

A Study to Evaluate the Therapeutic Effect of Art Therapy in the Rehabilitation of Stroke Patients

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Abstract:

Post-stroke depression is a common complication of stroke, which seriously affects patients' mood, cognitive function and quality of life. Traditional rehabilitation methods mostly focus on the recovery of physiological functions, and do not pay enough attention to the psychological rehabilitation needs of patients. As an emerging psychological intervention method, art therapy helps patients relieve bad emotions, improve self-awareness and expression skills, and promote comprehensive physical and mental recovery through music, painting, literature, occupational therapy, etc. This study uses a combination of quantitative and qualitative evaluation to systematically evaluate the therapeutic effect of art therapy in the rehabilitation of stroke patients. The results showed that art therapy could effectively improve patients' physiological indicators, improve daily living ability, and significantly relieve anxiety and depression. The subjective feedback of patients is positive, believing that art therapy can help enhance life confidence and social belonging. Although there are still deficiencies in the standardization of art therapy and the training of professional talents in China, it has important application value in stroke rehabilitation. This study provides theoretical basis and practical support for the clinical promotion of art therapy.

Keywords:

Art Therapy, Stroke, Rehabilitation, Psychological Intervention

1. Introduction

1.1. Research background and significance

Post-stroke depression is one of the common complications after stroke, which is more common in the elderly, mainly manifested as emotional disorders such as low mood, slow thinking, and loss of interest, and in severe cases, suicidal behavior. With the deepening of medical research, the rehabilitation of stroke patients has gradually attracted widespread attention. However, although traditional rehabilitation methods can improve patients' symptoms to a certain extent, their effectiveness is limited and

there are many limitations. Therefore, exploring new rehabilitation methods to improve the rehabilitation effect of stroke patients is of great practical significance and far-reaching social value. Therefore, it is of great significance to identify, prevent and intervene in the mood, cognition, and fatigue of post-stroke patients early. Art therapy is the psychological counseling of patients through music, painting, coloring, dance, sculpture, calligraphy, etc., to alleviate patients' bad emotions and improve happiness satisfaction [1].

In recent years, art therapy, as an emerging rehabilitation method, has gradually demonstrated its unique advantages in the rehabilitation process of stroke patients. Art therapy uses art forms to stimulate patients' creativity and imagination, help patients release inner stress and anxiety, and improve self-awareness and self-expression. Studies have shown that art therapy can significantly improve the psychological state of stroke patients and improve their quality of life. In addition, art therapy is personalized and non-invasive, and can tailor personalized rehabilitation plans according to the needs and characteristics of different patients. This personalized rehabilitation program can better meet the needs of patients and enhance the rehabilitation effect. At the same time, art therapy can also be combined with other rehabilitation methods to form a comprehensive rehabilitation model and further improve the rehabilitation effect. Therefore, evaluating the therapeutic effect of art therapy in the rehabilitation of stroke patients can help to understand the mechanism of art therapy.

This study aims to explore the therapeutic effect of art therapy in the rehabilitation of stroke patients, and comprehensively evaluate the effects of art therapy on patients' physiological indicators, daily living ability, subjective feelings, etc. through a combination of quantitative and qualitative evaluation.

1.2. Research objectives and problems

This study aims to deeply explore the therapeutic efficacy of art therapy in the rehabilitation process of stroke patients and evaluate its practical application value. As an emerging treatment modality, art therapy has a unique psychological and physiological mechanism of action that provides a new way of thinking for the rehabilitation of stroke patients. This study will focus on "What is the therapeutic effect of art therapy in the rehabilitation of stroke patients?" This core question is developed to comprehensively analyze the role of art therapy in promoting patient recovery through a combination of quantitative and qualitative assessment.

1.3. Limitations of existing rehabilitation methods

Although traditional physical therapy and drug therapy can improve patients' motor function and relieve symptoms, they often ignore the psychological rehabilitation needs of patients. At present, art therapy has been widely used in people with cancer, cognitive impairment, personality disorders [2], etc., which can effectively reduce patients' bad mood, improve their cognitive function and improve their quality of life, and is an effective adjunct to drug treatment. In addition, existing rehabilitation methods often lack personalization and targeting. The rehabilitation needs of stroke patients vary depending on individual differences, but traditional rehabilitation methods often use a unified treatment plan and are difficult to meet the needs of different patients. For example, some patients may need psychological support and emotional care more, while others may need rehabilitation for specific functional disorders.

2. Theoretical Basis of Art Therapy

2.1. Definition and principle of art therapy

Art therapy is a widely accepted social and psychological treatment method, and it is recorded in the ancient Chinese medical book “Li Ying Pianwen”: “The patient of the seven emotions, reading books to relieve boredom, listening to music to relieve sorrow, is better than taking medicine”, affirming the role of art in the treatment of diseases. Contemporary art therapy originated in Europe and the United States in the 20s of the 20th century [3], and was included in the guidelines of the German Scientific Medical Association in 2004 [4]. The principle is that artistic activities can touch the deep emotions and memories of human beings, build a non-verbal communication bridge for patients, help release inner stress and anxiety, and improve self-awareness and self-expression ability. Ali et al. [5] found that applied art therapy can reduce depression and anxiety levels and improve the quality of life of stroke patients during hospitalization.

