RESEARCH ON THE INFLUENCE OF ANXIETY DISORDER ON COLLEGE STUDENTS’ INNOVATION AND ENTREPRENEURSHIP

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SUMMARY

Background: With the advent of the Internet age and the continuous development of information technology, music, dance, education and other methods have been gradually proved to improve anxiety. Under the guidance of the national strategy of entrepreneurship and innovation, college students’ innovation and entrepreneurship has been supported by the society. Most college students have begun to devote themselves to innovation and entrepreneurship activities, and have made corresponding achievements at this stage.

Subjects and methods: 200 students with anxiety disorder with different degrees of psychological anxiety were selected as the research object. According to the digital random grouping method, they were divided into control group and experimental group. The students in the control group adopted the conventional innovation and entrepreneurship teaching scheme, and the students in the experimental group adopted the innovation and entrepreneurship teaching scheme combined with psychology. After 6 months of teaching, the mental health status of patients was analyzed by Hamilton Anxiety Rating Scale (HAMA), and the anxiety of college students was analyzed and evaluated by ID3 decision tree algorithm. The HAMA scale is divided into two factors: mental and physical, with a total of 14 items. Each item is quantified by 5-level score, and the total score is 60 points.

Results: Compared with the control group, the improvement rate of anxiety students in the experimental group was higher in the seven mental factor dimensions. This is because the increase of innovative entrepreneurship teaching programs for college students combined with psychology can help students dredge psychological problems in time.

Conclusions: The psychological intervention program of college students with entrepreneurial anxiety can greatly improve the psychological health of college students.

Key words: anxiety disorder - college student - entrepreneurship - influence

INTRODUCTION

With the increase of academic pressure, interpersonal pressure, employment pressure, social adaptation pressure and other pressures, students are prone to anxiety, fear, anxiety, irritability and other bad emotions (Karayagiz 2020). This phenomenon has attracted the keen attention of many experts and educators at home and abroad (Yoo et al. 2019). Student anxiety disorder is one of the common psychological diseases of college students, which will not only affect the mental health of students, but also have a negative impact on their study and life (Rankin et al. 2018).

Mennin and other scholars proposed to apply emotion regulation therapy to patients with generalized anxiety disorder for intervention. The experimental setting shows that emotion regulation therapy is effective and practical (Mennin et al. 2018). Researchers such as Newby have proposed a scheme combining cognitive behavioral therapy and mental health based on the Internet. The research results verify that the scheme can alleviate anxiety caused by disease (Newby et al. 2018). Pepper and other researchers analyzed the relationship among autism, early psychosis and social anxiety disorder, and expounded the role of social cognition and its relationship with young adult disability characterized by social disorder (Pepper et al. 2018).

A large number of studies at home and abroad show that there is a great correlation among college students’ emotional intelligence, psychological anxiety and learning adaptability, and the proportion of college students with anxiety disorder is gradually increasing. Anxiety disorder of college students is a very complex psychological and emotional disorder. Its clinical manifestations are usually motor agitation and sympathetic hyperactivity. The causes of the disease are depression, mental stimulation, personality, innate heredity, etc., which are manifested in negative emotions such as anxiety, shame, disappointment, anxiety and fear (Da et al. 2020). Generally speaking, anxiety itself is a very reasonable emotional response. However, long-term anxiety will lead to physiological and emotional diseases. According to different types, anxiety can be divided into pathological anxiety and realistic anxiety. Pathological anxiety is one of the most common types of anxiety (Siew et al. 2019). Its clinical manifestations are panic anxiety, generalized anxiety disorder and so on. At present, the most common intervention measures for anxiety disorders are personalized psychological intervention, lectures on professional knowledge of mental health and so on. Although these intervention methods can reduce the psychological anxiety of patients to a certain extent, the application scope of these intervention methods is greatly constrained, and the implementation is difficult, the effect is poor, and the real-time performance is low (Katie 2018). Therefore, they have little value in clinical promotion. After entering the university, college students are facing great
changes in learning styles (Fort et al. 2021). At the same time, with the increase of learning pressure and learning tasks and their poor psychological tolerance, their mental health problems are becoming increasingly prominent. According to different performance types, the anxiety psychological problems of college students can be expressed in three types: academic anxiety, social anxiety and employment anxiety. With the increasingly serious phenomenon of students’ anxiety, colleges and universities must take corresponding measures to intervene students’ anxiety (Van et al. 2018). At present, college teachers do not pay attention to students’ psychological needs in the teaching process, which leads to a serious phenomenon of students’ anxiety (Ashar et al. 2021).

