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Mindfulness Decompression Therapy on Negative Emotion, Cognitive Bias and Treatment Compliance in Patients with Coronary Heart Disease

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Abstract: To explore the effect of mindfulness decompression on negative emotion, cognitive bias and treatment compliance in patients with coronary heart disease. 200 patients with coronary heart disease in Liaoning Provincial People's hospital were selected for screening. 150 patients met the inclusion criteria, and the invalid data were removed again. They were randomly divided into intervention group and control group, 20 in each group. The control group received routine treatment, examination, nursing, health education, telephone follow-up was the same as the intervention group, but did not receive mindfulness training guidance. The patients in the intervention group began mindfulness training 8 weeks before discharge. Results: in general, there was no statistical difference between the two groups (P>0.05). In the baseline comparison of anxiety and depression, there was no significant difference in the scores of hospital anxiety and depression scale, anxiety subscale, depression subscale and the proportion of anxiety or depression patients before intervention between the two groups (P>0.5). In the comparison of anxiety and depression before and after the intervention, the number of anxiety patients in the experimental group decreased from 16 to 9, and the number of depression patients decreased from 12 to 7. However, there was no statistical difference in the proportion of patients with anxiety and depression. To observe the effect of mindfulness decompression treatment, the pressure level of experimental group after intervention was significantly lower than before (P=0.001). Mindfulness decompression therapy can significantly improve the quality of life of patients with coronary heart disease anxiety after discharge, improve the happiness index of patients, reduce negative emotions, cognitive bias and treatment compliance, and provide a reference for future clinical application.

1. Research Status

The mortality rate of coronary heart disease is always low in most Western European countries.

As we all know, coronary heart disease not only seriously damages the health of patients. Patients with coronary heart disease are suffering from repeated illness, long-term mental burden, high medical cost, high social pressure, and often have bad emotions such as anxiety and depression, which seriously affect the treatment effect and quality of life. Some studies have pointed out that anxiety is closely related to the occurrence and development of coronary heart disease and is an independent risk factor [1]. According to the guidelines for the diagnosis and treatment of acute and chronic heart failure, the risk of cardiovascular events or life-threatening events published by the European Heart Association in 2016 in patients with coronary heart disease, anxiety and depression and other negative emotions after two years in patients with acute myocardial infarction, there was no negative emotion [2]. Anxiety can affect patients' autonomic nervous function, increase heart load and myocardial oxygen consumption. When the human body adapts to the stress response of negative emotions, the basic metabolic rate will gradually increase, thus aggravating the patient's condition, forming a vicious circle of negative emotions and serious condition. Therefore, it is very important to evaluate and intervene the mental health of patients with coronary heart disease and improve their anxiety level. With the development of psychological intervention model, mindfulness decompression therapy as a psychological adjustment method has been successfully applied to different populations in foreign countries. In order to explore the effect of MBSR on anxiety of heart disease patients, jazaieri and other scholars studied 37 female patients. The results showed that the total score of anxiety in the experimental group was significantly reduced. MBSR exercise can significantly improve the control level of patients' negative emotions, and the response to life stress events is better [3]. In the study of diabetic outpatients, Shi and other scholars found that MBSR can significantly improve the quality of life of patients, mainly reflected in two dimensions of emotional function and overall health [4].

In China, MBSR research is still in its infancy. The current research mainly focuses on breast cancer patients with perceived stress and negative emotions, gastric cancer patients with chronic pain and pain level, negative emotions and immune level, and elderly patients with sleep quality coronary heart disease during perioperative period, for other chronic disease patients, there is no randomized controlled trial to verify the effect and feasibility [5]. However, the cause of coronary heart disease is complex, and the implementation of psychological intervention is easily interfered by external factors. It is not clear whether MBSR is suitable for Chinese patients with coronary heart disease anxiety [6]. There is an urgent need for psychological intervention to improve the emotional state of patients with coronary heart disease anxiety [7].

2. Main Contents

2.1. Coronary Heart Disease

Coronary atherosclerotic heart disease is a kind of heart disease caused by coronary atherosclerotic disease, which leads to artery stenosis, occlusion, myocardial ischemia, hypoxia and even necrosis. Imbalance of supply and demand is the main cause of chronic coronary artery disease. Myocardial ischemia and oxygen supply decrease: atherosclerotic plaque rupture, bleeding, surface ulcer or erosion, resulting in platelet aggregation, different degrees of thrombosis, distal vascular embolism or spasm, resulting in a sharp increase in the degree of lumen stenosis. It can significantly reduce the myocardial oxygen supply and prevent the elimination of metabolites. Although there is no increase in the oxygen demand of myocardium, myocardial ischemia is serious, which is the main cause of acute coronary syndrome. The pathogenesis of coronary heart disease mainly has the following theory: the theory of fat infiltration: after years of research, it has been proved basically correct. Theory of thrombosis and platelet aggregation: this theory can be summarized as follows: the mechanism of local hyperactivity is the massive formation of thrombus, the aggregation of

