

# The influence of music education and sports psychology on students' anxiety

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## Abstract

Music contains some folk culture, national culture, and foreign culture. This type of aesthetic gratification from music can instill in students the desire for self-actualization, which is crucial for enhancing their artistic talent and charisma. This investigation aims to determine the effect of music education and sports psychology on student anxiety. This information was taken from 200 college students randomly picked from a Chinese university. The findings of this study revealed that music education and sports psychology substantially impact student anxiety. The study concluded that a student's anxiety could be lessened by providing a suitable education. The study has theoretical ramifications that have realistically expanded the body of knowledge. In addition, the practical consequences of this study are essential for enhancing the sports psychology of students. There are also some future directions for this research.

**Keywords:** Music education, sports psychology, student anxiety, mental health

## Introduction

According to [Umuzdaş, Tök, and Umuzdaş \(2019\)](#), music is an art form that reflects the feelings of real-world humans. Depending on the expression, music can be classified as vocal or instrument. There are two distinct genres of music, which can be further subdivided into folk music, primitive music, and contemporary music. Individuals who express their feelings through music can effectively release their emotions. Music education can cultivate students' music perception ability and effectively cultivate students' interest in study and life while simultaneously increasing the fun in the learning process and relieving middle school students' inner pressure accumulation to achieve the ultimate goal of psychological purification ([Good-Perkins, 2019](#)). In addition to the absence of disease or infirmity, health is a complete bodily, mental, and social well-being condition. So, a healthy individual should have a robust body, a positive mental attitude, and the capacity to sustain harmonious relationships with the social and natural surroundings ([Chen & Wong, 2022](#)).

Moreover, health is the foundation for the continuation of human life. Individuals have diverse conceptions of health in different historical eras and cultural contexts. With the evolution of society, the continual advancement of science and technology, and the broadening of people's understanding of the outer world and themselves, people have a more precise grasp of health, and health demands are rising ([Kos Jr, 2018](#)). Simultaneously, they experience the beauty of Chinese traditional culture, expand the students' understanding, and broaden their cultural perspective. In addition, music, as both an art and a

science, involves the dissemination of numerous other cultures and has a wealth of rhythmic information. Students' knowledge and horizons can be broadened by encouraging them to study music outside of school. They gain a deeper awareness of culture, which is crucial for promoting mental health education ([Johnson, 2020](#)).

Music contains some folk culture, national culture, and foreign culture. When students are instructed to listen to traditional Chinese music, for instance, they will experience the crisp sound of the flute, the deep voice of the flute, and the clang of the pipa. They will simultaneously sense the beauty of traditional Chinese classical music and feel the beauty of classical Chinese culture, enhancing their knowledge and cultural perspective. In addition, music as an art and science involves disseminating numerous other cultures and has a wealth of rhythmic information ([Cayari, 2018](#)). Students' knowledge and horizons can be broadened by encouraging them to study music outside of school. They gain a deeper awareness of culture, which is crucial for promoting mental health education. Music is a form of art that has the most potent ability to penetrate people's innermost hearts, and suitable music education approaches can infuse middle school pupils' hearts with music containing positive emotions, thereby preventing mental health issues ([Bates, Gossett, & Stimeling, 2020](#); [Palkki & Sauerland, 2019](#)).

Research indicates that excellent music education can help kids cultivate inner feelings and develop distinctive personality traits. In addition, music broadens the perspectives of kids by allowing them to experience the world's splendor and majesty. Singing instruction in music education can successfully save middle school pupils' emotional expression and emotional ability development

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(Bates et al., 2020; Good-Perkins, 2021). Moreover, pupils may utilize the creative evening party in school or class. By signing or performing various programs, pupils can also experience various emotions. It can correctly represent if kids' psychological development occurs when communicating with others (Powell et al., 2020). It includes issues such as the ability to speak with others, the

ability to express one's actual opinions freely, etc. Alternatively, learning and Teaching music may efficiently promote pupils' good character, an essential requirement for effective interpersonal interactions.

Among other things, In addition, music teaching can also help students express their hearts through music. As shown in Figure 1.

