ANALYSIS ON THE POSITIVE EFFECT OF DANCE PERFORMANCE ON ALLEVIATING PATIENTS WITH DEPRESSION

Shimanqi Kong

School of Fashion Design, Shanghai Institute of Visual Art, Shanghai 201620, China

SUMMARY

Background: Depression is an affective mental disease, which is mainly manifested in pessimism, cognitive and sleep disorders. In severe cases, it can also lead to self-mutilation, suicide and other behaviors. Long term negative emotion makes patients with depression show poor physiological function in controlling themselves and regular life. Dance performance can convey the performer's psychological state and emotional value with the help of dance movements and forms. It is the expression of externalization of psychological activities. With the help of dance training, it can effectively intervene patients with depression in order to improve their mental health level.

Methods: 500 students with depression were randomly divided into dance performance experimental group and psychological intervention control group. The intervention time was 12 weeks. With the help of self-rating depression scale and statistical analysis tools, the data of depression and mental health level of the subjects were collected and analyzed.

Results: As a mental disease with complex pathogenesis, depression seriously threatened human physical and mental health. Dance performance can effectively alleviate the negative emotions and psychological problems of patients with depression.

Conclusion: Dance performance can guide individuals to transfer their negative emotions through action learning, make patients with depression pay attention to the perception of their own internal value and psychological characteristics, and help them improve their mental health level and interpersonal skills.

Key words: dance performance - depression - Emotional guidance

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INTRODUCTION

With the rapid development of social economy and the acceleration of people's pace of life, people have to play different social roles and deal with different interpersonal relationships in life, so that they will face different degrees of psychological pressure when dealing with individual self-development and the relationship between individuals and groups, which makes the problem of psychological diseases increasingly prominent, especially depression (Shin 2020). Different individuals have different views and understanding of the same thing due to the differences of age structure, cognitive level, psychological tolerance and other factors, which makes them suffer from depression differently. The physical and mental development of teenagers is not vet fully mature. Under the stimulation of environment, academic examination and interpersonal communication. they are prone to emotional fluctuation and pressure. In the face of setbacks, stress and misfortune, it is difficult to alleviate and eliminate negative and pessimistic emotions, so they are prone to depression, and depression has great damage to their physical and mental health (Af et al. 2020). The etiology and pathological mechanism of depression are affected by many factors, often manifested as a series of symptoms, such as depression, energy loss, pessimism, despair, helplessness and so on, which are harmful to individual physical and mental health. To find an effective treatment for depression, the key is to help patients get rid of persistent negative emotions, divert attention and realize the emotion regulation mechanism. As a form of

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kinesthetic art movement, dance can convey the performer's psychological state and internal value in the form of performing actions and rhythmic music, effectively mobilize and meet individual emotional value, and reduce depression and other negative emotions. Dance movements, dance training and dance performances can maximize the psychological acceptance of individuals and pay more attention to their relationship and value among social groups.

The common treatment methods of depression include drug intervention and psychological counseling, and many mathematicians have conducted relevant research on the treatment of patients with depression. Schimmel believes that appropriate psychedelic drugs can effectively help patients with depression and anxiety (Schimmel et al. 2022); Barr alleviated the depression and anxiety of patients by means of Internet, effectively reduced their eating disorders and improved their mental health level (Barr et al. 2021). Kahalnik strengthened the treatment and intervention of patients with depression in primary health care clinics with the help of network self-report software, and corrected the misunderstanding of antidepressant drugs (Kahalnik et al. 2019). Bargiel matusiewicz intervened with cognitive means on the psychological status and emotional problems of dialysis patients with nephropathy. The results showed that cognitive narrative intervention could effectively reduce the anxiety level and depression level of patients (Bargiel et al. 2019); Nayak R B found that video conference can effectively conduct psychological counseling and emotional intervention on the depression of mild to moderate family members (Nayak et al. 2020).

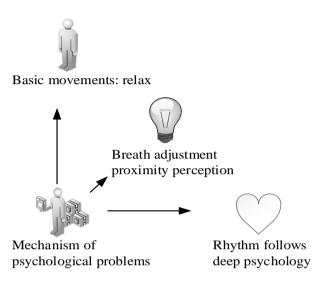
Gao found that psychological targeted intervention based on positive psychology can relieve the anxiety and depression of Internet addicts (Gao et al. 2021). The drug treatment for depression is mainly tricyclic and tetracyclic antidepressants, monoamine oxidase inhibitors and other drug treatment. The clinical results show that only one third of patients have improved, and the drug compliance and efficacy latency make it difficult to show the efficacy of drug treatment in a short time; Although psychotherapy has little effect, its expensive consultation cost and the concealment of patients with depression make it ineffective in the treatment of the disease. As an effective way of psychological intervention, dance can greatly improve the psychological status of patients. Among them, Aithal's research conducted psychotherapy intervention on children with autism with the help of dance movement, and analyzed the results with SCO and SDO questionnaires. The results show that dance, a psychotherapy method with nonverbal characteristics, can effectively improve children's social function and emotional health (Aithal et al. 2021). Christina proved that dancing can have a good effect on psychological intervention for patients with mental diseases (Christina & Devereaux 2019). Therefore, it is of great practical value to study the influence mechanism of dance performance on alleviating the condition of patients with depression.