In recent years, innovation and entrepreneurship is an entrepreneurial activity carried out on the basis of innovation. It is neither pure innovation nor pure entrepreneurship. Entrepreneurship attaches importance to the behavior of obtaining legitimate interests through practical action. Innovation pays attention to originality and pioneering. In the theory of innovation and entrepreneurship, innovation is a premise and foundation, and entrepreneurship is the extension and embodiment of innovation. The research takes anxiety students as the research object, and analyzes the effect of college students’ entrepreneurship and innovation program on anxiety, in order to provide new ideas for the alleviation of college students’ anxiety.

SUBJECTS AND METHODS

Study setting

Under the background of socialism with Chinese characteristics entering a new era, innovation and entrepreneurship education has a new connotation and higher requirements for innovation and entrepreneurship. College students’ acceptance of innovation and entrepreneurship education is not only the demand of the national innovation driven development strategy, but also the path to improve the quality of innovation and entrepreneurship. Carrying out innovation and entrepreneurship education for college students in the context of the new era refers to the implementation of all college students, taking morality and cultivating people as the basic goal, taking the socialist core values as the policy, according to the strategic policy of “mass entrepreneurship and innovation”, taking quality education as the main theme, updating educational concepts and changing educational ideas as the guide, and improving students’ sense of social responsibility, innovative spirit. It is an educational practice that focuses on entrepreneurial awareness and entrepreneurial ability, takes the reform of talent training mode and curriculum system as the core, strengthens the indoctrination and teaching of college students’ ability, spirit, value, innovative and entrepreneurial concept, improves college students’ innovative and entrepreneurial ability and comprehensive quality, and finally realizes full employment and serves the construction of socialist modernization. In view of the increasingly serious phenomenon of anxiety disorder of college students, this paper studies and puts forward an innovation and entrepreneurship scheme of college students combined with students’ psychology, as shown in Figure 1.

Most college students have begun to devote themselves to innovation and entrepreneurship activities, and have made corresponding achievements at this stage. First, adhere to the innovation and entrepreneurship education as an important agenda of the school. Colleges and universities shall establish a working mechanism of innovation and entrepreneurship education in which relevant departments cooperate with each other. The President shall serve as the team leader, the leader in charge of the school shall serve as the deputy team leader, and the innovation and entrepreneurship department of college students shall take the lead. Second, adhere to the basic training program of cultivating morality and establishing talents. Clarify the objectives and requirements of innovation and entrepreneurship education and establish a curriculum system of innovation and entrepreneurship education. Third, adhere to and strengthen the practice of innovation and entrepreneurship. Strengthen the construction and sharing of resources between universities and local governments, widely build “maker space” and other internship and training platforms, and actively run China’s “Internet +” college students’ innovation and entrepreneurship competition and other...
innovation and entrepreneurship competitions at all levels, which has played a positive role in deepening the reform of innovation and entrepreneurship education in universities, improving the quality of higher education, promoting the all-round development of students, and promoting the full entrepreneurship and employment of graduates. However, limited by age, experience and other problems, we are faced with problems such as inadequate service, little experience and difficult financing.

