

## Original Article

# Collective rehabilitation training conducive to improve psychotherapy of college students with anxiety disorder

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**Abstract:** Objective: Study the auxiliary therapeutic effect of psychological counseling treatment after collective rehabilitation training of the patients with anxiety disorder. Methods: 38 college students with anxiety disorder are randomly divided into an experiment group and a control group, each of which consists of 19 students. The experiment group only receives psychological counseling treatment; the control group, based on psychological counseling treatment, receives the collective rehabilitation training, that is, the joint therapy. Results: before the treatment, the inter-group difference of the general data about the patients in 2 groups shows no statistically significance,  $P > 0.05$ , which is comparable; after 8 weeks' treatment, HAMA and SAS scores of the patients in 2 groups are significantly improved compared with those before treatment,  $P < 0.05$ ; meanwhile, the improvement effect of the experiment group is better than that of the control group  $P < 0.05$ . After 3 months' follow-up, it is found that the recurrence rate of the experiment group is obviously lower than that of the control group  $P < 0.05$ . Conclusion: the joint treatment, consisting of psychological counseling and collective rehabilitation training, exercises synergetic effect on the college students who are anxiety disorder patients and its curative effect is obviously superior to the single psychological counseling and its recurrence rate is low.

**Keywords:** Psychological counseling, rehabilitation training, joint, anxiety disorder, curative effect

## Introduction

In daily life, because of unexpected events and many uncertainties, everyone may feel anxiety more or less and thus anxiety is one of the normal emotional responses when they deal with the stress [1, 2]. When any individual is separated from the society or the real life, he/she may feel anxiety or fear, which is inconsistent with the reality indeed, even more, his/her living function is damaged to some extent. In this case, his/her status can be considered as anxiety disorder [3, 4]. Anxiety disorder is an emotional disorder in which his/her main manifestation is anxiety. Additionally, he/she is often accompanied by dizziness, chest tightness, shortness of breath, heartbeat tachycardia, tremor, urinary frequency and urgency and other body reactions as well as anxiety, fear, coercion or similar emotional reactions [5, 6]. In the university stage, the person's physiology and psychology are rapidly developed. The individual psychology is quickly developed toward

the mature but it has not yet fully mature. For this reason, many students can't adapt themselves to the problem, and even suffering from the psychological barriers, which seriously affects the life and learning if the living environment, learning characteristics and interpersonal relationship are changed. It is shown from the survey statistics data of 11 undergraduate colleges and universities in Jiangsu Province provided by the research group that more than 25% college students are psychological disorder patients, among which about 15% students have psychological anxiety and about 2% students suffer from anxiety tendency. Anxiety disorder has been an important psychological disease that is harmful to the physical and mental health of college students. It not only causes physical and psychological harm to the patients themselves, but also brings serious burden to families of the patients, their schools and competent education departments. Thus, it is an important problem that shall be solved as soon as possible. Of treating the patients with anxi-

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**Table 1.** Comparison of General Data for the Patients in 2 Groups ( $\bar{x} \pm s$ )

Group	Male/female (cases)	Age (years)	Disease duration (months)	HAMA rating (points)
Control group	11/8	21.34 $\pm$ 3.50	4.37 $\pm$ 1.29	18.64 $\pm$ 3.56
Experiment group	10/9	22.18 $\pm$ 3.76	4.81 $\pm$ 1.35	19.32 $\pm$ 3.49

Note:  $P > 0.05$ .

ety disorder, the common therapy is drug treatment or psychological counseling. However, in the drug treatment, patients often depend on the drugs and some patients have hostility to drugs, which may affect the curative effect. In this study, the joint therapy, combining the psychological counseling with collective rehabilitation training, is used to treat the college students who are anxiety patients. After that, it is found that the curative effect is significant.