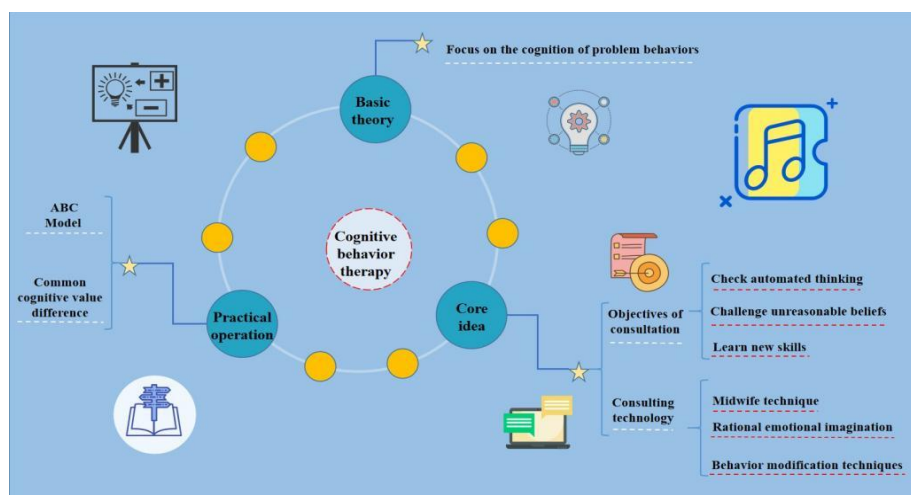


Figure 1. The influence of sports psychology on students' anxiety.

College students are later in physical and mental development (sometimes called early adulthood), transitioning from childhood to adulthood (Gellerstein, 2021). They must contend with the modification of the social economy, the alteration of the learning and living environment, and the restoration of interpersonal connections. Several significant life difficulties, such as hybridization and the battle between education and job, bear the weight of society's and parents' high expectations. This investigation aims to determine the effect of music education and sports psychology on student anxiety. For psychological health education in colleges and universities to explore new views and methods, the results of this study are crucial from a theoretical and practical standpoint for enhancing students' mental health education. So, this research has a high theoretical and practical value, as the relevant ideas of music education function can be utilized to improve the mental health of students in higher vocational schools.

## Literature Review

Music is an art form that can mirror the feelings of actual humans. It is possible to divide music into vocal music and instrumental music. Moreover, it can be split into classical, folk, and contemporary music (including pop music). Through music education, a student's music perception skills can be developed. The student's ability to learn and

interest in life can be increased, making the learning process more enjoyable and effectively relieving heart pressure (Nugraha, Sumaryanto, & Utomo, 2018; Tian, 2020). People's quality of life has increased in recent years due to the continual improvement of their economic and social standing, enabling them to reach their ultimate aim of psychological purification. Yet, as the pressures of life and society increase, the mental health of college students has become a matter of widespread concern in modern culture. Students continue to leap out of buildings, fight, and have autism (Daubney & Fautley, 2020).

As the nation's future leaders, college students' mental health problems have reached an unacceptable level. No matter the cultural quality, it is impossible for a person to adjust to the demands of society if they lack good psychological traits (Said & Abramides, 2020; Saputra, 2021). Given the mental health problems of college students, not only are schools required to increase their efforts in school education, but society as a whole should increase its efforts in all areas, including music education, guiding students' psychological quality, and promoting the improvement of students' mental health (Prest et al., 2021; Saputra, 2021). According to Maslow's theory of human needs, the highest requirement of human nature is self-actualization. By listening and activating multiple organs, such as the mouth, eyes, and ears, students can experience a sense of inner happiness while studying music (Umuzdaş et al., 2019).

This aesthetic enjoyment from music can inspire students' need for self-realization, which is crucial for enhancing students' artistic talent and charisma (Regier, 2021). As part of their art education, students might establish an interest in off-campus music. Not only may students achieve self-actualization through music in their spare time, but they can also prevent exposure to undesired behaviors. Students have a profound knowledge of the beauty in music, which helps enhance their aesthetic ability and foster their ongoing psychological development (Jo & Cho, 2021). With beautiful language, musical tune, and intangible feelings, the music conveys an aesthetic notion that inspires pupils to move. Compared to other creative disciplines, the art of music is more natural, more conducive to pupils expressing their thoughts, and more capable of allowing students to be discreetly impacted by the mind (Tom et al., 2020).

