

into contact with infected people or infected areas during the process of moving, and there will be a probability of being infected. This paper established a COVID-19 panic spread model based on travel rate to study the transmission mechanism of COVID-19 panic spread.

**Results:** The experiment results show that the dynamic model in this study can predict the change of epidemic situation well. The study found that there was a quantitative relationship between urban travel rate and COVID-19 outbreak. On this basis, targeted COVID-19 epidemic prevention and control policies could be further proposed.

**Conclusions:** The positive correlation between the spatial distribution of urban travel volume and the number of people diagnosed with COVID-19 indicates that when the epidemic reappears, according to the experimental results, the regions with higher spatial effect level should be cared first. In the COVID-19 panic spread model based on travel rate, we found that there is a relative travel rate threshold, which determines whether there will be an outbreak or not. This provides a quantitative yardstick for pandemic control, which can determine whether the government can reopen or force a secondary shutdown.

**Acknowledgements:** This work was supported by Science and Technology Commission of Shanghai Municipality Foundation (Grants No. 22692117402).

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## THE INFLUENCE OF TAI CHI EXERCISE ON PSYCHOLOGICAL ANXIETY OF COLLEGE STUDENTS

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**Background:** Using the questionnaire, experiment and other methods, using the psychological lecture scale of college students, the exercise effect of Changchun Guanghua University students' Tai Chi psychological status test. The results showed that there were 10 significant factors among the students after the Tai Chi exercise, especially in the interpersonal relationship, emotional adjustment, adaptability and psychological endurance. It is concluded that Tai Chi exercise has a detailed effect on college students' psychological anxiety.

**Objective:** College students, as the group with a higher cultural level in Chinese society, have always been recognized as the most active and healthy group, but in the society with the rapid development, the accelerated pace of life and the fierce competition, many college students begin to feel at a loss and have a psychological discomfort. Studies at home and abroad show that 10% to 30% of college students in Chinese universities have psychological anxiety problems of varying degrees, and the psychological anxiety status of college students is facing a serious threat, and it is not optimistic. Whether the psychological anxiety is directly related to the comprehensive development of college students and the early success of. Therefore, maintaining and improving the psychological anxiety level of college students and reducing and avoiding the occurrence of various psychological problems have become one of the contents of college education.

**Methods:** Take two types of college students practicing Tai Chi and non-practicing Tai Chi. In Zhoukou Normal University, 100 people were randomly selected, and 100 non-practitioners were randomly selected in total Of 200 college students, 200 questionnaires were distributed, 200 were recovered and 192 valid questionnaires. The psychological scale of Chinese college students was used as a measurement tool. The scale has 80 evaluation items, and can be classified as 10 factors, namely: interpersonal tension and sensitivity, poor psychological tolerance, poor adaptability, psychological imbalance, emotional disorders, anxiety, depression, hostility, paranoia, and somatization. SPSS18.0 and Excel were used to analyze and process the obtained data, and the reliability test, correlation analysis and T-value test were mainly used for data collation. In consultation with the relevant psychology research experts of Zhoukou Normal University, to provide reference opinions and suggestions for the writing and design of the paper.

**Results:**

*Test results of the psychological scale*

*Scale reliability test*

Internal consistency coefficient (homogeneous reliability, also known as Cron-bach coefficient) is used as the reliability index of the questionnaire. For the total and subscales ranged from 0.625 to 0.938, with poor adaptability was 0.808, 0.800 for anxiety, and 0.809 for depression, all three subscales had good reliability indicator [3]. Interpersonal tension and sensitivity were 0.774, psychological tolerance difference was 0.750, psychological imbalance was 0.798, paranoia was 0.760, and somatization was 0.791, indicating that these five subscales also have good reliability indicators. Emotional disorders and hostility were 0.625 and 0.651, respectively, which were also acceptable. The details are shown in Table 1.

Table 1 Reliability tests of the total scale and subscales

Subject	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	Z1
a	0.774	0.750	0.808	0.798	0.625	0.800	0.809	0.651	0.760	0.791	0.938

Among them: M1-interpersonal tension and sensitivity, M2-poor psychological endurance, M3-poor adaptability, M4-mental imbalance, M5-emotional disorder, M6-anxiety, M7-depression, M8-hostility, M9-paranoia, M10-somatization, Z1-total score.

#### Correlation analysis of total scale and subscales

Tension and sensitivity, poor psychological endurance, poor adaptability, mental imbalance, mental balance, emotional disorder, anxiety, depression, hostility, paranoia, somatization the 10-item factor subscale and total scale correlation matrix are shown in Table 2.

