The effect of physical fitness exercise on relieving psychological anxiety of college students

Xiaoliang Zhu[1]*, Huaping Cheng[1]

Abstract

The study aims to determine whether engaging in physical activity reduces college students' psychological anxiety. With the assistance of college physical education teachers, this study uses random cluster sampling, literary analysis, and mathematical statistics. Measurement data are expressed by mean and standard deviation while counting data are expressed by frequency and percentage. It has been determined that the detection rates for inactivity among college students were 56.5%, anxiety was discovered at 22.2%, and depression was identified at 34.9%. The general state of exercise, anxiety, and sadness among college students is not encouraging, with depression and inactivity being more pronounced. Higher levels of physical activity can lead to lower sadness and anxiety scores and higher levels of mental wellness. The study has shown that kids who experience low anxiety may learn well, and anxiety can be managed by physical exercise and fitness. In this regard, the study has stressed that parents and college administration play a crucial role in encouraging college students to maintain the physical fitness required for their mental health and advance their academic careers. Psychological anxiety has been the subject of numerous studies, but this study has improved the model of psychological novelty with physical activity and physical fitness. This is a unique literary contribution.

1. Introduction

Anxiety is a complicated emotional response brought on by internal conflict or annoyance. It is a particularly unpleasant emotion that frequently coexists with others, like concern, tension, disappointment, unease, dread, and shame. It is a typical human feeling that arises from being angry or angry. Physiological and psychological problems are frequently brought on by excessive anxiety (Reynolds & Mullins, 2020). Students in college are at a particular period of physiological development and psychological immaturity. The pressure to learn and find work is growing, and they deal with many societal issues. This causes ongoing tension and psychological barriers for students. The relevant survey statistics show that college students' mental health is not particularly good.

Approximately 30% of Chinese college students currently suffer from varying mental health issues, which are most commonly exhibited by anxiety, sadness, paranoia, compulsion, tension, and other features. The prevalence of mental diseases is rising annually (Li, Yu, & Yang, 2021). College students' mental health has become a significant problem for their well-being. According to the "Healthy China 2030" plan's outline, which the government released and began implementing in October 2016, physical health among students must improve to the point where it meets the standard of more than 25% by the year 2030 to support the comprehensive development of human beings. The establishment of numerous national programs to support improving students' mental and physical well-being speaks volumes about the importance placed on the general public's mental and physical well-being. Additionally, it objectively and steadily raises pupils' physical and mental development (Meng & Zhang, 2020).

Numerous studies on reducing anxiety are available in the corpus of knowledge (Choompunuch et al., 2021). According to Luo et al. (2022), stress management effectively lowers anxiety levels. According to Tortella et al. (2021), emotional intelligence can aid in decreasing anxiety. According to Gonzalez Mendez et al. (2022), outdoor games can help pupils study more effectively while reducing anxiety. Zhang et al. (2022) noted that managing daily activities well to accomplish goals can lower anxiety levels. According to Kosiba et al. (2019), managing anxiety is a crucial task that students can easily complete by adopting an optimistic outlook. According to Lo, Gupta, and Keating (2018), the external incentive required for success in life can help pupils control their anxiety. According to Pan et al. (2021), managing difficult situations effectively is essential, and anxiety can be managed by acting positively.

This study aims to find out how college students manage their anxiety in relation to physical activity. This study has generated a significant notion to offer to the literature because no investigation has discussed this relationship to control the amount of anxiety. Since previous research has

[1] Department of Physical Education, Jiangnan University, Wuxi, China.
Corresponding Author's Email: zhu0606l@163.com

not addressed this relationship, this study aims to add to the body of knowledge successfully. In the meantime, our work has made important theoretical advances that are required to enhance the effectiveness of removing anxiety from students' performance. Additionally, this study has outstanding practical ramifications crucial for reducing students' stress through physical fitness. Additionally, the research's future directions include examining any remaining gaps in the body of knowledge and dark spots that need to be filled by future researchers to continue contributing to the field.