The students' emotions have been fostered, and their hearts have been cleaned through time. In off-campus music education, students can select their preferred genres of music, such as colorful folk music, folk songs, popular songs, etc., and develop an appreciation for beauty (Angel-Alvarado, Wilhelmi, & Belletich, 2018; Koskela & Leppänen, 2020). When the music rushes like a fresh spring into the students' hearts, the students' hearts become infected. This might enhance the emotional resonance of the students, enrich their sentiments, and purify their brains (Shaw, 2020). College students are learning the "ideal me" and "actual me" in a social environment that is becoming ever-complex. A considerable disparity between the two will often result in a psychological gap. The "subject I" and "object I" will conflict, unable to objectively and thoroughly evaluate their benefits and disadvantages, and either overconfident or underconfident. It is straightforward to develop mental health difficulties if the situation persists. This paper begins by discussing the current state of music education in the context of the information age and the need for innovation in music education practice.

Under the influence of music education, colleges, and universities in the new era nurture the concept of talent training, take professional students as their guides, conduct various types of music practice activities, and lead professional students to participate in it continuously (Bell & Bell, 2018). Conduct relevant practice in the perception and taste of musical works, and thoroughly comprehend oneself; treat my advantages and disadvantages appropriately (Burwell, Carey, & Bennett, 2019). Music education is conducive to students' in-depth and objective viewing when your views and feelings about people and things, including your abilities and accomplishments, gradually form a stable self. I am conscious of making a

correct evaluation of myself at all times and continuously enhancing and elevating myself under stable self-consciousness. Students can rationally adjust their psychological state, conduct correct judgments or predictions of behavior, have a more comprehensive understanding of themselves, cultivate their ability and quality more effectively, and promote the development of mental health (Bennett & Rowley, 2019).

So, music is a means for people to communicate their emotions. People can communicate their pain and happiness through music and lyrics through appropriate avenues. Utilized in music In Cheng Zhong, students may efficiently "express Vent and control their feelings" by listening to lyrics or playing music, among other activities. Hence, music instruction can be conducted in either language or non-linguistic formats. Individuals must continually interact, cooperate, and collaborate with others throughout musical practice. Sound Music education can help students learn to deal with the relationship with others and even the collective when communicating with others constantly integrate into the collective, master the essential skills of communication with people, and conduct multi-level communication with people, avoiding such psychology as seclusion and escape can effectively improve students' interpersonal skills and pave the way for the improvement of psychological quality. Based on this literature, the following hypotheses were developed:

Hypothesis 1: Music education has a direct impact on student anxiety.

Hypothesis 2: Sports psychology has a direct impact on student anxiety.

## **Methodology**

Adapted scale items from prior studies were utilized to obtain data from the research participants. This information was taken from 200 college students randomly picked from a Chinese university. These pupils were instructed to complete the questionnaire based on their comprehension. The Likert scale rating approach is utilized for the questionnaire. The scale for music education was taken from a study conducted by Droe (2006) that significantly validated this scale. In addition, Wiese, Weiss, and Yukelson (1991) developed the sports psychology scale to assess the impact on student anxiety.

Similarly, the scale for student anxiety was adapted from Kleehammer, Hart, and Keck (1990) to establish the association between student anxiety and other variables in this study. In this approach, the study must establish a cross-sectional method for data collection, regarded as the proper method for data gathering in any research. In addition, the participants in this study were acknowledged for their

contributions to the research findings. Smart PLS 3.0 is used for data analysis in this study since it is regarded as a trustworthy instrument for meaningfully collecting data.

## Data Analysis

This research's data analysis began with determining skewness and kurtosis values. These values are employed

to examine the normalcy of data distribution. The skewness numbers cannot be below +1, and the kurtosis values cannot exceed -1. (Royston, 1992). The data analysis revealed that all indices of music education, sports psychology, and student anxiety met the specified skewness and kurtosis thresholds, and Table 1 displays the normality of the data.

**Table 1**

### Skewness and Kurtosis

Items	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
ME1	1	0	3.247	3	1	7	1.517	-0.486	0.087
ME2	2	0	3.256	3	1	7	1.805	-0.577	0.437
ME3	3	0	3.537	3	1	7	1.882	-0.807	0.296
ME4	4	0	3.489	3	1	7	1.906	-0.799	0.374
ME5	5	0	3.546	3	1	7	1.734	-0.495	0.297
ME6	6	0	3.502	4	1	7	1.819	-0.710	0.238
SA1	12	0	3.590	3	1	7	1.855	-0.639	0.355
SA2	13	0	3.599	3	1	7	1.904	-0.791	0.325
SA3	14	0	3.485	3	1	7	1.789	-0.479	0.441
SA4	15	0	3.524	4	1	7	1.913	-0.919	0.204
SA5	16	0	3.480	3	1	7	1.826	-0.649	0.307
SA6	17	0	3.648	3	1	7	1.778	-0.605	0.283
SA7	18	0	3.075	3	1	7	1.478	-0.112	0.587
SP1	7	0	3.498	4	1	7	1.835	-0.884	0.154
SP2	8	0	3.678	4	1	7	1.867	-0.781	0.194
SP3	9	0	3.700	3	1	7	1.865	-0.761	0.303
SP4	10	0	3.687	3	1	7	1.943	-0.800	0.349
SP5	11	0	3.573	3	1	7	1.891	-0.729	0.379