thrombus in the arterial wall, the proliferation of vascular wall cells covering thrombus and arterial wall. Then, due to some factors, thrombus decomposes and produces lipids. Theory of vascular endothelial injury response: the basic pathological change of coronary heart disease is the formation of atherosclerosis. In the process of atherosclerosis, vascular endothelial damage is the starting factor and the most important part of atherosclerosis. In the process of the formation and development of coronary heart disease, endothelial dysfunction mainly plays the following roles: causing vasodilation dysfunction; accelerating the structural transformation of arterial blood vessels; activating platelets and making them abnormally enriched; activating monocytes and neutrophils and guiding adhesion. Smooth muscle clonal Theory: every atherosclerotic lesion in blood vessels originates from variant smooth muscle cells. It is a benign smooth muscle tumor formed by virus infection or chemical factor transformation. The New York Heart function grade of heart failure is II ~ IV, and LVEF echocardiography is lower than normal [8].

Treatment and prognosis: with the accumulation of treatment experience and the improvement of medical level, there are various clinical treatment methods for coronary heart disease, mainly including surgical treatment, drug treatment, rehabilitation treatment and other methods. Surgical treatment is one of the most effective methods for the treatment of coronary heart disease (CHD), which is difficult to relieve symptoms. The most common surgical methods are coronary artery bypass grafting and percutaneous coronary intervention. Most patients will not have symptoms for a long time after coronary artery bypass grafting, and the treatment effect is ideal. Percutaneous coronary intervention (PCI) is to expand the occluded or narrow lumen of coronary artery directly by using stent to increase the flow of coronary artery. However, the coronary artery will also be damaged. The stent exists in the coronary artery, which is easy to lead to hemorheology changes and coronary artery repair reaction, so as to form a new embolism, with the risk of recurrence. Clinical drugs mainly include calcium antagonists, nitrates, β - receptor blockers, antiplatelet aggregation and so on. The application of β - blocker can reduce chest pain, chest distress and limb fatigue, and improve the quality of life of patients with coronary heart disease. Anticoagulant therapy can change the hypercoagulable state of the body, improve the basis of thrombosis from the source, so as to reduce the occurrence of acute cardiovascular events. However, there was no significant increase in thrombin time when anticoagulants were used. Psychological factors will closely affect each stage of the course of coronary heart disease, negative emotions will also improve the prevalence of coronary heart disease, affect the rehabilitation of patients. Mindfulness decompression therapy is a kind of self-psychological intervention method to reduce or eliminate negative emotions and decompression [9].

Factors influencing the prognosis of coronary heart disease: the prognosis of coronary heart disease is related to hypertension, diabetes, dyslipidemia, smoking, obesity, family history of early coronary heart disease, high-sensitivity C-reactive protein, heart function, etc. In addition to physiological disease factors, psychological factors - anxiety and depression, in view of the high incidence of psychological problems such as anxiety and depression in patients with coronary heart disease, more and more attention has been paid to the prognosis of coronary heart disease. Hypothalamic pituitary adrenal system (HPA): anxiety and depression are a stress factor that causes continuous or intense stress in patients, leading to HPA axis hyperfunction. The increase of HPA activity makes the human body release too much catecholamine and cortisol for a long time, which leads to the disorder of sympathetic and parasympathetic nerve activities, so as to speed up the heart rate and raise the blood pressure. Treatment compliance: a study has shown that poor aspirin compliance in patients with acute coronary syndrome may be related to depression, leading to poor prognosis. Through psychological intervention to improve the compliance of patients with coronary heart disease, the incidence of adverse cardiovascular events also decreased.

2.2. Mindfulness Decompression Therapy

The concept of mindfulness can be traced back to Indian Buddhism 2500 years ago. It is called mindfulness meditation or mindfulness meditation. Mindfulness is a way to relieve unnecessary pain and realize self-awakening. Under the influence of mindfulness, monks and Buddhists actively cultivate their ability of insight into their own state of consciousness through meditation, so as to maintain inner peace in the face of negative emotions such as anger, jealousy and sadness. Through this process, individuals develop valuable psychological characteristics, such as kindness, sympathy, insight, dedication, consciousness, etc. Traditional psychological intervention focuses on the repair of patients' psychological problems, and pays little attention to the positive psychological characteristics of patients such as self-acceptance and self-cognition. Mental intervention based on mindfulness confirmed the important role of exploring positive factors in resisting pain and maintaining happiness. Therefore, the traditional concept of psychotherapy has changed, first of all, recognition and acceptance, then change [10].