## Object and method

### Study object

38 students, who sought medical advice to the mental office of China University of Mining and Technology and its Affiliated Hospital and were diagnosed with anxiety disorder from December 2013 to June 2014, were selected as the study objects and their ages ranged from 18 to 24 and their disease course ranged from 2 to 6 months. Inclusion criteria: patients meet the diagnostic criteria of anxiety disorder in Chinese Classification and Diagnostic Criteria of Mental Disorders (Third Edition) (CCMD-3) and their Hamilton Anxiety Scale (Hamilton Anxiety Scale, HAMA) rating is more than or equal to 14 points; In view of convenient and controllable operation and the effect of age cultural differences on cognitive ability and the psychology of the patients, the selected patients are undergraduate students at school; the patients are willing to accept practical treatment and they set an example by personally taking part with the treating. It excludes the patients suffering from other mental illnesses, personality disorders, severe anxiety, other organic diseases or serious physical disease. The random digital table method is used to divide the patients into the experiment group and the control group, each of which consists of 19 patients. Upon the consistency test of the basic data for the patients in 2 groups, it is found that the inter-group difference shows no statistics significance ( $P > 0.05$ ) and it is comparable. See **Table 1**.

### Treatment method

The patients in the control group are treated by the psychological counseling method. Psychological counseling therapy is based on the language, that is, both doctors and patients communicate through language and then the patients can trust the doctors. As a result, a good information conversion and good feedback channel is established. In reliance on counseling and benign interaction feedback, the patients can be treated. In the course of treatment, the professional psychological counseling person will provide the psychological counseling for patients and the counseling contents may vary from the personality of the patients and their sick sources. Thus, the different counseling is provided. At the early stage of the psychological counseling, in order to be trusted by the patients, the psychological support therapy is adopted, for example, explanation, encourage, comfort and guarantee methods. It is required that the doctor shall communicate with the patient in the guidance way and understand the disease reasons and sources of the patient by the means of listening in the process of communication. In the middle-late stage of the psychological counseling, the main therapies are cognitive counseling, narrative therapy, psychological counseling and behavioral therapy. When the patients release the intense and anxiety, they are provided with the emotional catharsis and cognitive reconstruction so that the students can gradually correct the wrong cognition and adjust their self-control ability to reply the mood changes. Patients are treated twice a week, the treatment lasts for about 30 minutes and the entire psychological counseling treatment is completed within 8 weeks.

The experiment group is treated by the psychological counseling and the collective rehabilitation training. Psychological counseling method is same with that used in the control group. The collective rehabilitation training method is as

follows: (1) encouraging patients to participate in collective outdoor games, for example, joining in the collective game consisting of about 20 people. The main game is the entertainment one, which aims at the team cooperation. (2) It shall avoid arranging many patients into the same team game. It's better to arrange 1-2 patients into the same team game. (3) Before organizing each game, the coach or the team leader, who organizes and implements this game, shall be informed of the basic information of the patients. The coach or the team leader in each group before the event, to inform the organization and shall encourage the patients so that the patients can feel the joy of participation in collective activities, meanwhile, the language stimulation shall be avoided. (4) As for the weekly activities, the main one is the collective training project, additionally; 1-2 short distance travels, hiking and picnics can be arranged. Each patient in the experiment group can participate into 3-5 activities each week and the activity time may be determined depending on the activity content, for example, the collective training project lasts for about 60 minutes, while short distance travel, hiking or picnic lasts for half a day. The entire training is completed within 8 weeks.

### *Observation indexes*

Detection of therapeutic effect: before treatment and after 8 weeks' treatment, use Hamilton Anxiety Scale (Hamilton Anxiety Scale, HAMA) and self rating Anxiety Scale (Self-Rating Anxiety Scale, SAS) to assess the patients. Hamilton Anxiety Scale (HAMA) is mainly used for assessing the severity of patients with anxiety disorder symptoms. In the process of assessing, the professional assessment person talks with the patients, while observing them. The assessment content includes 14 items and each item is 0-4 points. The assessment person scores each item based on communication and observation results. According to the severity of the patients, it is divided into 5 levels: in case of the total score  $\geq 29$  points, it is the severe anxiety symptom; in case of the total score  $\geq 21$  points, it is the obvious anxiety symptom; in case of the total score  $\geq 14$  points, it is the anxiety symptom; in case of the total score  $\geq 7$  points, it is the possible anxiety symptom; in case of the total score  $< 7$  points, it has no anxiety symptom; The Self-Rating Anxiety Scale is a simple clinical tool to analyze the

subjective symptoms of the patient and it can reflect the subjective feeling of the person, who asks for help and has the anxiety tend. SAS adopts 4-grade rating and it aims at assessing the severity of the symptom. It consists of 20 assessment items and each item is 1-4 points. It is normal if the score is less than 50 points; it is mild anxiety if the score is 50-59, while it is moderate anxiety if the score is 60~69 and it is severe anxiety if the score is more than 70 points.