The study data discriminant validity is also tested in this stage. The factor loadings, Cronbach Alpha, composite reliability, and average variance extracted values are tested.

The findings reported in Table 2 highlight that the thresholds are significantly achieved. The data of this study has validity.

**Table 2**

### Convergent Validity

Variables	Items	Factor Loadings > 0.60	Cronbach's Alpha > 0.70	Composite Reliability > 0.70	Average variance Extracted > 0.50
Music Education	ME1	0.893	0.952	0.961	0.805
	ME2	0.903			
	ME3	0.903			
	ME4	0.883			
	ME5	0.893			
	ME6	0.907			
Student Anxiety	SA1	0.877	0.947	0.960	0.826
	SA2	0.892			
	SA3	0.897			
	SA4	0.895			
	SA5	0.893			
	SA6	0.883			
	SA7	0.657			
Sports Psychology	SP1	0.888	0.940	0.952	0.739
	SP2	0.895			
	SP3	0.905			
	SP4	0.935			
	SP5	0.921			

The research has examined the discriminant validity, which is essential for determining the degree to which the items for any given concept differ. This study employed the

Heteritrait-Monotrait technique. Table 3 indicates that this strategy yields significant results because the required criterion of < 0.90 is met (Gold, Malhotra, & Segars, 2001).

**Table 3**

*Discriminant Validity*

Variables	Music Education	Sports Psychology	Student Anxiety
Music Education			
Sports Psychology	0.792		
Student Anxiety	0.685	0.576	

This research's findings are examined using a structural equation model for hypothesis testing. Table 4 demonstrates that both hypotheses are significant since their respective t-values are more remarkable than 1.96 and their respective p-values are less than 0.05. (Hair et al.,

2012). Accepting Hypothesis 1, music education has a direct effect on student anxiety. Moreover, the second hypothesis is supported, and sports psychology directly affects student anxiety. Table 4 presents the findings of this study.

**Table 4**

*Structural Equation Model*

Hypotheses	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Music Education -> Student Anxiety	0.392	0.393	0.057	6.929	0
Sports Psychology -> Student Anxiety	0.574	0.573	0.057	10.057	0

**Discussion**

According to the results of this study, both hypotheses are well supported. The association established in hypothesis 1 is acknowledged, as is the effect of music education on student anxiety. In addition, the association proposed in hypothesis 2 is accepted, as is the influence of sports psychology on student anxiety. Music education, regardless of whether it is music education teaching or art practice activities related to music, is an essential means of fostering the mental health of college students, so long as proper guidance is provided (Good-Perkins, 2019). The particularity of the use of music education expresses the aesthetic, educational, emotional experience, and social interaction functions of music education. Music performance and appreciation activities enable college students to participate in the aesthetic experience of music and the music scene experience (Kos Jr, 2018; Pitt, 2020). This improves high school music instruction techniques and reduces the psychological stress of college students, which is essential for the development of health psychology and personality in college students (Bates et al., 2020). In conjunction with the realities of physical education, the reform of physical education in colleges and universities should be strengthened. Physical education must include physical fitness, psychology, and other theoretical knowledge and teaching methods to encourage students to voluntarily and actively acquire physical

knowledge, skills, and procedures with the capacity to self-regulate psychology (Lin et al., 2020). To promote the mental health of college students enrolled in physical education, selecting the most effective instructional strategy is crucial. To attain physical education and fitness objectives, teachers must think broadly, investigate the teaching approach, and incorporate "happy physical education" into the classroom. Improve the establishment of a physical education teaching team and enhance the mental health education of teachers (Deng et al., 2020). Teachers must possess sound psychological characteristics, an outstanding temperament, high moral standards, harmonious interpersonal relationships, and social flexibility. Teachers should strengthen their study of pedagogy and psychological theories in their spare time, update their educational concepts, learn to understand and recognize different opinions and differences, and timely provide a kind of mediation and tolerance of the psychological environment, fully mobilize students' enthusiasm and inspire students' creativity, to improve students' psychological health levels (Sortwell & Ramirez-Campillo, 2022). Initially, music instruction contains emotional qualities (Chen & Wong, 2022). Music is an expressive art; it uses sound transport to communicate people's emotions in the shape of movement. It uses people's emotions as the starting point, climax, process, and destination to represent one's ideas, desires, and sentiments. Music is a