Mindfulness decompression therapy is one of the methods of psychotherapy. It has been established for more than 40 years and has been accepted by more and more people. It is widely used in the treatment of psychological problems such as anxiety and depression caused by physical pain and chronic diseases, and has achieved good results. It is an ideal way to treat psychological problems. It emphasizes reducing the pain of physical, mental and mental illness through meditation, body scanning and other exercises. Guide participants to consciously perceive the present, constantly observe and perceive their feelings, thoughts and emotions, so as to increase the real time of living in the present, keep awareness without judgment at all times, and learn to take better care of themselves. Basic cognition is very important for maintaining individual physical and mental health, especially for anxiety patients. MBSR can change the way of thinking of practitioners, so as to relieve tension and emotion, which may be the psychological mechanism of MBSR to improve the emotional feelings of anxiety patients. Mindfulness decompression can significantly improve the prognosis of patients with coronary heart disease. The improvement of emotion has a positive effect on the recovery of self-confidence and the establishment of social function in patients with coronary heart disease.

Measurement: the application of mindfulness in clinical field urges researchers to explore its essence. Foreign scholars began to develop a scale to measure the level of mindfulness. Therefore, different scales understand the meaning of mindfulness from different perspectives and develop self-report scales accordingly. State orientation: it refers to different mental states reflected by individuals or individuals, which can be cultivated or changed through continuous practice. The mindfulness state measurement tool is only applicable to individuals who have practiced mindfulness. Ability orientation: the ability orientation scale is used to measure the ability and skill of mindfulness practice, usually including several different sub scales to measure different mindfulness ability or skill. It includes Kentucky consciousness scale, five factor mindfulness scale and experience questionnaire. Cognitive orientation: in the framework of information processing model, mindfulness is regarded as a cognitive process by the mindfulness measurement scale of cognitive orientation. Including Southampton mindfulness questionnaire and mindfulness questionnaire. Idiosyncratic orientation: some scholars regard mindfulness as an individual's internal tendency, hoping to interpret it in a comprehensive, simple and understandable way. The trait selection vector scale includes mindfulness cognition and emotion correction scale, mindfulness attention awareness scale and Philadelphia mindfulness scale. Intervention methods: according to different skills and methods of mindfulness practice, different mindfulness therapies have been formed. The classic MBSR includes a variety of formal and informal mindfulness exercises. Formal mindfulness exercises include body scanning, mindfulness breathing, mindfulness

yoga and mindfulness meditation. Informal mindfulness practice refers to the integration of non-critical awareness into daily activities, such as dressing and washing. Mindfulness cognitive therapy: MBCT training technology is mainly based on mindfulness training combined with the discrete point of view in cognitive therapy. The traditional cognitive behavior therapy of dialectical behavior therapy overemphasizes change, which is almost impossible to achieve in borderline personality disorder patients. It emphasizes acceptance, not change, in order to intervene in patients with personality disorders. The basic idea is to integrate psychoanalytic dynamics, cognitive therapy, interpersonal therapy and other treatment methods, absorb the concept and skills of mindfulness, and help patients with personality disorders to control extreme emotions and behaviors. Acceptance and commitment therapy: MBSR is widely used to improve anxiety and depression in patients with chronic and mental diseases, mainly anxiety and healthy people. The effect of MBSR on anxiety and depression: MBSR can significantly alleviate the negative changes of body and mind during the treatment of breast cancer. MBSR significantly improved patients' anxiety. Compared with general community support and education, MBSR can significantly reduce the pressure of nurses and promote the overall mental health. IAA model: Mindfulness includes three core elements: intention, attention and attitude. These three elements act as three axes in the model and interact with each other. Mindfulness is that at this moment, for a certain purpose, we should pay attention to all kinds of experiences inside and outside the body and mind, treat these experiences with an open and curious attitude, and accept them objectively and truly no matter what happens. One of them is essential for the treatment of mindfulness and decompression. Rethink concepts like decentralization and de automation.

2.3. Negative Emotions

Coronary heart disease is a progressive disease. Its main treatment purpose is to delay or control the progress of the disease, prevent acute myocardial infarction, prolong life, reduce or control the attack of angina pectoris, and improve the quality of life. With the changes of age, environment, physiology, psychology and other factors, diagnosis is a long-term negative emotional event. Patients need to take medicine for a long time under the condition of inconvenient physical activity, and adjust and maintain heart function through various cardiac rehabilitation methods. This process is a long-term and continuous process, which will inevitably lead to anxiety, depression, panic, dissatisfaction and other negative emotions.

Anxiety and depression: the individual's panic, tension and worry about internal or external risks. The emotional reaction is serious, which affects the social function or causes obvious pain. It has clinical significance. The score of related anxiety scale was higher than the critical value. The score of related depression scale was higher than the critical value. Learning mindfulness exercises that focus on physical and emotional changes can increase the exposure of practitioners. Exposure is an important process of mindfulness practice. In mindfulness intervention, individuals can experience the process of "decentralization" by practicing non critical, open and intentional experiences. Through the process of decentralization, individuals can avoid negative thoughts and emotions, and then reduce their worries, rather than spend a lot of time and energy to avoid negative memories, emotions and experiences. Secondly, through learning to realize that the body's feelings, thoughts and emotions are constantly changing, mindfulness can cause individual cognitive changes. By learning to return to the current practice technology, individuals can take the "existence mode" instead of the automatic "action mode". In the mode of existence, psychology processes experience only at this time. It "has nothing to do and nowhere to go", which makes people focus on the present no matter what happens.