Follow-up and interview: after 12 weeks' treatment, the patients, whose HAMA score is less than 7 and SAS score is lower than 50, can be confirmed as the cure ones. Meanwhile, the cured patients in the 2 groups are followed up and interviewed for 3 months in order to observe their recurrence rate. Respectively test HAMA and SAS scores of the cured patients at the third month after their cure.

### *Data processing*

Use SPSS 13.0 version statistical software package to statistically compare the assessment data of HAMA and SAS for the patients in the two groups before and after the treatment and then compare the internal group data before and after the treatment as well as compare the improvement effect of the inter-group data after the treatment. Data is expressed by  $(\bar{x} \pm s)$ . The measurement data is compared by using t test, while the count data is compared by using  $\chi^2$  test.  $P < 0.05$  indicates that the difference has the statistical significance.

### **Results**

Before the treatment, the inter-group difference of HAMA and SAS scores in the experiment group and the control group has no statistical significance ( $P > 0.05$ ). See **Table 1**. After 2 groups of patients are treated for 8 weeks, it is found that HAMA and SAS scores are significantly improved compared with those before treatment ( $^aP < 0.05$ ) and the improvement effect of the patients in the experiment group is more obviously compared with that of the control group, which shows the statistical significance ( $^bP < 0.05$ ). See **Table 2**. After 8 weeks' treatment, 6 patients from the observation group and 11 patients from the experiment group are respectively cured, meanwhile, the cure rate of experiment group is significantly

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**Table 2.** Comparison of HAMA and SAS Scores for the Patients in 2 Groups before and after the Treatment ( $\bar{x} \pm s$ )

Group	Male/female (cases)	HAMA assessment (score)		SAS assessment (score)	
		Before treatment	After treatment	Before treatment	After treatment
Control group	11/8	18.64 ± 3.56	13.86 ± 3.17 <sup>a</sup>	61.72 ± 5.23	56.31 ± 4.95 <sup>a,b</sup>
Experiment group	10/9	19.32 ± 3.49	9.74 ± 3.09 <sup>a</sup>	62.44 ± 5.31	53.07 ± 4.32 <sup>a,b</sup>

Note: After the internal group comparison before and after treatment, <sup>a</sup>P < 0.05; comparing the same timepoint of the experiment group with the control group after the treatment, <sup>b</sup>P < 0.05.

**Table 3.** Comparison of Cure Rate and Recurrence Rate for the Patients in 2 Groups after the Treatment ( $\bar{x} \pm s$ )

Group	Male/female (cases)	Cure rate after 8 weeks		Recurrence rate within 3 months of the cure	
		Cured patients	Cure rate (%)	Recurrence patients	Recurrence rate (%)
Control group	11/8	6	31.58	2	33.33
Experiment group	10/9	11	57.89 <sup>a</sup>	2	18.18 <sup>b</sup>

Note: Comparison of the cure rate, <sup>a</sup>P < 0.05; comparison of the recurrence rate, <sup>b</sup>P < 0.05.

better than that of the control group, <sup>a</sup>P < 0.05. See **Table 3**. After 3 months' follow-up and interview, 2 patients among 6 patients in the control group, who were cured, recrudescence. It can be said that its recurrence rate is 33.33%. At the same time, 2 patients among 11 patients in the control group, who were cured, recrudescence. Its recurrence rate is 18.18%. It is shown that the recurrence rate of the experiment group is significantly lower than that of the observation group, <sup>b</sup>P < 0.05. See **Table 3**.