2. Literature Review

In "Interpersonal Communication and Mental Health of Contemporary College Students," Hon (2020) made the point that as China's economic system reform continues to deepen, college students are now also subject to a variety of pressures from societal changes in addition to the numerous heavy burdens brought on by intense study and life. In their research, Park (2020) noted that psychological stress (stress) is the tension or discomfort that people experience due to internal and external stimuli and events confusing or threatening their psychology. Numerous recent studies have found a strong negative association between physical activity and sadness, anxiety, and sleep quality. It has been proven and validated in several populations that a high level of physical activity and a low level of sedentary behavior can significantly lower the risk of poor sleep quality, anxiety, and depression (Park, 2020). Numerous experimental research findings reveal that physical activity significantly improves mood, anxiety, and sleep quality. They also confirm the dosage response of sports components in boosting mental health, as illustrated in Figure 1. It is important to note that while moderate and intense exercise is generally thought to have the strongest promoting effect, gender and population variances exist. Numerous mice models of anxiety, sadness, and poor sleep quality have been used in fundamental research at the gene, molecular, and cellular levels. It has also been discovered that physical activity has a micro mechanism for boosting mental health (Grema, 2021).

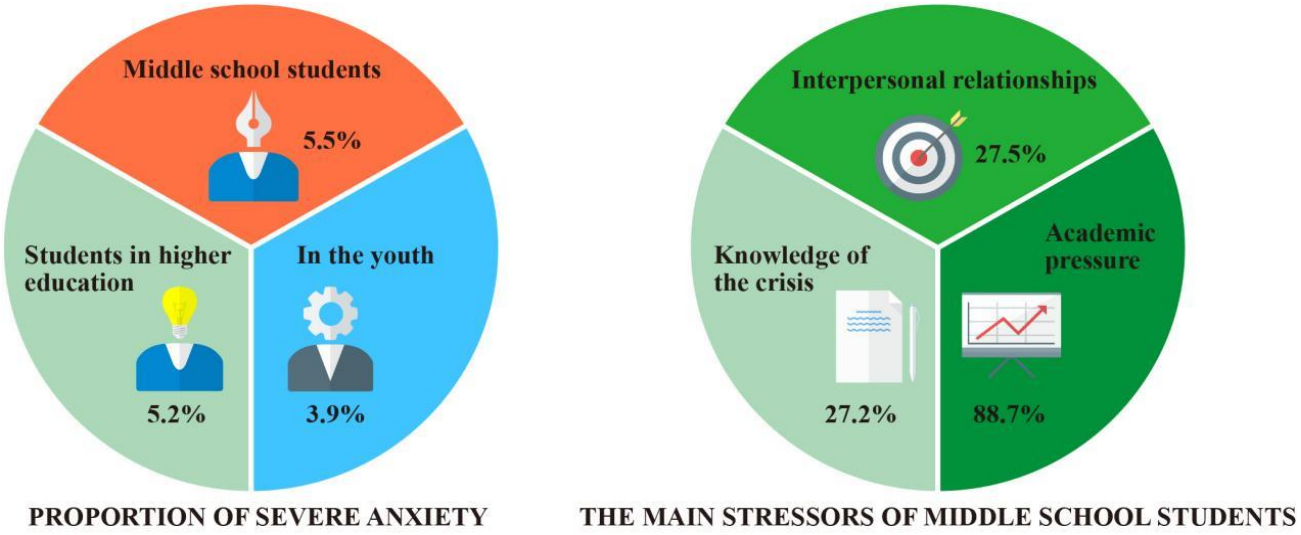

Figure.1 Proportion of psychological anxiety and sources of psychological stress

Although modern college students have greater access to resources for their education and daily needs, the different stresses brought on by the rapid social growth also put their mental health at risk. The following factors illustrate the current state of college students' mental health. (1) As China's economy continues to grow, modern college students occupy a variety of high-quality resources in their families, which to some extent, makes them dependent on outside forces. They have inadequate self-care skills, poor moral character, weak hearts, and poor resistance to pressure from others. (2) Modifications to the home environment. Middle school and university have very different ways of living. College students struggle to adjust to apartment life away from their familiar surroundings at home, and they must develop various life skills and novel interpersonal communication techniques. College students' mental health will be affected in some way by their current sense of maladjustment (Weisskirch, Guan, & Lazarevic, 2021). (3) Academic strain The university curriculum learning is primarily self-regulated and self-supervised, missing the class teacher's and other teachers' oversight that it would have in a middle school. The pupils' self-confidence and self-esteem are damaged as their learning inertia becomes apparent. This conflicts with the rigorous workload at school, and the results fall short of desired levels. (4) Stress in relationships. In the academic setting, there is now more than one interpersonal interaction. College