direct replication and sublimation of human emotions expressed in abstract, subtle, and rich ways. The emotional component has been incorporated into the primary body throughout the production, performance, and appreciation of musical works. The educational purpose of music education activities is accomplished through emotional transmission and emotional resonance. Throughout the teaching process, emotional experience dredges teachers and music, students and music, and teachers and students through various channels, enabling the three to develop emotional connection and communication so students can communicate through listening (Cayari, 2018). Sports activities can help pupils develop a strong will, improve their self-esteem and self-confidence, and cultivate their hardworking, ambitious, and tenacious spirits. Sports can prevent mental diseases and safeguard mental wellness. The game approach in sports is a fundamental means of preventing school mental problems (Lyu, Tang, & Yang, 2022). The purpose of games is to lighten the mood and help pupils realize their full potential. Generally, sports are characterized by difficulty, fatigue, intensity, stress, confrontation, and intense competition. With their adversity, sports hone college students' will and build a pleasant, joyful, and healthy mind while strengthening the body and the will (MacDonald et al., 2020). The process of college students' physical activity is also the process of their own emotions and emotional experience, in which expression, behavior, will, etc., can be accurately reflected; consequently, it is easy to find students with various psychological disorders, and physical exercise helps to relieve muscle tension and life tension. Emotion evolves from negative, incomplete, and distorted to positive, complete, and normal to boost the mental health of college students, promote the harmonious, comprehensive, and healthy development of body and mind, and enhance college students' social adaptability (Gama et al., 2022). Physical exercise is a good kind of interpersonal communication, which can enhance the interaction between individuals and society.

Physical education theory is essential to classroom physical education (Gama et al., 2022). The content of mental health must be taught in physical education theory courses so that students can understand the true meaning, standard, and influencing factors of mental health and master the healthcare methods of mental health so that they can adjust their mentality in a timely and appropriate manner. Pupils are encouraged to engage in sports frequently, seek satisfaction, and cultivate their emotions (González-García et al., 2018). Teachers should comprehensively understand their students' personality traits, hobbies, athletic abilities, and physical health during

the teaching process to know them well and provide a better-tailored education. To boost their chances of success, pupils with weak physical education skills should be encouraged and rewarded, and the instructional difficulty should be suitably reduced. They should be acknowledged and commended for their little accomplishments to boost their confidence in overcoming obstacles, address their deficiencies appropriately, and erase their inferiority complex. The campus sports culture is a relatively open cultural form comprised of rigorous scientific methodologies, sound organizations, abundant human resources, and many cultural and athletic activities. Scientific humanistic philosophy is the essence of sports culture, determining the type and direction of its growth. Scientific and healthy sports ideas will actively support sports' material and spiritual culture to develop in a manner conducive to the advancement and health of society and individuals. Students must "promote science, innovation, health, fair competition, etc." Students can increase their self-esteem, self-confidence, and pride in the milieu of various forms of campus sports culture. Collegiate sports activities include physical education instruction and all levels of athletic competition. Physical education teachers assist students in mastering the fundamental skills and procedures of physical health care in a planned, structured, and purposeful manner so that they may improve their physical education and develop their personalities via healthy physical exercise. These activities will provide college students with specific physical and mental activity, promoting their physical and mental health. Control the kids' emotions and feelings, and promptly identify and remove their psychological impediments. Emotions can be a significant indication of a person's mental health. The expression and behavior of pupils during athletic activities reflect their psychological state, and it is straightforward to identify their psychological difficulties. The study found that physical exercise is conducive to the treatment and reduction of mental illness and mental disorders to a certain extent and can alleviate depression, anxiety, sorrow, tension, and other unhealthy emotions so that people feel happy and relaxed, thereby improving their mental state and eliminating their mental disorders.