### Discussion

Anxiety disorder is a mental illness and its pathogen is complex. Inducement of the people's anxiety at different age stages varies from each other, for example, the body disease or physical impairment and other factors are major causes of the old people's anxiety [7, 8]. Most studies suggest that the cognitive process or thinking attitude plays a very important role in forming the anxiety. In case of stress events, it is more likely to have anxiety [9, 10]. The mind and body of the college student are developed rapidly but not yet mature. Because they are often affected by their study, employment and love stresses, they are prone to anxiety. Under this circumstance, if they are not treated timely and effectively, they are easily to suffer from anxiety. For the patients with anxiety disorder, the treatment measures can be divided into two categories, that is, psychotherapy and drug treatment. Oral anti-anxiety drug is the most commonly used method in the

treatment of anxiety disorder, but such anti-anxiety drug has many side effects, such as drowsiness and depression. In case of long-term use, it even may damage to some organs of the patients, while they are addicted to such drug and depend on it. Once the patients stop taking such drug, their symptoms will appear [11-13]. Even more, some patients prejudice the medication, which increases their psychological pressure; as a result, the treatment effect is not ideal. In the psychological counseling therapy, with the help of the language, both doctors and patients communicate through language and then the patients can trust the doctors. Consequently, a good information conversation and good feedback channel is established. In reliance on counseling and benign interaction feedback, the patients can gradually open their mind and get rid of their psychological anxiety [14-16]. Therefore, in treating the patients with anxiety disorder, it does not recommend the patients with mild and moderate anxiety disorder to take the drug and they shall accept the psychological counseling therapy. In this study, after the patients in the observation group are treated by the psychological counseling for 8 weeks, it is found that HAMA and SAS assessment data has been obviously improved compared with that before treatment, the clinical cure rate is 31.58% and the clinical treatment effect conforms to the related research results.

The patient in the experiment group, based on the above psychological counseling treatment,

receives the collective rehabilitation training, that is, the joint therapy. After 8 weeks' treatment, it is found that the clinical therapeutic effect is significantly better than that of the control group. After 3 months' follow-up and interview with the cure patients, it is found that the recurrence rate of the cure patients in the experiment group is significantly lower than that of the control group. This study shows that no matter the short-term curative effect or the rehabilitation maintenance effect of the cure patients, the curative effect of the experiment group is significantly better than that of the control group. By analyzing the reason why the experiment group can achieve such good results, it can be known that it is related to the following factors: as everyone knows, the exercise can enhance the body function, improve the mood of the patients and increase communication. All of these factors are helpful. At present, the rehabilitation curative effect of the exercise training has gradually attracted the attention in clinic. It is considered that the curative effect of the exercise training is better than that of the traditional drug treatment in some diseases. For example, a large number of reports confirm that the exercise therapy can significantly improve psychological and autonomic nerve functions of the patients. It not only can improve the regulatory function of the nervous system, but also can promote the nerve regeneration, thus it has important significance to improve the mental disorders [17, 18]. It has also been reported that the incidence of anxiety disorder has closely related to social support and whether the people actively participate in the activities and other factors. Therefore, according to the patient's interests, create conditions for them and encourage them to join some clubs and communicate with others. All of these measures can relax their mood [19, 20]. Thus, although it is important to improve the mind state of the patients, it still can't overlook the effect of the psychological experience and emotion exchange on the anxiety when the patients participate in collective activities. In this study, on this basis, according to the physical and mental characteristics of college students and their sports interest tendency, when setting the sports,, mainly select collective training project, short distance travel, hiking or camping, which focus on entertainment, teamwork and communication and are easily to stimulate the enthusiasm of patients'

participation in the activities and make them feel the joy from the teamwork and communication with the people as well as fully relax their mood and body, as a result, it can alleviate the anxiety and it is conducive to the recovery of the patients.

In summary, the results of this study show that the collective rehabilitation training has a synergistic effect on the psychological counseling therapy and it can improve the psychological counseling effect of the patients with anxiety disorder. It is suggested that when treating such patients, in addition to psychological counseling and language exchange, the rehabilitation training, including teamwork and collective communication, shall be provided. As a result, the patients can relax their mood and body in the rehabilitation training process and then it exercise positive effect on their mental health and it is helpful to alleviate the disease and fasten rehabilitation.

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### Disclosure of conflict of interest

None.

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