used for reference, and the dimensions and items of the scale were finally drawn up with the advice of many experts. The evaluation scale for college students' English autonomous learning ability includes 4 dimensions, a total of 24 items, namely, establishing learning objectives and making learning plans, selecting learning contents and methods, effectively using learning strategies and self-control in the extracurricular learning process. It adopts a 5-level scoring method, with a score of 1-5. The lower the score, the higher the learning ability. The evaluation scale for teachers' role expectation of college students' English autonomous learning includes 4 dimensions and a total of 16 items, namely, motivation motivators, motivation maintainers, facilitators and counselors. It adopts a 5-level scoring method, with a score of 1-5. The lower the score, the higher the expectation for teachers' role.

**Results:** As shown in Table 1, the average scores of each dimension of the self-regulated English learning teacher role expectation scale for college students are as follows: motivation motivator (M=1.482), motivation maintainer (M=1.426), facilitator (M=1.613), counselor (M=2.219), and the total average score (M=1.644). It can be seen that college students' expectation of the role of teachers is low.

**Table 1.** Multiple comparative tests of teacher role expectation in college students' autonomous English learning

Dimension		Mean difference (I-J)
	Power maintainer (J)	0.056
Motivational motivator (I)	Facilitator (J)	-0.131***
	Counselor (J)	-0.737***
Power maintainer (I)	Facilitator (J)	-0.187***
	Counselor (J)	-0.793***
Facilitator (I)	Counselor (J)	-0.606***

Note: \*\*\* P < 0.001.

Conclusions: Colleges and universities need to modify the English curriculum objectives, adjust the curriculum structure and content, so as to cultivate high-quality English talents in line with the needs of the new century and the new era. From the average value of the teacher role expectation questionnaire, college students have strong demand for the four teacher roles, among which the role of motivation maintainer and motivation motivator is relatively more important for students. This reflects that in the current English autonomous learning, although college students have the ability to make and implement choices independently, their motivation, confidence and perseverance to be responsible for their choices are very weak.

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## RESEARCH ON THE INFLUENCE OF SUNSHINE SPORTS CULTURE IN COLLEGES AND UNIVERSITIES ON THE IMPROVEMENT OF INTERPERSONAL RELATIONSHIPS AND PSYCHOLOGICAL QUALITY OF COLLEGE STUDENTS

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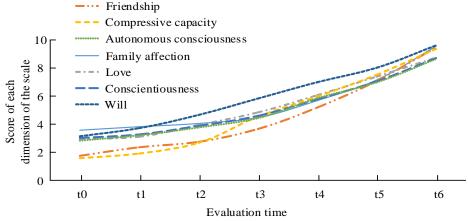
Background: Since 2006, the State General Administration of sports and the Ministry of education have jointly issued a policy resolution on the national implementation of "Sunshine Sports", which aims to promote the active participation of students in sports and enhance their physique. The core of sunshine sports culture lies in the strong cultivation and enhancement of students' physical quality through strengthening school sports work, improving the quality of physical education courses and sports activities. The development of sunshine sports in colleges and universities is conducive to the penetration of sunshine sports culture, and can effectively cultivate and improve the physical function of college students on the basis of enriching their after-school life. At present, college students are in the critical stage of

transforming from students to social personages. They not only need to bear the huge academic pressure and employment pressure, but also suffer setbacks in various interpersonal communication processes. The groups that college students often contact with include roommates, classmates, teachers of different disciplines from all over the world, social figures when they go out to practice or socialize, etc. Because their minds are not completely sound, college students will encounter various problems in friendship, love, teacher-student relationship and other aspects when facing different groups. When it is difficult for college students to properly handle interpersonal relationships, they will inevitably have certain negative emotions, including self doubt, inferiority and pride, fear of social interaction, etc. In the face of pressure from various parties, college students may be difficult to find appropriate solutions in time. When their self-esteem is at stake, they usually do not seek help from others, and ultimately bear the failure alone. From the perspective of psychology, the psychological quality of college students not only depends on their own personality, but also has a strong correlation with their circumstances, pressure and other factors. sunshine sports culture in colleges and universities is an optimistic concept full of positive attitude and fighting spirit, which can have a certain impact on college students' interpersonal relations and psychological quality to varying degrees.

**Objective:** As a basic sport popularized nationwide, sunshine sports have a great influence on students' physical and mental health. The research will explore the influence of college sunshine sports culture on college students' interpersonal relationship and psychological quality, hoping to find out the appropriate forms of college sunshine sports culture communication, effectively eliminate the potential problems in college students' interpersonal relationship, and improve their psychological quality.