Table 2 Correlation matrix of the total scale and subscales

Subject	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	Z1
M1	1										
M2	0.750*	1									
M3	0.697*	0.834*	1								
M4	0.776*	0.648*	0.604*	1							
M5	0.578*	0.490*	0.538*	0.529*	1						
M6	0.743*	0.727*	0.747*	0.673*	0.515*	1					
M7	0.774*	0.781*	0.782*	0.720*	0.522*	0.808*	1				
M8	0.764*	0.549*	0.597*	0.719*	0.619*	0.632*	0.618*	1			
M9	0.755*	0.556*	0.497*	0.735*	0.450*	0.692*	0.664*	0.648*	1		
M10	0.731*	0.659*	0.742*	0.736*	0.620*	0.741*	0.721*	0.686**	0.642*	1	
Z1	0.895*	0.831*	0.845*	0.836*	0.749*	0.860*	0.873*	0.812**	0.772*	0.871*	1

As seen in Table 2, the correlation of each dimension with total health levels is extremely significant. Among them, college students have a strong adaptability and psychological endurance. The strong positive correlation coefficient is 0.834, which shows that the adaptability of college students directly affects their psychological endurance to the outside world. Adaptability was also significantly related to the depression dimension, indicating that students with stronger adaptability had lower depressive mood. Interpersonal relationship tension also has a significant correlation with sensitivity and anxiety and depression dimensions, indicating that students with better interpersonal relationship are not easy to produce anxiety and depression.

The statistical results show that T (interpersonal relationship tension and sensitivity) = -8.286,  $P < 0.01$  indicates that the practice of Taijiquan has a significant effect in improving the interpersonal relationship of college students. In the process of Tai Chi, the experience of some movements and moves not only requires self-understanding and learning, but also needs the communication and discussion between teachers, classmates and friends, and the contact between someone and people's bodies.

#### Comparative analysis of the poor psychological endurance dimension of the practitioners

According to the statistical results, T (poor psychological endurance) = -7.834,  $P < 0.01$ . It shows that practicing Taijiquan can effectively improve the psychological endurance of college students, [5]. Most of the contemporary college students are the only child, they are strong dependent, lack of the spirit of hard work, and smooth growth experience makes many people develop a solitary, pretentious personality. This has caused most students can only succeed cannot fail the psychology, encounter all kinds of setbacks and difficulties cannot correctly to face. Such as the scholarship or excellent failure, election or love failure, failed to successfully get the degree certificate and graduation certificate, because of all of the above reasons and suicide or crime road is not a few people.

#### Comparative analysis of the poor adaptability dimension of practitioners and non-practitioners

The results showed that T (poor adaptability) = -7.246,  $p < 0.01$ . Indicating that practicing Chi can significantly improve the adaptability of college students. College life is at an important turning point in their life, and they are facing a multi-level, multi-faceted environmental change. The changes in the new living environment, learning activities and interpersonal relationship cause certain psychological conflicts and difficulties to adapt. A large part of students cannot live in harmony with the new living environment. Taijiquan is important in nature, and edify people's concept of harmony. In the process of practice, breathing, body, everywhere is not involved, free, often practice can gradually develop a concept of nature and nature, which can be sublimated into the harmonious relationship between man and nature, between man and man, between people and society. With such a harmonious relationship, people can better adapt to all kinds of people, things and environment, so that people's mood can be more natural, pleasant and peaceful. In conclusion, practicing Taijiquan can improve the adaptability of college students and improve their adaptability.

#### Comparative analysis of the psychological imbalance dimension between practitioners and non-practitioners

As can be seen from the experimental data, T (psychological imbalance) = -5.802,  $p < 0.01$ . It indicates that practicing Taijiquan can improve people's psychological imbalance. Balance is the foundation of human health. Taijiquan pays attention to balance everywhere, emphasizing the balance of Yin and Yang, Yin and Yang symmetry, Yin and Yang balance, and Yin The alternation of Yang, the growth and decline of Yin and Yang, and the mutual root of Yin and Yang promote the systems of the human body to adjust themselves as a whole and achieve a dynamic balance of life. The changes of Taijiquan opening and closing, reality, firmness and softness, attack and defense contain the rotation of Yin and Yang. The boxing pays attention to the moderate and impartial moderate. In the process of the alternating movement of Yin

and Yang of the body tends to balance, the unbalanced factors in people's psychological state will be affected accordingly, and self-regulation will gradually tend to balance.