Mindfulness enables practitioners to experience unconscious relaxation. Although relaxation is

not the purpose of meditation practice, it usually happens naturally. The sense of relaxation caused by mindfulness is one of the keys to freeing practitioners. Finally, the process closely related to change is acceptance. When people realize that things are not what they want, their "automatic spiritual driving mode" will be activated. One is what things are (or what they are expected to be), the other is what things are expected to be, or what things should be. This difference can lead to two situations: first, they will automatically cause some form of negative emotions; second, they start a specific psychological habit pattern, which aims to narrow the gap between the current (or expected) state and the ideal state. If behavior can directly reduce contradictions and achieve success, then psychology will withdraw from the behavior model, but if the effect of behavior is not obvious, psychology will continue to process all information in the "behavior" model, constantly think about differences, and practice possible ways to reduce differences. Behavior patterns lead to the dissatisfaction cycle of subjective perception. Through acceptance, individuals learn to accept that emotions, physical feelings and thoughts are constantly changing, "accept everything" weakens the power of driving automatic thinking habits. Acceptance enables practitioners to see so-called "bad" or "good" in a clearer and broader perspective, so that individuals can better cope with the whole situation.

3. Experimental Simulation Analysis of Mindfulness Decompression Therapy

3.1. Subjects

From February 8, 2018 to February 8, 2019, 200 patients with coronary heart disease were selected from Liaoning Provincial People's Hospital, 150 of them met the inclusion criteria, 60 refused to participate, and 90 were finally included. Randomly divided into intervention group and control group, 45 cases each. During the experiment, 5 patients in the intervention group took less than 85% time to meditate and were recorded as "abstinence". 5 patients in the control group refused to cooperate and did not complete the collection of outcome indicators. Finally, all interventions and data collection of 40 patients were completed, 20 in the intervention group and 20 in the control group. The control group received routine treatment, examination, nursing, health education, telephone follow-up was the same as the intervention group, but did not receive mindfulness training guidance. Inclusion and exclusion criteria: inclusion criteria: Patients with coronary heart disease; good language expression and understanding; informed consent and willingness to participate in the study. Exclusion criteria: over 70 years old; currently under treatment for mental illness; serious physical and mental complications, such as heart failure, cancer, mental illness; brain injury. Research tools and evaluation indicators: Overview: the questionnaire is compiled on the basis of literature review, including demographic data such as age, marital status, nationality, religious belief, occupation, etc.; clinical data such as height, weight, disease diagnosis, history of myocardial infarction, current medication type, etc.

Evaluation index: anxiety and depression score: measure the stability of patients with coronary heart disease. Hospital Anxiety and depression scale: there are 14 items in the scale, including anxiety and depression sub scales. There are 7 items of anxiety and 7 items of depression. 0-3 is the grade score, that is, the highest score of anxiety and depression is not more than 21 points, and the lowest score is 0 point. Anxiety subscale was 1, 3, 5, 7, 9, 11, 13; depression subscale was 2, 4, 6, 8, 10, 12, 14. 7 items in anxiety subscale are negative scores, and 2, 4, 6, 12 and 14 items in depression subscale are negative scores. According to the standard of the original author of the scale, the total score of no anxiety or depression is 0-7, the total score of possible or serious anxiety or depression is 8-10, and the total score of obvious anxiety or depression is 11-21. From 8 o'clock, the suspicious and symptomatic patients were all positive. The scale of five factor mindfulness in the concise version: 112 mindfulness, mindfulness cognition and emotion, Kentucky consciousness,

Freiburg consciousness scale and mindfulness concern consciousness scale were analyzed by the researchers through confirmatory factor analysis and exploratory factor analysis, and five factors were analyzed: consciousness, description, conscious action, non-judgment and non-reaction. There are 24 projects in total, which are divided into 5 grades, with a total score of 24-120. The higher the total score, the higher the whole level of mindfulness awareness; the higher the score of each sub scale, the higher the score, the higher the level of mindfulness awareness of this dimension. The corresponding items of five factors are: observation: Item 6, 10, 15, 20; Description: Item 1, 2, 5R, 11R, 16; conscious action: item 8R, 12R, 17R, 22R, 23R; no judgment: item 4R, 7R, 14R, 19R, 24R; no action: item 3, 9, 13, 18, 21, R represents reverse score. Cronbach's of Chinese ffmq subscale were: no response 0.45, no judgment 0.66, conscious behavior 0.79, description 0.84, awareness 0.75. Except for the response dimension, the reliability of other factors in the Chinese sample is above 0.65. The main evaluation indexes were anxiety and depression, and the secondary evaluation indexes were stress, mindfulness and subjective feelings. The therapist is a psychiatrist in Liaoning Provincial People's hospital. He has a course foundation in medical psychology, nursing psychology and psychiatry. He has theoretical learning and self-experience experience of mindfulness training, and has certain theoretical and clinical practice basis.