The path of college students’ innovation and entrepreneurship education program is as follows: strengthen organizational leadership and actively make top-level planning. Optimize the curriculum and teaching system. Strengthen team building and build a team of professional teachers. University leaders need to pay special attention to top-level planning, which is the fundamental condition for the implementation of innovation and entrepreneurship. The Party committee of colleges and universities should attribute innovation and entrepreneurship education to the cause of school reform. The Party committee of colleges and universities should adhere to the political position, put innovation and entrepreneurship education on the important agenda of the Party committee of colleges and universities as soon as possible, actively do a good job in the overall planning and top-level design of innovation and entrepreneurship education in colleges and universities, strive to coordinate the work of innovation and entrepreneurship education in colleges and universities, determine the division of responsibilities of responsible departments and relevant departments, and improve the long-term mechanism of innovation and entrepreneurship education. The establishment of the Party committee and the scientific guarantee system for the participation of teachers and students include one aspect. The important process of education and teaching is a perfect teaching system and reasonable curriculum. The curriculum should highlight the professional characteristics, organically integrate the professional curriculum system and innovative entrepreneurship curriculum, realize the combination of professional practice teaching and innovative entrepreneurship practice activities, and actively promote the reform of curriculum system, training mode and teaching content.

We should make innovation and entrepreneurship education run through the whole process of talent training, effectively integrate innovation and entrepreneurship education into the whole process of professional education and cultural quality education teaching plan and credit system, improve the innovation and entrepreneurship education system of colleges and universities integrating classroom teaching, autonomous learning, combining practice, guidance and assistance and cultural guidance, and enhance college students’ innovative spirit, entrepreneurial awareness and innovation and entrepreneurship ability. Excellent and strong teaching staff is the key guarantee to realize innovation and entrepreneurship. Colleges and universities need to strengthen the teaching ability and literacy training of innovation and entrepreneurship education for college teachers, reform teaching methods and assessment methods, and promote teachers to integrate international cutting-edge academic development, the latest research results and practical experience into classroom teaching. We should vigorously support our teachers to take temporary training in enterprises, encourage teachers to participate in the practice of innovation and entrepreneurship in social industries, and constantly improve the educational ability and comprehensive quality of innovation and entrepreneurship. Colleges and universities need to establish a team of full-time and part-time high-quality innovation and entrepreneurship education teachers, and build a university innovation and entrepreneurship education system integrating cultural guidance, guidance and assistance, combined with practice, autonomous learning and classroom teaching.