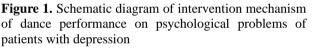
SUBJECTS AND METHODS

Study setting

Dance therapy is defined as using body movements as the medium to integrate personal emotions, intervene and guide their physiology and psychology, and help them adjust their emotional ability, including creative dance movements, psychotherapy and laban movement analysis. Dance performance therapy is to achieve a good state of individual internal coordination and external adaptation on the basis of psychology related theories and dance related theories, so that creative art forms can make life present a healthy and rich state. Among them, the psychological theories reflected in psychoanalysis, dance performance include developmental psychology, object psychology and positive psychology, that is, the change of body interaction can affect its internal psychological emotion and personality traits, so that the negative emotion can be regulated by nonverbal behavior, which will change the body schema, behavior structure and neural structure, and then comprehensively affect the individual's cognitive activities. Most dance educators integrate psychological theory into dance teaching, and guide students' behavior orientation and psychological emotion with the help of the psychological process of teacher-student interaction and teaching psychological phenomenon. Depression, also known as depressive disorder, is a mental disease related to emotion. Its main clinical features are often pessimism, cognitive and sleep disorders. Patients often have a negative attitude towards

their own situation and living conditions, fall into depression and other negative emotions, and even lead to self-mutilation, suicide and other behaviors in serious cases (Pampouchidou et al. 2019). Therefore, on the basis of analyzing the characteristics of psychological needs and emotional changes of patients with depression, we should apply dance performance psychological intervention to them, and give full play to the psychological guiding role of dance education itself. Figure 1 is a schematic diagram of the influence mechanism of dance performance on patients with depression.





The handling of social relations, the coping of interpersonal relations, work pressure and related negative emotions are not relieved. In the long run, psychological problems and negative emotions will accumulate, which will cause great damage to people's physical and mental health. Depression has become a disease killer affecting individual mental health. Most individuals intervene and treat through means and methods such as exercise therapy, psychological meditation and seeking help from professionals. However, it is difficult for individuals with depression to stick to the whole treatment process and achieve little effect, Dance is a kinesthetic art characterized by physical and mental interaction, which involves motion perception and behavior mechanism. Compared with daily movement, dance provides a new and rich movement paradigm, which can enable participants to improve their perception of their own psychological peace and emotional value in dance performance, so as to alleviate negative emotions. At the same time, dance can effectively show people's aesthetic emotion and aesthetic ideal, comprehend and realize the charm of dance art in all aspects from material carrier to psychological sustenance, make it cultivate dance emotion in the process of observation, learning and imitation of dance movements, give full play to its image and creativity, reduce emotional fluctuations and negative psychological conditions under abnormal conditions, and realize "heart dance integration" to be more positive Continuous and stable psychological state to deal with stress and life difficulties.

Design

Dance performance can place individuals in the music environment, guide them to transfer negative emotions through the learning of dance movements, greatly mobilize the interest and initiative of participants, and make them face life with a positive attitude. The study selected 500 students with depression as the research object. Firstly, the depression condition and psychological status of the research object were evaluated and information was collected before the experiment. Then the research object was randomly divided into experimental group and control group. The experimental group used dance performance and psychotherapy for intervention (Harmehr et al. 2019). The dance performance was once a week, while the control group only used psychological intervention for the experiment. The experimental intervention time was 12 weeks. After the experiment, with the help of self-rating Depression Scale (SDS), self-rating idea of Suicide Scale (SIOSS) and SPSS22.0 statistical analysis tools were used to analyze and process the depression and mental health level of the subjects before and after the experiment (Martínez et al. 2018). SDS scale includes 20 items, including 2 items of psychiatric affective symptoms, 8 items of somatic disorders, 2 items of psychomotor disorders and 8 items of depressive mental disorders. Each item is composed of 7-level scores. The scale is easy to use and can directly reflect the subjective feelings of patients with depression. Compared with shell Depression Scale, SDS scale has good application effect and accuracy in the determination and screening of depression severity in patients with depression. Suicide, as one of the mental health problems that have been neglected and difficult to understand for a long time, involves many aspects of emotion, society and economy, and the negative impact is easy to be amplified. Among them, suicidal ideation is the main psychological process of their behavior, that is, a person starts to sprout the idea of ending his life in his brain without taking the initiative. Only by paying attention to individual suicidal ideation in time can tragedy be reduced, the sioss scale can well explore individual suicidal ideation. Sioss scale consists of 26 items, including four factors: despair, optimism, sleep and concealment. Each item is scored with "yes" or "no". The total score of despair factor, optimism factor and sleep factor ≥ 12 points is used as the boundary point of the scale for screening people with suicidal ideation. The measurement is unreliable when the concealment factor \geq 4 points. At the same time, in order to reduce the subjectivity of the experimental data score, the fuzzy function is introduced to deal with the data. Fuzzy mathematics is a new subject, which has been