Subjects and methods: The research adopt ant colony clustering algorithm as the research means, and randomly selects 122 college students in a university as the research object to explore the impact of sunshine sports culture on college students' interpersonal relationship and psychological quality. This research integrates the sunshine sports culture into the traditional sports teaching mode in colleges and universities, and then forms the intervention means to improve the sunshine sports teaching in colleges and universities. The self-designed evaluation scale of interpersonal relationship and psychological quality of college students was used to compare and analyze the scores of the scale before and after the intervention. The self-designed scale mainly includes two parts: interpersonal relationship and psychological quality. The former includes three dimensional indicators: family affection, friendship and love. The latter includes four dimensions of evaluation indicators, namely, pressure resistance, responsibility, self-determination and perseverance. The total score of the self-designed scale is 70 points, and each dimension index accounts for 10 points. The higher the score, the higher the level of interpersonal relationship ability and psychological quality. The evaluation frequency of the scale was set as once every 10 days, and was set as t0-t6 from before the intervention to two months after the intervention.

**Results:** Figure 1 shows the score changes of 122 college students' self-designed scale before and after the intervention of sunshine sports in colleges and universities. As can be seen from Figure 1, before the sunshine sports culture of colleges and universities was integrated into the traditional physical education teaching mode, the scores of the self-designed scale of the tested college students were at a low level, in which the scores of friendships and pressure resistance were below 2, significantly lower than the scores of the other five dimensions. With the continuous intervention of sunshine sports in colleges and universities, the scores of all dimensions of the self-designed scale of college students show a continuous growth trend, among which the growth of friendship and pressure resistance is the most significant, indicating that college students have been effectively cultivated and improved in interpersonal relationship processing and psychological quality.



**Figure 1.** Change trend of self-designed scale scores of college students before and after the cultural intervention of sunshine sports in colleges and universities

Conclusions: The interpersonal relationship and psychological quality of college students play a decisive role in their comprehensive development. The integration of sunshine sports culture into the traditional physical education teaching mode in colleges and universities can effectively improve the students' scoring level in each dimension of interpersonal relationship and psychological quality. This shows that the sunshine sports culture in colleges and universities can have a subtle positive impact on college students, so that they can have a strong ability in dealing with interpersonal relationships, improve their pressure resistance and perseverance, and finally achieve the friendly handling of interpersonal relationships and the significant improvement of their psychological quality.

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## A STUDY ON THE INFLUENCE OF MENTAL HEALTH EDUCATION ON THE PSYCHOLOGICAL DEVELOPMENT OF PRESCHOOL CHILDREN

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Background: As the key period of individual psychological development, mental health education in early childhood is very important for preschool children. In many aspects such as emotion, anti frustration ability, interpersonal relationship and environmental adaptability, preschool children will show different kinds and levels of mental health problems. For preschool children, if they have experienced some setbacks or trauma in their early childhood and have not been solved in a timely and effective manner, they will have a sense of pain. Depression and other negative emotions will be hidden in the hearts of preschool children. Once they encounter setback or trauma again, all kinds of negative emotions will be activated again, causing preschool children to have serious psychological problems or mental diseases, and hindering their normal psychological development. The psychological problems of preschool children have different types of representations, including willful apathy, inferiority complex anxiety, shyness and timidity, self-centered, fear of contact with others or the outside world, aggressive behavior, language disorder, etc. Diversified mental health problems will have a great negative impact on the psychological development of preschool children, making it difficult to achieve their comprehensive and harmonious physical and mental development. From the perspective of psychology, we can see that in order to ensure the normal psychological development of preschool children, we need to make a detailed analysis of their psychological characteristics and take targeted mental health education. In addition, China has continuously issued a number of policies to emphasize the importance and necessity of psychological education and guidance for preschool children. Different from other forms of education, mental health education has strong characteristics. Its focus is on the changes of psychological characteristics. It can be seen that the ways to carry out mental health education are very diverse and rich. By setting up special courses and infiltrating relevant theories of mental health education in daily life and games, the mental health level of preschool children can be improved to a certain extent.

**Objective:** The purpose of this study is to find out appropriate measures for the implementation of mental health education through the analysis of the characteristics of preschool children's psychological development, and to explore its impact on preschool children's psychological development, in order to maximize the smooth progress of preschool children's psychological development and improve their psychological development level.

Subjects and methods: A total of 142 preschool children were selected from two kindergartens by simple random sampling. They were taken as the research objects and grouped. The control group and observation group with 71 people were obtained. The children in the control group were not given any form of mental health education, and the children in the observation group were given mental health education. The educational intervention time is set to 40 days, and the scale evaluation is conducted every 10 days to obtain the scale evaluation results before and after the intervention, i.e., t0-t4 five-time nodes. From the perspective of psychology, the psychological characteristics and behavior of 142 preschool children were observed and compared. The Denver Development Screen Test (DDST) was used to evaluate and analyze the two groups of preschool children. DDST is mainly composed of four dimensions of evaluation indicators, including fine movement, gross movement, language, side processing and social adaptability. For DDST, this study adopts a 4-level evaluation standard of 0-3, which respectively represents four evaluation results: normal, suspicious, abnormal and unexplainable.

Results: It can be seen from Table 1 that at t0, both groups of preschool children did not receive any