**Design**

In order to analyze the impact of college innovation and entrepreneurship teaching program on patients with anxiety disorder, ID3 decision tree algorithm is used to analyze the anxiety of college students and grade evaluation. 200 students with anxiety disorder with different degrees of psychological anxiety were selected as the research object. According to the digital random grouping method, they were divided into control group and experimental group. The students in the control group adopted the conventional innovation and entrepreneurship teaching scheme, and the students in the experimental group adopted the innovation and entrepreneurship teaching scheme combined with psychology. The cycle lasted for 4 months, and the number of people in each group was 100. After 6 months of teaching, the mental health status of patients was analyzed by Hamilton Anxiety Rating Scale (HAMA). Using HAMA, the scale was divided into mental and physical factors, with a total of 14 items. Each item was quantified by 5-level score, and the total score was 60 points. Somatic anxiety factors include autonomic nervous system symptoms, reproductive and urinary system symptoms, gastrointestinal symptoms, respiratory system symptoms, cardiovascular system symptoms, sensory system and muscle system symptoms. Mental anxiety factors include behavioral performance, depressive mood, cognitive function, insomnia, fear, tension and anxiety. Anxiety refers to worry, worry, feeling that the worst is about to happen and easy to provoke. Tension refers to tension, fatigue, inability to relax, emotional reaction, easy to cry, tremble and feel uneasy. Fear refers to the fear of darkness, strangers, being alone, animals, car or travel and crowded occasions. Insomnia refers to difficulty falling asleep, easy to wake up, not sleeping deeply, dreaminess, night terrors, and feeling tired after waking up. Cognitive function can also be called memory and attention disorder. Attention cannot be focused and memory is poor. Depressive mood refers to loss of interest, lack of pleasure in previous hobbies, depression, waking up
early, heavy day and light night. Somatic anxiety refers to muscle system muscle soreness, inflexibility, muscle twitch, limb twitch, tooth tremor and voice trembling. Somatic anxiety refers to blurred vision, chills and fever, weakness and tingling all over. Cardiovascular system disease refers to tachycardia, palpitation, chest pain, pulsation of blood vessels, faint feeling and cardiac leakage. Respiratory symptoms refer to chest tightness, suffocation, sigh and dyspnea. Gastrointestinal symptoms refer to dysphagia, heating, dyspepsia (abdominal pain, abdominal distension, nausea, stomach fullness after eating), intestinal motility, bowel ringing, diarrhea, weight loss and constipation. Reproductive and urinarian system symptoms refer to frequent urination, urgency, menopause, sexual apathy, premature ejaculation and impotence. Autonomic nervous system symptoms refer to dry mouth, flushing, pallor, easy to sweat, goose bumps, tension headache and bristling hair. During the meeting, the behavior performance can be mainly divided into two kinds. On the one hand, it is the general performance, including tension, inability to relax, uneasiness, biting fingers, clenching fists, touching handkerchiefs, facial twitch, restless feet, shaking hands, frowning, stiff expression, high muscle tension, sighing hand breathing and pale face. On the other hand, it is physiological performance, specifically swallowing and burping. When quiet, the heart rate is fast, the breathing is more than 20min, hyperreflexia, nitrogen shock, pupil dilation, eyelid beating, easy to sweat and exophthalmos. HAMA is a doctor’s anxiety scale and the most classic anxiety scale. Among all similar scales, it has the most time and frequency of use and is the most familiar with clinical and research work. HAMA can stabilize the treatment effect and compare the changes of symptoms before and after treatment. If the factor analysis method is used to analyze the curative effect, it can also accurately reflect the changes of each target symptom group. The evaluation method is simple and feasible, and can be used for anxiety disorders, but it is not suitable to estimate the anxiety state of various mental diseases. The degree of anxiety of patients is directly proportional to the score of the scale, that is, the higher the degree of anxiety of patients, the higher the score of the scale. The anxiety level is divided into four levels: no anxiety, possible anxiety, obvious anxiety and serious anxiety. The improvement rate is the proportion of the number of people without anxiety and possible anxiety and the total number of people. In order to ensure the reliability of the research results, the average value of all personnel of each group of research objects is taken as the final result. The basic information of the research object is shown in Table 1.

Table 1. Basic information of research objects

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Control group</th>
<th>Experience group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>45</td>
<td>46</td>
</tr>
<tr>
<td>Female</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Age/year</td>
<td>36.02±11.56</td>
<td>37.58±10.38</td>
</tr>
<tr>
<td>Course of disease/days</td>
<td>54.41±13.21</td>
<td>50.23±12.62</td>
</tr>
</tbody>
</table>

The questionnaires used in the study were calculated by reliability and validity formula. When the test of odd and even items is equivalent, it is corrected by Spearman Brown formula, and the calculation formula is formula (1).

\[ r_{sb} = 2r_{sh}/(1+r_{sh}) \]  

(1)

In formula (1), \( r_{sh} \) refers to the reliability index corrected by Spearman Brown formula, and \( r_{sh} \) refers to the split half reliability. When the tests of odd and even items are not equivalent, it shall be corrected by Flanagan formula, and the calculation formula is formula (2).

\[ r = 2\left(1 - \frac{S_2^2 + S_{sh}^2}{S_h^2}\right) \]  

(2)

The influence of college innovation and entrepreneurship teaching program on patients with anxiety disorder was analyzed by SAS data statistical analysis software. The comparison between count data groups was analyzed by independent sample t-test, paired t-test before and after treatment, and the data comparison at different time points was analyzed by repeated measurement variance test. \( P < 0.05 \) indicates that the gap has significant statistical difference, and \( P < 0.01 \) indicates that the gap has very significant statistical difference.