preliminarily applied to fuzzy control, fuzzy recognition and fuzzy clustering. Analysis, fuzzy decision-making, fuzzy evaluation, system theory, information retrieval, medicine, biology and other aspects, and there have been specific research results in meteorology, structural mechanics, control, psychology and so on. The psychological factors affecting the score of the scale have a certain fuzziness and lack of relatively strict quantitative evaluation standards. Therefore, the introduction of fuzzy function can effectively reflect the fuzziness of subjective data and improve the reliability and accuracy of mental health evaluation methods. When using fuzzy function to evaluate other indicators, it is necessary to reasonably construct the membership function, and its calculation formula is shown in formula (1) (Rogers et al. 2021).

$$\mu_{A}(x) = \begin{cases} x - m / n - m, m < x < n; \\ x - r / n - r, \quad n < x < r; \\ 0, \qquad other \end{cases}$$
(1)

In formula (1), U, x is the final domain and any fuzzy subset on the domain, $\mu(x) \in [0,1]$ is any existing number corresponding to subse x, μ represents the membership function of the subset $\mu_{(x)}$ is the membership degree, A is the definition of triangular fuzzy number, and the corresponding membership functions are $\mu_A(x) \subset [0,1]$ and m, n, r are real numbers, representing the upper limit, most likely value and lower limit of triangular fuzzy number respectively.

RESULTS

As a mental disease with complex and diverse pathogenesis, depression (MDD) is a mental disease characterized by significant and lasting depression and changes in will and behavior. It has a high mortality and disability rate and has become a "mental disease killer" that seriously threatens people's physical and mental health (Addleman & Jiang 2019). At present, the majority of people with high incidence of depression are women, and they are often accompanied by adverse symptoms such as decreased interest, mental retardation and sleep disorder, which has great mental pressure and economic burden. According to clinical research, compared with healthy people, patients with depression generally have cognitive impairment, which is often manifested in adverse conditions such as impaired memory, slow response and difficulty in concentrating, which seriously damage their life, work and study. Therefore, the research intervenes the research objects in the form of dance performance, guides them to participate in practical activities, swings their bodies freely according to the music rhythm, soothes their emotions, and increases their regulation and control over their individual and psychological conditions, so as to effectively help patients with depression reduce negative emotions and reduce their condition. Statistics were made on the changes of depression and suicide risk of

subjects before and after the experiment. The results are shown in Table 1.

Evaluation scale	Experience group		Control group	
	Before experiment	After the experiment	Before experiment	After the experiment
SDS	14.23±1.25	7.41±2.16*#	15.12±1.07	12.32±2.09*
SIOSS	17.46±1.33	3.12±1.83*#	16.49±1.24	9.25±1.46

Table 1. Statistics of depression and suicide risk before and after the experiment

Note: * means P < 0.05 compared with that before the experiment, # means P < 0.05 compared with the control group.

Because of its high recurrence rate and disability morbidity, depression infringes on individual physical and mental health, showing a loss of interest; Decreased energy or fatigue; Low self-evaluation, decreased thinking ability, suicidal behavior and sleep disorders, the severity of depression and the probability of suicide risk will cause great damage to individual life safety (Amirinezhad et al. 2020). It can be seen from the data in Table 2 that the depression and suicide risk of the experimental group and the control group decreased in varying degrees after the experimental intervention. The scores of SDS scale and sioss scale of the subjects in the experimental group had significant statistical differences compared with those before the experiment and the control group (P < 0.05), and the maximum difference reached 14 points and 6 points. At the same time, collect and sort out the data of psychological and emotional changes of the experimental group participating in dance performance training and psychological intervention. The results are shown in Table 2.

