercise duration on college students' subjective well-being, exercise duration has significant main effects on all dimensions of subjective well-being. This shows that regardless of the amount of exercise, long-term continuous physical exercise will have a positive impact on overall life satisfaction, positive emotion and negative emotion. With the increase of exercise duration, college students' overall life satisfaction and positive emotion index scores increase, while negative emotion index scores decrease. That is to say, college students' overall life satisfaction and positive emotion degree increase with the increase of exercise duration, while negative emotion decreases with the increase of exercise duration.

### CONCLUSIONS

College students' physical exercise can positively influence their subjective well-being, and there is a close relationship between them. Therefore, under the current situation, college students need to attach importance to physical exercise, design reasonable exercise plans and

**Table 3.** Differences in subjective well-being between college students majoring in physical education and college students without majors.

	Life satisfaction (M ± SD)	Positive emotion (M ± SD)	Negative emotion (M ± SD)
Sports major (n = 165)	3.99±1.31	4.73±1.01	2.91±0.99
Non-sports major (n = 724)	3.70±1.22	4.48±1.17	2.85±0.96

**Figure 1.** Relationship between actual value and calculated value of stepwise linear regression.

effectively implement exercise activities. Harmonious campus sports culture atmosphere can stimulate students' interest in sports, make students actively participate in sports activities, so that students can know themselves better, constantly improve themselves, improve their own quality, cultivate team spirit and promote friendship among students. For college students' subjective well-being, physical exercise can play a positive role in many aspects. Therefore, it is necessary to design reasonable physical exercise activities to cultivate college students'

subjective well-being, so that college students can get a more positive happiness experience. Schools should actively increase investment in physical exercise venues and facilities in schools, so that more college students can participate in physical exercise and choose their favorite sports more freely.

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