Experimental results show that the subjects before and after the experiment has significant differences in psychological data, proved that the body, heart, spirit tai chi teaching mode of intervention, college students in forced, depression, anxiety, terror, paranoid five dimensions of improvement, more effective to reduce the college students' psychological anxiety, to alleviate the college students have significant effect. At the same time, the experimental implementation process talk with subjects also confirmed the formation of the results, they generally reflect, in the process of learning to practice tai chi chuan movements feel breathing smoothly, calm, happy, thought enrichment, the anxiety, mental tension and depression got certain relief, the whole body and mind to effectively relax.

Combined with the experimental results and intervention process, body, heart, spirit tai chi teaching mode of positive influence on college students' psychological anxiety, mainly with the following aspects: first, the intervention pays attention to the subjects' breathing and relaxation training, starting from the simple tai chi station pile, guide students to meditation, let the experience of deep breathing and muscle relaxation, make the practitioner will focus on slow breathing, experience and learning with breathing changes of muscle relaxation method. Through this static practice before each class, the practitioner's mood quickly becomes calm and natural. Secondly, the movement is simple and the number is small, to avoid the subjects tired of memory. "Practice makes perfect", with fewer movements, easy to remember and more accurate methods. In this way, practitioners can focus on the body feeling of the movements, deeply explore the relationship between Taijiquan body and heart, and experience the connotation of the unity of body and mind. Third, emphasize the integrity of the "scanning" body, understand the body reflection. Teaching emphasizes the subjects feel tai chi movement highly overall coordination, "motionless" body scanning body experience, guide the students' body reflection, constantly set up students in self, change themselves, improve themselves a kind of thinking logic, help students to adjust their own life learning way. Fourth, conduct cultural infiltration, improve the ideological understanding. Tai chi contains the profound of Chinese traditional philosophy and culture, with the help of tai chi can vivid and concrete interpretation of "gas", "dialectical", "humanity", "unity", "object image", "cultivate one's morality", "unyielding, thick with virtue" ideas, the ideological understanding for the youth life and learning has a positive guiding role. On the whole, through the application and implementation of these specific methods, the influence of Taijiquan on the psychological anxiety of college students is fully played.

Of course, this teaching mode of "weakening the external body and paying attention to the physical and mental feelings" is relatively difficult for college students to learn, and students' experience and mastery will not be achieved overnight. "Tai Chi does not go out for ten years" also fully explains the depth and difficulty of Taijiquan. However, for teenagers in modern society, Taijiquan, which pays attention to psychological adjustment and cultural infiltration, has important social practical significance for solving their current life and learning problems, comprehensively understanding Taijiquan, and mastering the methods and principles used for long-term practice.

**Conclusion:** Practicing Tai Chi has a significant role in improving the interpersonal relationship among college students. Practicing Tai Chi can effectively improve the psychological endurance of college students. Practicing Tai Chi can significantly improve the adaptability of college students.

It is suggested that colleges and universities should offer Tai Chi courses from the first year of university. They can increase the number of weekly class hours to increase the participation of college students and increase the time of Tai Chi exercise, so as to more effectively improve the psychological anxiety status of college students and improve their psychological anxiety level. Open Tai Chi associations, clubs and interest classes in order to provide more opportunities and platforms for college students to learn and communicate with each other.

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## CEO SOURCES AND CASH HOLDINGS UNDER THE IMPACT OF COVID-19: FROM THE PERSPECTIVE OF PSYCHOLOGICAL EMOTION REGULATION

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**Background:** Under the impact of COVID-19, many private enterprises in China have bankrupted due to broken capital chains. A company's cash holdings are not only related to its daily production and operation, but also an important decision for its sustainable development. This paper attempts to explore the determinants of cash holdings from the perspective of management psychology.

**Subjects and Methods:** As an agent, CEOs from different relationship sources have different sense of security, loyalty, dependence and psychological needs to their clients, resulting in different agency behaviors. This paper divides the CEO sources into three types according to the relationship between CEOs and directors. We believe that different CEO sources have different psychology needs and thoughts, and that should affects the behavior of cash holdings. Our sample includes 2007-2020 private listed companies in China, the sources of CEO are divided into family member, acquaintance and outsider.

**Results:** Compared with family member CEOs, the cash holding level of acquaintance and outsider CEOs is significantly lower, and the cash holding value is significantly higher, which is more obvious in the source of outsider