RESULTS

The reliability and validity of the questionnaire used in the study are 0.74 and 0.76 respectively. Therefore, the survey results have high reliability and effectiveness. Figure 2 shows the improvement of two groups of students with anxiety disorder after the experiment. In the seven dimensions of mental factors, the anxiety symptoms of anxiety students in the experimental group were significantly improved, while the anxiety symptoms of the control group were only improved to a certain extent. The improvement rates of behavioral performance, depression, cognitive function, insomnia, fear, tension and anxiety in the experimental group were 86.0%, 92.0%, 93.0%, 91.0%, 93.0%, 92.0% and 91.0% respectively. The improvement rates of corresponding mental dimensions in the control group were 78.0%, 81.0%, 81.0%, 78.0%, 81.0%, 79.0% and 80.0% respectively.
respectively. Therefore, the introduction of innovative entrepreneurship teaching program in colleges and universities with mental health has an obvious effect on the intervention of bad emotions of patients with anxiety disorder.

Figure 2. Remission of students with anxiety disorder in experimental group and control group

Figure 3 shows the improvement of anxiety of two groups of anxiety students in this experimental cycle. One month after the implementation of the innovation and entrepreneurship education path for college students, the improvement rates of the experimental group and the control group were 69.0% and 75.0% respectively. After 2 months of implementation, the improvement rates of the experimental group and the control group were 72.0% and 81.0% respectively. After 3 months of implementation, the improvement rates of the experimental group and the control group were 76.0% and 85.0% respectively. After 6 months of implementation, the improvement rates of the experimental group and the control group were 82.0% and 91.0% respectively. With the increase of experimental time, the improvement rate of anxiety emotion of anxiety students in the two groups increased. However, the improvement rate of anxiety symptoms of anxiety students in the experimental group was more significant, which was statistically significant compared with the control group. This further shows that the innovation and entrepreneurship education path of college students combined with psychology can improve the anxiety symptoms of patients with anxiety disorder.

Figure 3. The improvement of anxiety in four groups of anxiety patients in this experimental cycle
Note: * means statistically significant compared with the control group.

Figure 4 shows the improvement of depression of two groups of anxiety students in this experimental cycle. One month after the implementation of the innovation and entrepreneurship education path for college students, the improvement rates of the experimental group and the control group were 69.0% and 75.0% respectively. After
After 2 months of implementation, the improvement rates of the experimental group and the control group were 72.0% and 81.0% respectively. After 3 months of implementation, the improvement rates of the experimental group and the control group were 76.0% and 85.0% respectively. After 6 months of implementation, the improvement rates of the experimental group and the control group were 82.0% and 91.0% respectively. With the increase of experimental time, the improvement rate of depression of anxiety students in both groups increased. However, the improvement rate of depressive symptoms of anxiety students in the experimental group was more significant, which was statistically significant compared with the control group. This further shows that the innovation and entrepreneurship education path of college students combined with psychology can improve the depressive symptoms of patients with anxiety disorder.

**CONCLUSIONS**

The value of innovation and entrepreneurship education in colleges and universities lies in promoting the all-round development of college students and realizing the high-quality employment of college graduates. The mental health problems of college students with anxiety disorder have been widely concerned by experts and educators at home and abroad. Based on the analysis of college students’ anxiety disorder, this paper puts forward a path of innovation and entrepreneurship education for college students combined with mental health. The results showed that the improvement rates of behavioral performance, depression, cognitive function, insomnia, fear, tension and anxiety in the experimental group were 86.0%, 92.0%, 93.0%, 91.0%, 93.0%, 92.0% and 91.0% respectively. The improvement rates of corresponding mental dimensions in the control group were 78.0%, 81.0%, 81.0%, 78.0%, 81.0%, 79.0% and 80.0% respectively. The innovation and entrepreneurship teaching scheme of college students combined with psychology can greatly improve the mental health level of anxiety students. The innovation and entrepreneurship teaching scheme of college students needs to be formulated in combination with the unique psychology of students, which can not only improve the mental health level of entrepreneurs, but also improve the success rate of entrepreneurship. The follow-up study can apply it to the intervention of patients with other types of anxiety disorders to enhance the universality of the proposed method.