students' communication skills must meet standards for relationships in their dorms, communities, teacher-student relationships, and social communication. The university's newest freshmen lack communication skills and have limited psychological endurance. Five) Work. Universities in China no longer guarantee the graduation distribution of college students due to educational reform. As a result of the intense social competitiveness, approximately 10 million new college students graduate each year. Consequently, the stress of finding a job and the related pressure to advance one's knowledge and skills impact college students' mental health (Agans, Wilson, & Bopp, 2020). College students are in the comprehensive physical and mental development stage, and all aspects of development need to be balanced. Rahawi et al. (2021), examining the psychological conditions of college students who participate in sports and those who do not, pointed out that physical activity has an extremely obvious positive impact on promoting college students' mental health and plays an extremely special role in maintaining mental health.

Hsu et al. (2021) examined the benefits of physical activity on people's mental health and some psychological issues connected to physical activity. She made the point that physical activity can not only effectively promote the development of intelligence, regulate emotions, cultivate goodwill, enhance self-concept, and improve interpersonal relationships, but it can also improve mental health and allow people to exert their best psychological efficiency. In the "Research on the association between stress, coping styles, self-efficacy, and mental health of graduate students," Chakraborty et al. (2021) discussed the coping styles of stress and mental health in the process of self-regulation once more. He also revealed that positive coping has a regulating effect on self-efficacy in the process of psychological stress affecting mental health, as well as a regulating effect on the process of psychological stress affecting mental health, demonstrating the existence and importance of the relationship between stress, coping style, self-efficacy, and mental health.

3. Methodology

3.1Research object

The overall situation of College Students' physical exercise, anxiety and depression, and the influence characteristics of physical exercise on anxiety and depression.

3.2 Literature method

All of the obtained literature is imported into endnotex7 after the computer searches the databases China HowNet and web of science (Core Collection). The irrelevant literature is filtered out by reading the titles and abstracts, and only the works directly relevant to the inquiry are read in full. Effective information from the literature generates research concepts, creates research frameworks, and chooses the appropriate research methodologies (Yang & Zhu, 2020).

3.3 Questionnaire survey method

The survey was carried out using electronic questionnaires, with the six universities in the university town serving as the source of the survey objects. Paper questionnaires were created in advance and fed into the "questionnaire star." Random cluster sampling was done in physical education classes in colleges and universities with the assistance and arrangement of the physical education teachers. The testing period was the 2021 fall semester. A total of 2110 first- and second-year students from six universities in University Town participated in the poll, which had respondents. The computerized questionnaire had a 100% recovery rate. 1801 valid questions were obtained (the effective rate was 85.36%) after invalid questionnaires, such as regular answers and random fills, were eliminated.

3.4 The physical activity rating Scale-3 (PARS-3)

Japanese psychologists created the PARS-3 scale (Xiao et al., 2021). The poll used the Chinese version of the scale updated by Demirdelen Alrawadieh (2021) and others, which mostly reflects the subjects' recent physical activity. Relevant domestic studies demonstrate that the Chinese version of PARS, which has internal consistency reliability of 0.796 0.856, split-half reliability of 0.794 0.8, and retest reliability of 0.82, may more accurately assess the physical activity of regular college students. The three indicators on the scale are the duration, frequency, and intensity of the individuals' physical activity. Each indicator is graded on a scale of 1 to 5. Time is "0-4 points," intensity and frequency are each "1-5 points," and accordingly. The exercise will progress more quickly and with a higher score if the intensity is higher, the time and frequency are longer, and the frequency is higher. Exercise quantity is calculated using the formula "intensity x time x frequency," with a score range of "0-100 points". The classification standard for college students' sports volume is as follows, per the pertinent research of domestic predecessors: " 19 points are small sports volume (insufficient physical activity), 20-42 points are medium sports volume, and 43 points are large sports volume" (Lan, Long, & Van Hanh, 2020).