3.2. Experimental Method

(1) Literature retrieval: retrieval database computer retrieval of China biomedical literature database (CBM), China Knowledge Network (CNKI), Wanfang database, etc. The key words in Chinese are "mindfulness", "cardiovascular disease", etc. The retrieval strategy uses the combination of subject words and free words to retrieve the references in the literature. Pressure perception scale: the scale consists of 14 items, reflecting the tension and uncontrollability of pressure. The theoretical score is 14 to 70. 4.5, 6, 7, 9, 10 and 13 questions scored negative. The final score of the scale is the total score minus 14 points. The scale assessed three stress situations: daily chores; major events; and changes in stress sources.

(2) Implementation steps: patients who meet the inclusion criteria and are willing to participate in the study sign the informed consent. According to the order of admission, the patients were randomly divided into intervention group and control group. During hospitalization, guide patients to fill in the hospital anxiety and depression scale, the pressure perception scale and the simplified version of the five factor mindfulness scale to collect general information of patients. After collecting baseline data, the intervention group received mindfulness decompression training, the control group received routine nursing, and the study ended with mindfulness decompression training. Six weeks later, the same researcher collected the data again. Researchers consult a large number of literature and related mindfulness training work at home and abroad, and participate in the mindfulness decompression training seminar held in Beijing. The trainers have rich experience in mindfulness decompression training, and master the actual operation process and methods, and systematically learn the theoretical knowledge of mindfulness decompression training. Through the process of mindfulness practice, I have rich experience and experience in mindfulness decompression training.

(3) Intervention method: the patients in the intervention group began mindfulness training 8 weeks before discharge. The specific operation method is as follows: the first stage: one week, for the patients of mindfulness decompression therapy who are publicized and educated by medical staff, the patients can understand mindfulness decompression therapy and master it skillfully, so that the patients can adhere to it until the end and actively cooperate in the following treatment process, so the treatment process is more stable; the second stage: five weeks, Every day, under the guidance of the researchers, we train mindfulness decompression therapy for half an hour, and urge

the patients to conduct autonomous training for at least one hour every day. Mindfulness training includes three aspects: Mindfulness breathing training: guiding patients to eliminate external interference in the treatment process, paying attention to their own breathing rhythm, and feeling the body ups and downs caused by breathing movement; mindfulness emotional training: guiding patients with language and picture materials to face the surrounding things with an optimistic attitude, feel the wonderful feelings brought by the environment, and eliminate the adverse effects; Mindfulness five senses training: teach patients to use the five functions of seeing, touching, smelling, listening and smelling to feel everything around, enrich patients' understanding of the surrounding environment, and actively experience life. The third stage: within two weeks, the patients still need to carry out one hour of autonomous exercise every day; in addition, the patients follow the researchers to strengthen and consolidate the previous training content, three times a week, two hours each time. After the training, discuss and exchange in groups to improve the training effect. The fourth stage: after the recovery period, the patients still keep exercising for 1 hour every day.

(4) Quantitative data processing and analysis: spss19.0 software was used for statistical analysis. Chi square test or Fisher exact probability method were used to analyze the general situation and counting data between the two groups. The measurement data were expressed in ($x \pm s$), and independent sample t-test was used for inter group and intra group comparison. $P<0.05$ was statistically significant.

3.3. Experimental Results

(1) General

Table 1. General

Features	Control group	Intervention group	T
Age	55.97±9.98	59.40±9.86	1.127
BMI	19.52±1.46	24.19±2.90	0.715
Married	20	20	1.051
Han nationality	20	17	1.051
Have religious beliefs	0	1	5.793
Physical labor	5	9	1.913