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**Conflict of interest:** None to declare.

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A STUDY ON THE IMPACT OF ENGLISH EDUCATION AND TEACHING ON COLLEGE STUDENTS’ POSITIVE PSYCHOLOGY FROM THE PERSPECTIVE OF MULTICULTURALISM

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SUMMARY

Background: In the process of English teaching, due to various reasons, some students’ English performance is not ideal, and students are prone to anxiety, which is not conducive to students’ personal development. Positive psychology advocates the positive orientation of psychology, mainly studies the positive psychological quality of individuals, human health and happiness and the harmonious development of society, and advocates an open and encouraging attitude to treat individual potential, motivation and emotion, so as to realize the transformation of individuals from negative psychological mode to positive psychological mode. The research is based on positive psychology to innovate and improve college English teaching mode, so as to improve students’ enthusiasm, alleviate students’ depression, loneliness and other negative emotions, and then alleviate students’ anxiety symptoms, so as to provide guarantee for students’ long-term development.

Subjects and methods: To innovate and improve college English teaching model based on positive psychology, so as to improve students’ enthusiasm and alleviate students’ anxiety symptoms. 120 students were randomly selected from a university as the research object. Self-rating Anxiety Scale (SAS) was used to evaluate students’ mental health. Students were randomly divided into study group and control group. The students in the research group adopted an innovative English teaching model. The students in the control group adopted the traditional teaching mode.

Methods: The relevant data were processed and statistically analyzed by SPSS21.0 software.

Results: After teaching, the SAS score of the students in the research group was significantly lower than that in the control group (P > 0.05).

Conclusions: The innovation of college English teaching model based on positive psychology can significantly improve students’ psychological quality of English learning, improve students’ English performance, alleviate negative emotions and anxiety symptoms, which is of positive significance to students’ personal development.

Key words: positive psychology - English teaching - mental health - anxious

INTRODUCTION

In the process of China’s social and economic development, economic and cultural exchanges between China and other countries are becoming more and more frequent. In this context, China’s culture and the culture of other countries continue to collide and integrate, and on this basis, it has been innovated and developed, and the renewal and development of culture are also faster and faster. The cultures of various countries, nationalities, industries and regions are facing different bases and challenges. Emerging cultures are also emerging and developing, which has also created cultural diversity (Sriken et al. 2021). In the context of multiculturalism, the importance of international talents who can master and skillfully use English is becoming more and more prominent. Therefore, in recent years, college English teaching has become more and more important in the college education system, and has been paid attention by local governments, parents and people from all walks of life. There are various reasons for the low efficiency of English Teaching in colleges and universities. Under the dual pressure of academic pressure and employment pressure, students will have irritable and lonely emotions, which will lead to students suffering from psychological diseases such as anxiety and depression (Prabowo 2021). When the degree of anxiety is too high and lasts too long, students may have learning weariness, which greatly affects students’ normal study and life (Tabet et al. 2021). Therefore, many scholars have conducted in-depth research on anxiety. Berryhill explored the relationship between college Students’ disorderly separation from family function, depression and anxiety (Berryhill & Smith. 2020). Al Jumaili used the hospital anxiety and depression scale to measure the prevalence of depression and anxiety among Iraqi health care college students (Al-Jumaili et al. 2021). Sriken studied the factor validity and measurement invariance of college students’ generalized anxiety disorder (GAD-7) scale scores across gender and race (Sriken et al. 2021). Under the multicultural background, the importance of international talents who can master and skillfully use English is becoming more and more prominent. Therefore, in recent years, college English teaching has become more and more important in the college education system. However, in the process of English teaching, due to various reasons, students’ positive psychology is not enough. After analyzing the students’ psychology, the research summarizes the reasons for the low enthusiasm of students, as shown in Figure 1.