3.5 Self-rating Anxiety Scale (SAS)

The Duke University School of Medicine created the SAS scale. The poll employed the Chinese version of

the scale modified by Sahu et al. (2020) and others, primarily representing the individuals' recent anxiety symptoms. According to domestic studies, the Chinese version of SAS has a high internal consistency reliability of 0.788–0.931 and is better able to measure the anxiety symptoms of college students. The scoring is based on 20 self-evaluation scale items, with four scoring levels. All of the response choices—"no or little time," "a little part of the time," "quite a lot of time," and "most of the time"—are scored as "1-4 points," with 15 items receiving positive scores and 5 receiving negative ones. All the elements' positive scores are added to get the total gross score, which is then multiplied by 1.25 to get the standard score. As a result, the scale's usual score range is "25-100 points." According to relevant domestic research, college students' anxiety levels can be classified as follows: normal is < 50 points, mild anxiety is 50-59 points, moderate anxiety is 60-69 points, and severe anxiety is ≥70 points (Kim & Kim, 2020).

3.6 Mathematical statistics

Counting data are expressed by frequency and percentage, and measuring data are expressed by mean and standard deviation. An Independent sample t-test was used to compare the scores of physical exercise, anxiety, and depression between the two groups on different demographic characteristics. The Chi square test was used to compare the difference in the detection rate of insufficient physical exercise, anxiety, and depression in different demographic characteristics. One-way ANOVA was used to compare the scores of anxiety and depression among the three groups with different physical exercise volumes (small exercise volume, medium exercise volume, and large exercise volume), and LSD was used to compare further the scores of anxiety and depression between the two groups (small exercise volume and medium exercise volume, small exercise volume and large exercise volume, medium exercise volume, and large exercise volume). A two-tailed test was used for all statistical inferences. The test level a of independent sample t-test, chi-square test, and one-way ANOVA was set to 0.05. P > 0.05 means that the difference is not statistically significant. P < 0.05, P < 0.01, and P < 0.001 are marked with "*," "* *" and "* * *" respectively, which means that the difference is statistically significant; The test level a of the post hoc multiple comparisons of the LSD method among the three groups is set as 0.0167, P ＞ 0.0167 means that the difference is not statistically significant, P ＜ 0.0167 and P ＜ 0.001 are marked with "*" and "* *" respectively, which means that the difference is statistically significant. All statistical analyses were performed using spss22.0 software (Husky et al., 2021).

4. Results and Discussion

4.1 Overall situation of physical exercise, sleep quality, anxiety, and depression of College Students

As shown in Table 1, the average score of College Students' physical exercise is 22.9 (19.4). The scores of physical exercise of freshmen were significantly higher than those of sophomores (23.7 (19.3) and 21.6 (19.5), respectively, with statistical significance (P = 0.023). The scores of physical exercise of male college students were significantly higher than those of female college students (31.6 (23.2) and 18.8 (15.8), respectively, with statistical significance (P < 0.001). The score of physical exercise of only-child college students is slightly higher than that of non-only-child college students, which is 23.5 (19.7) and 21.7 (18.7), respectively. The scores of physical exercise of urban registered permanent residence college students were significantly higher than those of rural registered permanent residence college students (23.6 (20.0) and 20.5 (17.3), respectively, with statistical significance (P = 0.002). The scores of college students who participated in associations were significantly higher than those who did not, 24.1 (20.5) and 20.4 (16.9), respectively. The detection rate of College Students' lack of physical exercise was 56.5%. The detection rate of physical exercise deficiency in sophomores was significantly higher than that of freshmen, 60.2% and 53.9%, respectively, with statistical significance (x2 = 7.1, P = 0.008). The detection rate of insufficient physical exercise of female college students was significantly higher than that of male college students (63.5% and 41.4%, respectively). The difference was statistically significant (x2 = 78.0, P < 0.001). The detection rate of physical exercise deficiency of non-only-child college students was higher than that of only-child college students (59% and 55.2%, respectively). Still, the difference was insignificant (x2 = 2.4, P = 0.122). The detection rate of insufficient physical exercise of rural registered permanent residence college students was higher than that of urban registered permanent residence college students (61.7% and 54.8%, respectively). The difference was statistically significant (x2 = 6.3, P = 0.012). The detection rate of insufficient physical exercise of college students who did not participate in the association was 60.2% and 54.5% higher than that of college students who participated in the association, respectively. The difference was statistically significant (x2 = 5.3, P = 0.022).