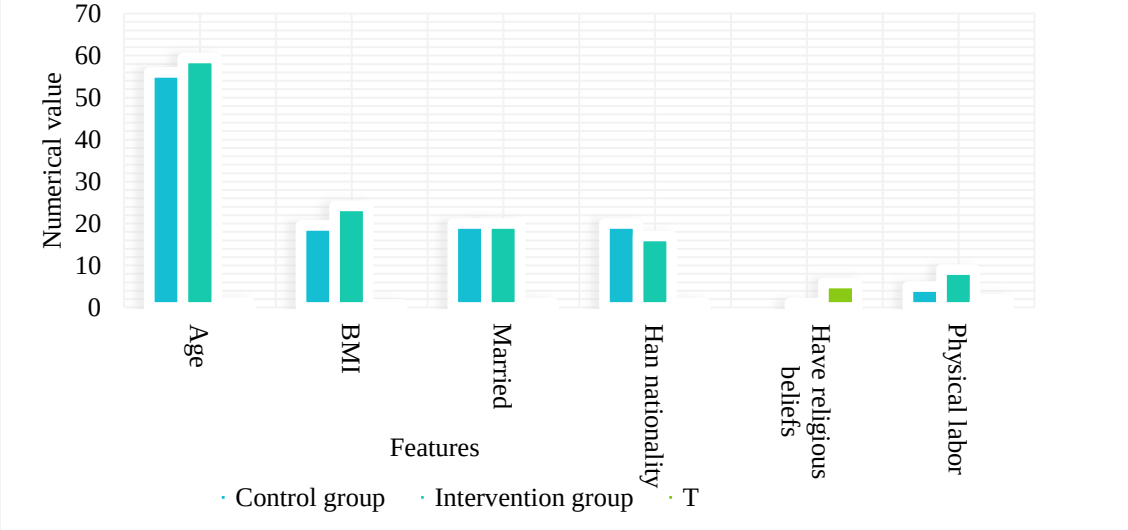

Figure 1. General

According to the data statistical analysis, as shown in Figure 1 and table 1, the age range of the two groups is 29-70 years old, and the BMI index of the control group is 18.06-20.98kg/m2. All the patients were married, 37 of them were Han nationality, 39 of them had no religious belief, 1 of them had religious belief, 14 of them were mainly physical labor, none of them received psychological consultation or treatment. There was no statistical difference between the two groups ($P > 0.05$). Independent sample t-test was used. There was comparability between the two groups.

(2) Baseline comparison of anxiety and depression

Table 2. Baseline comparison of anxiety and depression

Classification	Control group	Intervention group	T
HAD	15.94±5.66	14.67±4.42	0.715
A	7.45±2.20	6.80±2.00	0.72
D	7.77±3.29	7.00±2.59	0.663
Have anxiety	13	10	0.043
No anxiety	7	10	0.043
Depression	11	13	0.166
No depression	8	7	0.166

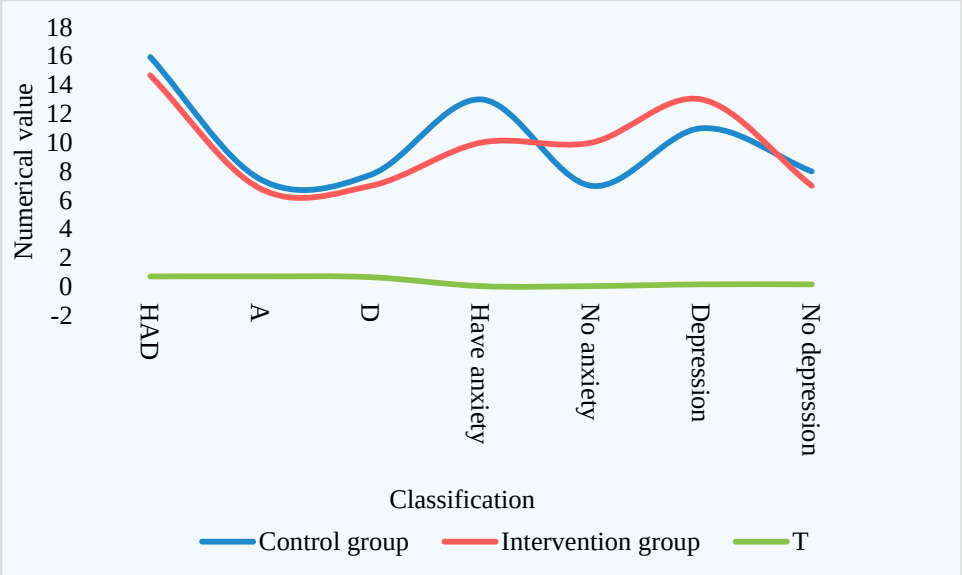

Figure 2. Baseline comparison of anxiety and depression

According to the statistical analysis of data, as shown in Figure 2 and table 2, the scores of anxiety and depression scale, anxiety subscale, depression subscale and the proportion of anxiety and depression patients before intervention in the two groups ($P > 0.5$).

(3) Comparison of anxiety and depression before and after intervention

Table 3. Comparison of anxiety and depression before and after intervention

Classification	Before intervention	Prognosis	T
HAD	15.94±5.66	13.74±5.90	6.019
A	7.45±2.20	6.16±2.39	7.715
D	7.77±3.29	6.58±2.61	2.329
Have anxiety	16	9	1.345
No anxiety	4	11	1.345
Depression	12	7	0.481
No depression	8	13	0.481