Table 2. Statistics of psychological and emotional changes of subjects in the experimental group before and after the experiment

Negative emotions	Anxious	Depressed	Uneasy	Pessimism
Before intervention	14.61±1.37	22.30±1.48	17.54±1.14	28.74±1.32
After intervention	6.27±1.22	8.69±1.33	6.28±1.18	11.65 ± 1.34
t	-0.502	-1.662	1.457	-0.147
Р	0.004	-0.024	0.047	0.001

Patients with depression have weak consciousness and extreme behavior. They are very prone to poor compliance in the treatment process. If the treatment process is interrupted, the condition is prone to repetition or aggravation, which further affects their emotional fluctuation and psychological disappointment, resulting in negative emotions such as anxiety, depression, uneasiness and pessimism (Wong et al. 2020). Psychological emotion plays a great role in the early, middle and late stages of the treatment of depression, which is very important for the treatment of the disease. In Table 2, after the intervention of dance performance, the score difference of negative psychological emotion in the experimental group has significant statistical difference (P < 0.05), and the negative emotions such as anxiety, depression, uneasiness and pessimism are relieved in varying degrees. The score of anxiety decreases from 14.61 \pm 1.37 to 6.27 \pm 1.22, the score of depression decreases from 22.30 ± 1.48 to 8.69 ± 1.33 , the score of uneasiness decreases from 17.54 ± 1.14 to 6.28 ± 1.18 , and the score of pessimism decreases from 28.74 ± 1.32 to 11.65 ± 1.34 . Compared with the data before the experiment, the score difference of negative emotion was 8 points, 14 points, 11 points and 17 points respectively. It shows that dance performance can effectively improve the psychological status of patients with depression and mobilize their emotional enthusiasm. Then, the experimental data were sorted out on the

improvement of depression of the research subjects under the intervention of dance performance at different time scales. The results are shown in Figure 2.

Most patients with depression have varying degrees of cognitive impairment, including executive function, attention, memory function and reaction speed. Abnormal neurotransmitters, long-term stress state and brain-derived neurotrophic factors are the main reasons for the onset and cognitive impairment of patients with depression. The depression of patients with different degrees of depression is also different, which is closely related to their psychological adjustment ability, and the application effect of psychological intervention is also different (Hwang et al. 2019). The results in Figure 2 show that after the subjects in the experimental group received dance performance training, the depression of patients with depression in different conditions was improved and cured to varying degrees after 4 weeks, 8 weeks and 12 weeks after the intervention. The depression recovery of patients with mild depression, moderate depression and severe depression reached 96.37%, 78.53% and 80.14% after the experimental intervention. The above results show that dance training has a good therapeutic effect and intervention effect on the improvement of the condition of patients with depression in the short-term and long-term, and greatly improves the mental health level of students with depression.

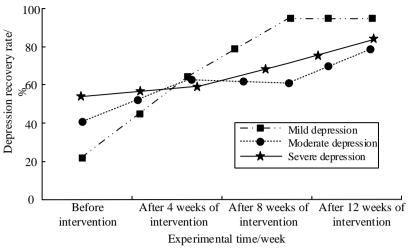


Figure 2. Statistics of depression rehabilitation of subjects in different time scales after dance performance intervention

CONCLUSIONS

Dance performance individuals are placed in the music environment to guide them to transfer the negative emotions of patients with depression through the learning of dance movements, pay attention to the perception of their own internal value and psychological characteristics, greatly mobilize the interest and initiative of participants, and make them face life with a positive attitude. Different types of dance performances different effects on individual emotional have intervention and psychological emotional guidance. By introducing dance performance, this study explores its positive remission mechanism for patients with depression. The results showed that after the intervention, the depression and suicidal tendency of the experimental group and the control group decreased in varying degrees. There were significant differences in SDS and sioss scores compared with those before the experiment and the control group (P < 0.05), and the maximum differences were 14 points and 6 points respectively. After the intervention of dance performance, the negative emotions such as anxiety, depression, anxiety and pessimism in the experimental group were relieved to varying degrees. After the intervention, the depression recovery rates of patients with mild, moderate and severe depression were 96.37%, 78.53% and 80.14% respectively. The above results show that dance performance can effectively achieve the intervention treatment of negative emotions and states of patients with depression, and greatly improve the mental health level of patients with depression. It is very necessary to strengthen emotional attention and psychological intervention for patients with depression, help them get rid of emotional traps, and guide them to live, work and study with correct ideas. Mental health, as one of the important indicators to evaluate individual health status, plays an important role in different development stages and periods. Dance performance has a significant effect on the treatment of patients with depression, which greatly reduces the psychological burden of treatment before intervention, and provides the possibility for

long-term and regular treatment intervention. In addition, dance performance can enhance the physical function of patients with depression, reduce the production of negative emotional hormones, and improve the psychological endurance of patients in the process of subtle influence.