Table 1

Overall situation of College Students' physical exercise (n = 1801)

Variable	Classification / statistical inspection	Physical exercise score	Physical exercise	
			Lack of physical exercise	Normal
Grade	Freshman (n = 1074)	23.7±19.3	579(53.9%)	495(46.1%)
	Sophomore (n = 727)	21.6±19.5	438(60.2%)	289(39.8%)
	Statistical comparison between groups	t=2.3/p=0.023*	x2=7.1/p=0.008***	
Gender	Male (n = 573)	31.6±23.2	237(41.4%)	336(58.6%)
	Female (n = 1228)	18.8±15.8	780(63.5%)	448(36.5%)
	Statistical comparison between groups	t=12.0/p<0.000***	x2=78.0/p<0.001***	
Only Child	No (n = 619)	23.5±19.7	365(59%)	254(41%)
	Yes (n = 1182)	21.7±18.7	652(55.2%)	530(44.8%)
	Statistical comparison between groups	t=1.9/p=0.06	x2=2.4/p=0.122	
Registered residence	Town (n = 1375)	23.6±20.0	754(54.8%)	621(45.2%)
	Rural (n = 426)	20.5±17.3	263(61.7%)	163(38.3%)
	Statistical comparison between groups	t=3.2/p=0.002**	x2=6.3/p=0.012*	
Association	Not participating (n = 613)	20.4±16.9	369(60.2%)	224(39.8%)
	Participation (n = 1188)	24.1±20.5	648(54.5%)	163(38.3%)
	Statistical comparison between groups	t=4.2/p<0.001***	x2=5.3/p=0.022*	
Total		22.9±19.4	56.5%	3.5%

As shown in Table 2, the average anxiety score of college students is 42.1 (10.2). The anxiety scores of sophomores were significantly higher than that of freshmen (43.8 (10.8)) and 40.9 (9.7), respectively, with statistical significance (P < 0.001). The anxiety scores of female college students were significantly higher than that of male college students (42.4 (10.2) and 41.3 (10.2), respectively, with statistical significance (P = 0.03). The anxiety scores of non-only child college students were significantly higher than those of only child college students (42.7 (10.5) and 41.7 (10.0), respectively, with statistical significance (P = 0.044). The anxiety scores of rural registered permanent residence college students were slightly higher than those of urban registered permanent residence college students (42.6 (10.5) and 41.9 (10.1), respectively, with no statistical significance (P = 0.22). The anxiety scores of college students who participated in or did not participate in the community were similar, 42.1 (10.2) and 42.0 (10.2), respectively, and the difference was not statistically significant (P = 0.93).

The prevalence of anxiety problems among college students was 22.2%. The detection rate of anxiety problems of sophomore students was significantly higher than that of freshman students (27.4% and 18.7%, respectively). The difference was statistically significant (x2 = 18.8, P < 0.001). The prevalence of anxiety problems among female college students was slightly higher than that of male college students (23.5% and 19.5%, respectively), but the difference was not statistically significant (x2 = 3.5, P = 0.063). The prevalence of anxiety problems in non-only-child college students was significantly higher than that in only-child college students (24.9% and 20.8%, respectively). The difference was statistically significant (x2 = 3.9, P = 0.049). The prevalence of anxiety problems among rural registered permanent residence college students was slightly higher than that of urban registered permanent residence college students (23.7% and 21.7%, respectively). Still, the difference was insignificant (x2 = 0.7, P = 0.394). The detection rate of anxiety problems of college students who did not participate in the association and those who participated in the association was 22.2%, and the difference was not statistically significant (x2 = 0, P = 0.986).