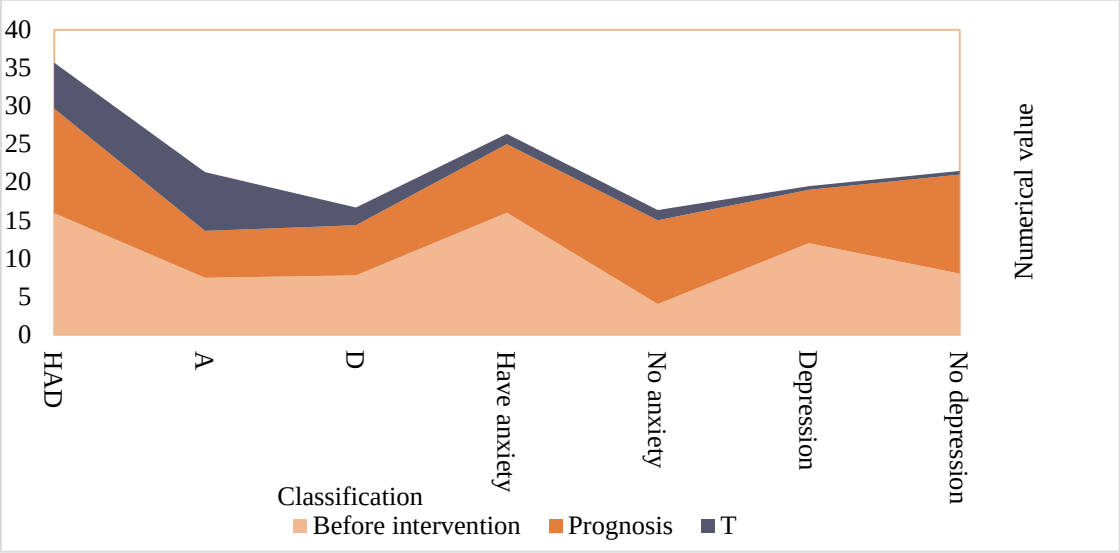

Figure 3. Comparison of anxiety and depression before and after intervention

According to the data statistical analysis, as shown in Figure 3 and table 3, compared with the baseline, the scores of anxiety and Depression Scale (P<0.001), anxiety subscale (P<0.001) and depression subscale decreased significantly in the experimental group after 8 weeks. The number of anxiety patients decreased from 16 to 9, and that of depression from 12 to 7. However, there was no significant difference in the proportion of patients with anxiety and depression.

(4) Effect of mindfulness decompression therapy

Table 4. Effect of mindfulness decompression therapy

Classification	Control group	Intervention group	T	P
Before intervention	39.39±7.74	39.93±9.66	0.119	0.727
Prognosis	45.94±7.49	41.20±7.66	1.157	0.025
T	2.607	2.607	0	0
P	0.001	0.001	0	0

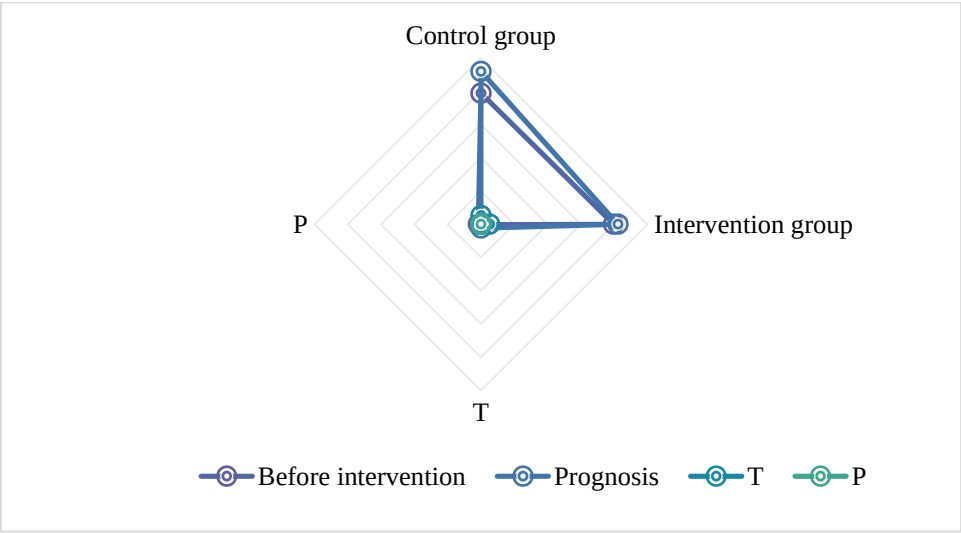

Figure 4. Effect of mindfulness decompression therapy

According to the statistical analysis of data, as shown in Figure 4 and table 4, there was no difference in the pressure level between the control group and the test group (P=0.727) before the intervention through the independent sample t-test, and there was comparability between the groups. The blood pressure level of the control group decreased during the follow-up period, which was statistically significant compared with that before the intervention (P=0.001). After intervention, the pressure level of the experimental group decreased significantly (P=0.001). The pressure level of the experimental group was significantly lower than that of the control group (P=0.025).