Improve people's physical health and give fundamental mental health protections. Significantly, sports can immediately improve people's psychological and physiological activities in quiet conditions, effectively promote the effective functional systems of the human body to actively join the active state, increase blood circulation, and stimulate significant organs. In addition, it fully activates the closed alveoli, capillaries, nerve cells,

and muscle fibers so that the major organs of the human body may receive more nutrients and oxygen, hence promoting the healthy development of the human body. A healthy body is a fundamental prerequisite for mental health growth. It is helpful to the healthy development of the psychological and moral qualities and character of students. Students engage in self-challenge and self-transcendence openly and widely acknowledgedly during physical education and sporting events. Through this process, students gain a thorough understanding of the worth of life, the value of transcending life, and the value of continuing life. This is favorable to helping them develop the capacity to endure setbacks and disappointments. This has resulted in cultivating and improving their self-control and self-discipline, resulting in braver and more determined personalities and a more persistent and tenacious will. It also contributes to developing their sense of fair play, the spirit of entrepreneurship, and teamwork, which are essential components of healthy psychology. Through research, it has been shown that sports can not only support the growth of people's cognitive ability but can also minimize mental hurdles, enhancing their ability to adapt to society and, ultimately, their mental health. Moreover, from a sociological perspective, the purpose of all sports activities is to imitate social life, and social production, which is the shadow of social activities, and the sports spirit reflected from it is a mirror of the social spirit at the moment.

Physical education instructors infect kids with their exceptional psychological traits. As we all know, a teacher's influence on students extends to all aspects of their lives; therefore, the physical education teacher's mental health impacts the students' mental health. Thus, physical education teachers must actively continue to grow their quality, remain optimistic and enterprising, and maintain a long-term commitment mentality in their daily work. They must have an in-depth grasp of students' hobbies, athletic abilities, and personality attributes to implement individualized instruction effectively. Organize the instructional content of sports to meet the psychological demands of various students. The technical structure of competitive sports is rather complex, and the physical quality of the players is also high, making it difficult for students to master and prone to injury in sports. As a result, many students fear challenges. The study revealed that physical education teachers should first strive to implement the educational concept of health when organizing the teaching content, simplify the content of competitive sports as much as possible, reduce the difficulty of the action, and emphasize the fitness and entertainment functions of physical education. The short

but exact teaching content makes instruction simpler to implement, easier for students to master, and more favorable to lifelong physical activity.

## **Conclusion**

Through the research, it has been determined that music education can effectively improve the mental health quality of college students and improve students' main Look at physical condition so that they can enjoy university life with a more energetic outlook; But it can also improve the student's Interpersonal relationship, helping students to establish a more friendly and mutually supportive interpersonal environment; Furthermore, music education is associated with emotional stability, I.e., a student's ability to maintain a positive outlook on life. It may be asserted that music education is an essential means and method for enhancing the mental health of college pupils. In the music of aesthetic pleasure and the process of enjoyment, the emotion can be sublimated, the soul can be purified, and a subtle spiritual power can be produced. Classroom teaching and music practice activities, through various themes, genres of music works, singing, instrumental music, Xin Appreciation, and other methods, can improve students' feelings, understanding, and appreciation of music.

## **Implications**

The study has both theoretical and applied consequences. First, the research has contributed to the literature in a novel way, as previous studies have failed to disclose the associations presented by this study. The favorable effect of music instruction on student anxiety significantly enhances this research. The research has filled a gap in the existing corpus of information. Moreover, the excellent impact of sports psychology on student anxiety is widely established, and this link is novel in the scientific literature. According to the research, these correlations were identified as new factors in the student anxiety model.

Additionally, the study has considerable practical consequences. Exercise can help the mental health of college students with anxiety and sadness. Physical activity may "stay fit" and "keep the heart healthy" simultaneously, which is a double-headed arrow. Psychological counseling has a significant effect. The mental health education of college students is a deliberate endeavor. Colleges and universities must enhance physical activity by cooperating and coordinating all related schools and departments. It functions with mental health education, takes focused and practical steps to establish a positive growth environment and development chances for college students, and builds the ideal psychological support system. Several

psychological types of college students should participate in different sports exercises so that they may choose sports scientifically. It is anticipated to advance the mental health research level of college students.

## Future Directions

Despite significant implications, additional research is required, such as a deeper understanding of the problem,

the possibility that mastered data do not fully reflect the performance of the problem, and the inability of proposed measures and countermeasures to solve the problems thoroughly and effectively. Theoretically, a fair amount of research has been conducted on this topic, but it has not yet been implemented in practice. Future research must add mediation and moderation into the study paradigm to progress it to a higher level.

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