As shown in Table 3, the average depression score of college students was 45.8 (10.5). The depression scores of sophomores were significantly higher than that of freshmen (47.5 (10.7) and 44.7 (10.2), respectively, with statistical significance (P < 0.001). The depression scores of female college students were significantly higher than that of male college students (46.3 (10.4) and 44.8 (10.6), respectively, with statistical significance (P = 0.006). The depression scores of non-only child college students were significantly higher than those of only child college students (46.9 (10.3) and 45.3 (10.6), respectively, with statistical significance (P = 0.002). The depression scores of rural registered students were slightly higher than those of registered urban students (46.4 (9.9) and 45.6 (10.6), respectively, with no statistical significance (P = 0.16). The depression scores of the college students who did not participate in the association were similar to those of the college students who participated in the association, which

were 46.0 (10.2) and 45.7 (10.6), respectively. The difference was not statistically significant (P = 0.61). The prevalence rate of depression was 34.9%. The prevalence of depression in sophomores was significantly higher than in freshmen (40.4% and 31.2%, respectively). The difference was statistically significant (x2 = 16.3, P < 0.001). The prevalence of depression in female college students was 36.7% and 31.1% higher than that in male college students, respectively, with statistical significance (x2 = 5.5, P = 0.019). The prevalence of depression in non-only-child college students was significantly higher than that in only-child college students (39.9% and 32.3%, respectively). The difference was statistically significant (x2 = 10.3, P < 0.001). The prevalence of depression among rural registered permanent residence college students was slightly higher than that of urban registered permanent residence college students (37.1% and 34.3%, respectively), but the difference was not statistically significant (x2 = 1.2, P = 0.28). The prevalence of depression among college students who did not participate in the association was slightly higher than that of college students who participated in the association (36.5% and 34.1%, respectively). Still, the difference was insignificant (x2 = 1.1, P = 0.301).

Table 2

Overall anxiety of college students (n = 1801)

Variable	Classification / statistical inspection	Physical exercise score	Physical exercise	
			Lack of physical exercise	Normal
Grade	Freshman (n = 1074)	40.9±9.7	873(81.3%)	201(18.7%)
	Sophomore (n = 727)	43.8±10.8	528(72.6%)	199(27.4%)
	Statistical comparison between groups	t=5.7/p=0.001***	x2=18.8/p<0.001***	
Gender	Male (n = 573)	41.3±10.2	461(80.5%)	112(19.5%)
	Female (n = 1228)	42.4±10.2	940(76.5%)	288(23.5%)
	Statistical comparison between groups	t=-2.2/p<0.03***	x2=3.5/p=0.06	
Only child	No (n = 619)	41.7±10.0	465(75.1%)	154(24.9%)
	Yes (n = 1182)	42.7±10.5	936(79.2%)	246(20.8%)
	Statistical comparison between groups	t=-2.0/p=0.044*	x2=3.9/p=0.049*	
Registered residence	Town (n = 1375)	41.9±10.1	1076(78.3%)	299(21.7%)
	Rural (n = 426)	42.6±10.5	325(76.3%)	101(23.7%)
	Statistical comparison between groups	t=-1.2/p=0.22	x2=0.7/p=0.394	
Association	Not participating (n = 613)	42.0±10.2	477(77.8%)	136(22.2%)
	Participation (n =1188)	42.1±10.2	924(77.8%)	264(22.%)
	Statistical comparison between groups	t=-0.09/p=0.93	x2=0/p=0.986	
Total		42.1±10.2	77.8%	22.2%

Table 3

Overall depression of college students (n = 1801)