3.4. Analysis and Discussion

MBSR can improve the negative emotion of PCI patients with coronary heart disease. The results of this study showed that there was no significant difference between MBSR group and control group in hospital anxiety and depression scale, anxiety subscale, depression subscale, the proportion of anxiety or depression patients, stress scale scores and so on. After intervention, the scores of anxiety and depression scale, anxiety subscale, depression subscale, stress scale and the proportion of anxiety and depression in MBSR group were significantly lower than those before intervention. The results showed that although the anxiety and depression of patients decreased with the passage of time, on this basis, mindfulness decompression training can promote the trainers to further alleviate anxiety and depression and reduce self-perceived pressure. MBSR can improve the negative emotions of patients with chronic diseases, mental disorders, healthy people and patients' nurses. Burgess and other researchers also used a one-to-one personalized telephone course to conduct mindfulness decompression training once a week for 45 patients with heart disease who installed defibrillators. Five factor mindfulness scale and hospital anxiety and depression scale were used to evaluate the level of mindfulness, anxiety and depression. The study found that 96.3% of the patients completed the intervention and 94% of the patients participated in mindfulness training. After the intervention, the level of mindfulness and anxiety of the patients improved, but the author did not find that mindfulness decompression training can improve depression [11]. Berk and other scholars divided 8-week MBSR into 2-week face-to-face courses and 6-week telephone courses, and observed their applicability in 63 patients about to receive kidney transplantation. The results showed that patients had a high degree of participation, all the pre-determined intervention programs were effectively implemented, no obvious technical problems occurred, and patients' self-report satisfaction was high [12].

Before MBSR training intervention, there was no significant difference between the control group and the experimental group. The level of mindfulness in the experimental group was significantly higher after the intervention than before. After intervention, the level of mindfulness in the experimental group was significantly higher than that in the control group. Mindfulness is an intermediate variable in the relationship between attachment type and depression. High level of mindfulness shows the characteristics of safe attachment, while high level of safe attachment is not easy to produce depression, while high level of unsafe attachment shows more depression. Mindfulness is a variable that regulates the relationship between self-care and stress, anxiety and depression. Mindfulness decompression training improves the level of mindfulness of patients, which is an important positive psychological quality, so that patients can accept the current self and situation, easier to see the essence of things, so as to deal with problems in life in a more rational way. This process not only promotes the development of mental health, but also plays a role in eliminating the negative emotions such as anxiety, depression and pressure. According to the two factor model of mental health and positive psychology, no mental problem does not mean mental health. Some patients may not show obvious anxiety and depression symptoms, but due to the low level of positive psychological quality, in the future, in the face of the deterioration of the disease,

heart disease and other negative events, they will also be more likely to cope with adverse psychological problems. Therefore, the medical staff should not only evaluate and correct the negative psychological problems, such as anxiety, depression and stress patients with coronary heart disease stent implantation, but also pay attention to evaluate and cultivate positive psychological quality, such as mindfulness, to help patients correct negative emotions, improve their ability to deal with and solve problems, and improve their happiness. The inner peace is caused by the initial "body relaxation", and the inner peace brings the body further relaxation. The interaction between the two promotes the change of internal state. Although most patients feel uneasy, anxious, tired, depressed and even bored when they begin to practice, a few patients feel relaxed. However, with the practice, the vast majority of patients have experienced a change, from mindfulness practice as an additional burden of life to the expected way of relaxation. Accept yourself. When emotions of anger, sadness, regret and fear appear, they can acknowledge the existence of these emotions, accept the occurrence of this situation, and will not blame themselves for these emotions. When doctors learn to accept themselves, their understanding of the disease itself changes. Instead of thinking about and imagining the negative effects of disease on one's physical, psychological and social behaviors, resisting the fact of disease, trying to make one's heart return to normal completely, one can accept the reality of disease life. Realize that your heart can still work hard in an imperfect state. Be grateful, not complaining. The patient's understanding of the disease is also to verify the original intention of mindfulness training, to accept truly and without judgment, rather than resist and change. This kind of accepted living conditions and diseases enable patients to see the so-called "bad" or "good things" from a clearer and broader perspective, to objectively and rationally view the occurrence and development of diseases, and to avoid the emotional self-condemnation and fear of diseases caused by further deterioration. Learning to live in the moment is a way to release negative emotions such as anxiety, depression and stress and rediscover happiness. Mindfulness practice, through improving self-awareness and consciously bringing awareness and acceptance into the current experience, can promote individuals to adopt a broader and more adaptive coping behavior to deal with their own problems. Through mindfulness practice, objective consciousness of life experience, living in the present, to improve the ability of acceptance, self-confidence and response, individuals can face their past and future a calm and peaceful thought, better put down the past sadness and meditation and future anxiety and fear, improve adaptability and mental health.

4. Conclusion

(1) Long term adherence to mindfulness decompression treatment can significantly improve the heart function of patients with coronary heart disease, and has a significant therapeutic effect on anxiety, depression and other adverse emotions of patients with coronary heart disease.

(2) MBSR can significantly improve the quality of life of patients with coronary heart disease anxiety after discharge, improve the happiness index of patients, reduce negative emotions, and provide reference for future clinical application.

(3) MBSR can improve mindfulness, anxiety, depression and stress levels.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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