Acknowledgements: None.

Conflict of interest: None to declare.

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Correspondence: Shimanqi Kong, School of Fashion Design, Shanghai Institute of Visual Art, Shanghai 201620, China E-mail: maggiek2022@163.com

APPLICATION OF CHRONIC DISEASE HEALTH MANAGEMENT MODEL IN COMMUNITY SERVICE FOR PEOPLE WITH MENTAL DISORDERS

Yicai Li^{1*}, Feng Jiang², Chunlan He¹ & Haoyu Jin¹

¹Department of Medical Devices, Guangdong Food and Drug Vocational College, Guangzhou 510520, China ²School of Management, Hangzhou Dianzi University, Hangzhou 310018, China

SUMMARY

Background: Chronic diseases easily lead to mental disorders in the course of the disease. At the same time, mental disorders also have repetitive characteristics similar to chronic diseases to a certain extent. At present, daily and community-based intervention for patients with mental disorders is one of the main methods of mental disorder treatment. Community disease intervention has certain intervention advantages for chronic diseases with mental disorders and inherent mental disorders in terms of daily disease tracking and timely intervention.

Subjects and methods: This study combines convolutional neural network with comparative experimental method, and takes the comparative experiment as the research basis. The control group adopts traditional treatment methods, while the intervention group adopts chronic disease health management mode to intervene mental disorders. The experiment lasted for 4 months. After obtaining the experimental data, the research will use the convolution neural network algorithm to classify and analyze the elements.

Results: The scores of anxieties and depression, cognitive impairment, disturbance of consciousness and delusion in the intervention group were 1.62, 1.53, 1.87 and 1.71 respectively, which were higher than those in the control group. It can be seen that the treatment effect of the intervention group is better.

Conclusions: The treatment effect of the four symptoms of anxiety and depression, cognitive impairment, consciousness disorder and delusion in the intervention group is significantly better than that of the traditional method. It has more extensive application significance in community treatment and is more conducive to improving the treatment experience and quality of life of patients.

Key words: chronic diseases - community management - mental disorders - mental health

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INTRODUCTION

The treatment and late intervention of mental disorders are similar to the intervention of chronic diseases (Plascak et al. 2018). At the same time, chronic diseases and mental disorders are often associated and complicated combined diseases, such as hypertension (Jaen-Moreno et al. 2021). Diabetes and other chronic diseases will affect the cognitive ability of patients, and then cause mental disorders of patients. The cases of concurrent physiological and psychological diseases are common (Costa et al. 2021). Mental disorders will not only have a serious impact on patients' quality of daily life, but also delay the treatment process of patients' physiological chronic diseases, resulting in difficulties in the process of community disease intervention (Júnior et al. 2021). Therefore, the use of chronic disease treatment mode for mental disorder intervention can provide patients with combined intervention of community-based chronic diseases and mental disorders, the consistency between chronic use disease management methods and mental disorders, improve the effect of mental disorder intervention, and intervene both physiological and psychological diseases (Taipale et al. 2021). At present, the research on the group of mental disorders is gradually in-depth and extensive (Tonari et al. 2020). Conducted a correlation study on the nursing burden and mental disorders for mothers receiving treatment for mental disorders. The results show that the

nursing burden of children is positively correlated with the degree of mental disorders of mothers (Matsuda et al. 2021). Studied the use proportion of benzodiazepines in patients with potential mental diseases other than formal diagnosis. The results showed that benzodiazepines were consumed more in men than in women, and were the main over-the-counter drugs for potential patients (Khan et al. 2021). Harris team studied the mental disorders of elderly patients with intestinal cancer. The results showed that patients with anal cancer, gastric cancer and esophageal cancer were more likely to suffer from mental disorders, with prevalence rates of 26%, 20% and 20% respectively (Harris et al. 2021). With the deepening of research for different groups of mental disorders, the formation of specialized treatment schemes for different groups has become a possibility.

Mental disorder refers to the disorder of brain functional activities, which leads to different degrees of obstacles in mental dominant activities such as individual consciousness, cognition and behavior. Common mental disorders include brain organic mental disorder, affective mental disorder and so on. There are many factors of mental disorders, including personality characteristics, congenital heredity, physical factors, organic factors, social environmental factors and other individual and external environmental factors. The vast majority of patients with mental disorders lack sufficient self-knowledge and self-control, and lack sufficient cognition of their own condition. At present, common