Variable	Classification / statistical inspection	Physical exercise score	Physical exercise	
			Lack of physical exercise	Normal
Grade	Freshman (n = 1074)	44.7±10.2	739(68.8%)	335(31.2%)
	Sophomore (n = 727)	47.5±10.7	433(59.6%)	294(40.4%)
	Statistical comparison between groups	t=5.6/p<0.001***	x2=16.3/p<0.001***	
Gender	Male (n = 573)	44.8±10.6	395(68.9%)	178(31.1%)
	Female (n = 1228)	46.3±10.4	777(63.3%)	451(36.7%)
	Statistical comparison between groups	t=-2.8/p=0.006**	x2=5.5/p=0.02*	
Only child	No (n = 619)	45.3±10.6	372(60.1%)	247(39.9%)
	Yes (n = 1182)	46.9±10.3	800(67.7%)	382(32.3%)
	Statistical comparison between groups	t=-3.1/p=0.002**	x2=10.3/p<0.001***	
Registered residence	Town (n = 1375)	45.6±10.6	904(65.7%)	471(34.3%)
	Rural (n = 426)	46.4±9.9	268(62.9%)	159(37.1%)
	Statistical comparison between groups	t=-1.4/p=0.16	x2=1.15/p=0.28	
Association	Not participating (n = 613)	46.0±10.2	389(63.5%)	224(36.5%)
	Participation (n = 1188)	45.7±10.6	783(65.9%)	405(34.1%)
	Statistical comparison between groups	t=0.51/p=0.61	x2=1.07/p=0.30	
Total		45.8±10.5	65.1%	34.9%

4.2 Influence characteristics of physical exercise on anxiety and depression of College Students

As shown in Table 4, there are significant differences in the anxiety scores of college students among different groups of physical exercise (F = 16.2, P < 0.001). The scores of the small exercise group, the medium exercise group, and the large exercise group are 43.2 (10.4), 41.0 (9.8), and 39.9 (9.6) in turn. Compared with the low exercise group, the anxiety scores of the medium exercise group and the high exercise group were significantly lower (LSD correction, P < 0.001). Compared with the moderate exercise group, the anxiety score of the increased exercise group was slightly lower, and the difference was not statistically significant (LSD correction, P = 0.003).

Table 4

Scoring characteristics of anxiety of college students with different physical exercises (n = 1801)

Exercise volume / statistical test	Anxiety score
Small exercise group (n = 1017)	43.2±10.4
Moderate exercise group (n = 484)	41.0±9.8
High exercise group (n = 300)	39.9±9.6
Statistical comparison among three groups	F=16.2/p<0.001***
Post hoc multiple comparisons: small vs. medium	LSD correction / P < 0.001***
Post hoc multiple comparisons: small vs. large	LSD correction / P < 0.001**
Post hoc multiple comparisons: medium vs. large	LSD correction / P = 0.15

As shown in Table 5, there are significant differences in the depression scores of college students among different groups of physical exercise (F = 24.3, P < 0.001). The scores of the small exercise group, the medium exercise group, and the large exercise group are 47.2 (10.6), 44.9 (10.1), and 42.7 (9.9) in turn. Compared with the low-exercise group, the depression scores of the moderate and high-exercise groups were significantly lower (LSD correction, P < 0.001). Compared with the moderate exercise group, the depression score of the high exercise group was significantly lower (LSD correction, P = 0.003).

Table 5

Scoring characteristics of depression of college students with different physical exercise quantities (n = 1801)

Exercise volume / statistical test	Depression score
Small exercise group (n = 1017)	47.2±10.6
Moderate exercise group (n = 484)	44.9±10.1
High exercise group (n = 300)	42.7±9.9
Statistical comparison among three groups	F=24.3/p<0.001***
Post hoc multiple comparisons: small vs. medium	LSD correction / P < 0.001***
Post hoc multiple comparisons: small vs. large	LSD correction / P < 0.001**
Post hoc multiple comparisons: medium vs. large	LSD correction / P = 0.003*

4.3 Promoting the effect of physical exercise on College Students' mental health

Some college students' personality development is not sound due to the influence of different variables and the effect of time precipitation. The specific forms are excessive introversion and self-isolation. They lead autonomous lives, frequently argue with others, or never interact. It can be challenging to establish positive interpersonal relationships with other pupils. Team sports and physical activity can also improve these college students' mental health issues. In sports like basketball, football, and others that call for intense teamwork, winning depends on having a high level of tacit understanding and regular communication among the team members. College students' personalities can be improved to some extent through high-frequency information interaction, and they can also get over their loneliness and better integrate into society (Xu et al., 2021). It is important to remember that physical education teachers should always be aware of industry trends, placate the students with language, and prevent disputes because of their personality issues. To prevent disagreements from worsening, they should immediately halt their ideological teaching and mediation efforts.

Some college students frequently experience sentimentality, melancholy in the spring and fall, and unfounded worry. Long-term effects will be detrimental to college students' mental health. Therefore, it is essential to

intervene in college students' depressing emotional state. The concept of enjoyment until death must also be protected from the effect of Internet short films and variety shows simultaneously. It is possible to alter pupils' psyche through "fun sports," which differ from conventional physical activity. In reality, the term "fun sports" refers to a certain sport activity that is primarily fascinating and amusing. It uses sports equipment and a comfortable training atmosphere to help pupils overcome psychological obstacles. The relay party must finish the relay tasks online and use time as the benchmark for scoring during the relay (Chakrabarti et al., 2021). Through this type of physical activity, college students can not only build up their bodies but also experience the excitement and joy of competition, improve their innately unhealthy mentalities, get rid of anxiety, sadness, and other unpleasant feelings, and maintain their mental health.

Students in college today face a lot of strain from their studies and jobs. College students may have incredible motivation to study and work under pressure. Still, it will also cause them to become exhausted, diminish their productivity, and harm their mental health. Through attentional shift, exercise can help college students let go of tense emotions. They can also use exercise as a way to let off steam. Regular exercise will help the body gradually adjust to different settings, elicit good feelings, and significantly reduce anxiety and other bad emotions.

5. Conclusion

The study's goal was accomplished because it determined information on the students' anxiety and physical fitness. Clarifying the influencing factors of college students' mental health and the beneficial effects of physical exercise on their mental health can persuade relevant educators in China to pay full attention to the role of physical exercise in light of the premise that psychological problems and influencing factors of various degrees commonly exist among college students in China and are difficult to solve. Educational institutions (colleges) should enhance the percentage of physical activity in the real teaching system to contribute to the development of our students' morality, intelligence, physique, beauty, and work ethic. In other words, reducing college students' psychological distress is a challenging endeavor that calls for the combined efforts of the entire community, including the college faculty. College students must, however, focus on enhancing their psychological literacy and developing their capacity for psychological self-regulation. Furthermore, the mission of providing psychological education for college students has grown more challenging since educational reform in general and social change, in particular, have advanced substantially. It's crucial for educational institutions (colleges) to develop working techniques and continually modify concepts while also lowering students' psychological worry.

6. Theoretical and Practical Implications

Significant theoretical ramifications of this discovery that were not covered in other studies. The study adds to the body of knowledge regarding the worry that college-bound students experience. The prior study did not recognize the benefits of physical activity and fitness training for reducing college students' psychological stress. With its important findings, this study has added to the corpus of knowledge in this respect. The study has added to the body of knowledge by showing that students' learning performance and anxiety levels can be reduced if they engage in the physical activity and training required for their mental health to reduce their anxiety levels. This study's contribution has looked into a new area of the literature and produced significant data that will help scholars understand the connection between psychological worry and student instruction.

Additionally, this study offers applications that are required for raising students' living standards by lowering their worry over performing better. The study has shown that kids who experience low anxiety may learn well, and anxiety can be managed by physical exercise and fitness. In this regard, the study has stressed that parents and college administration play a crucial role in encouraging college students to maintain the physical fitness required for their mental health and advance their academic careers. According to the study, students' physical anxiety is significantly reduced when physically fit. As a result, the college administration should schedule physical education sessions to increase students' ability to learn and behave responsibly. Additionally, the government's programs to promote fitness and better mental health, essential for students' academic achievement, should inspire them.

7. Future Directions

The goal of this study was accomplished because the results showed that fitness, which is essential for students' good performance, can help reduce psychological worry. However, this study makes several recommendations for further investigation. Future research on the anxiety of college students should collect data using a five-point Likert scale because it can yield more accurate results.

Second, future research should concentrate on how external incentive affects the physical health that Chinese college students maintain. Last but not least, future research might concentrate on using a straightforward random sample technique to obtain cross-sectional data to validate this study's results.

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