According to research data, stroke patients who were intervened through art therapy had significant improvements in emotional state, cognitive function, and daily living ability. For example, a study on the application of drawing therapy in the rehabilitation of stroke patients pointed out that patients who underwent painting therapy effectively relieved their depression, and their spatial cognition and fine motor skills of the hands were significantly improved.

In the rehabilitation process of stroke patients, art therapy not only focuses on the physical rehabilitation of patients, but also focuses on the psychological rehabilitation of patients. Through the intervention of art therapy, patients can find joy and a sense of accomplishment in the process of artistic creation, thereby enhancing their love and confidence in life. At the same time, art therapy can also promote communication and integration between patients and society, helping them reintegrate into society and realize their self-worth.

2.2. Application of art therapy in stroke patients

2.2.1. Music therapy

Music therapy is a therapeutic method that systematically uses music in a therapeutic relationship to improve mood, restore and maintain physical and mental health through music, which can regulate emotions from the psychological aspect, enhance physical activity from the physiological aspect, and then improve weight, blood pressure, blood sugar and other indicators, and improve the patient's health [6]. Särkämö et al. [7] randomly divided 60 stroke patients into 3 groups for a 2-month intervention, and the results showed that the recovery effect of verbal memory and concentration in the music group was significantly higher than that of other groups, and compared with the control group, the music group had less depression and anxiety, proving that listening to music in the early post-stroke period can prevent negative emotions and promote cognitive recovery. Kim et al. [8] performed music therapy on stroke patients within 6 months of onset for 4 weeks, and the results showed that patients' mood improved and caregivers were more satisfied with music therapy.

2.2.2. Literary therapy

Literary therapy can be divided into poetry therapy and story therapy, both of which belong to the category of art therapy. Poetry therapy is the use of poetry to promote health, and patients gain personal insights and experiences through listening, reading, and creating, which resonates and resonates, so as to achieve the effect of promoting recovery. Poetry therapy can play a role in venting bad emotions, relieving anxiety, and improving patients' ability to express and perceive themselves. Story therapy is to tell others their own stories, and patients externalize their life experiences and life experiences through the role of language, which can have positive meanings for both the narrator and the listener [9].

2.2.3. Painting therapy

As an art therapy, painting therapy is to express, communicate and convey emotions through non-verbal and symbolic ways, so painting therapy can achieve the effect that speech therapy cannot achieve and promote the recovery of patients. At present, the application scope of painting therapy is constantly expanding, and the treatment methods are constantly innovating. The research of Tong Jie et al. shows that group painting art therapy has a significant effect on improving the rehabilitation of social function and quality of life of patients.

2.2.4. Occupational therapy

Occupational therapy is to adopt purposeful and selective work activities [10], such as work, labor, and cultural and sports activities, so that patients can obtain functional exercise in the work, so as to promote the recovery of various functions such as mental, physical, and social participation. Occupational therapy was mainly used to treat mental patients in the early days, but with the rise of rehabilitation medicine, occupational therapy has also developed into the field of rehabilitation therapy. On the basis of conventional treatment, Yu Li et al. gave the intervention group occupational therapy to strengthen life activities, cultural and sports activities, and music appreciation, and the results showed that the therapy had an effect on improving patients' depression and activities of daily living.

2.2.5. Other therapies

Virtual reality art (VR) is developing rapidly as a new art therapy method, which is an interactive art form based on a new type of human-computer dialogue, and produces a new psychological experience through the integration of artistic thinking and technological products. Szczepańska Gieracha et al. [11] explored the impact of virtual reality art on the physical and psychological rehabilitation of stroke patients, confirming the effectiveness of various forms of virtual reality art in reducing psychodepressive states and behavioral problems. Ecosystem-focused therapy, designed by scholar Alexopoulos, mainly to achieve therapeutic purposes by intervening in the psychological processes experienced by patients and their families.

2.2.6. Summary

In rehabilitation medicine, art therapy is widely used in the rehabilitation of stroke patients. For example, an art therapy intervention study for stroke patients found that after three months of art therapy training, patients' ability to perform daily living was significantly improved, with 80% of them able to perform basic activities of daily living independently. In addition, the patient's psychological state was also

significantly improved, with a 30% reduction in anxiety scores and a 25% decrease in depression scores.

The potential of art therapy in stroke rehabilitation is not only reflected in the improvement of physiological indicators, but also in its positive impact on the psychological level of patients. Art therapy stimulates the creativity and imagination of patients to help them build a positive self-perception and improve their self-confidence and self-esteem. At the same time, art therapy can also promote communication and interaction between patients and medical staff, family members and society, and enhance patients' sense of social support and belonging.

3. Evaluation of Treatment Effect

3.1. Quantitative evaluation of treatment effect

3.1.1. Changes in physiological indicators

Changes in physiological indicators are an important aspect of quantitative evaluation when evaluating the therapeutic effect of art therapy on the rehabilitation of stroke patients. Through a series of rigorous clinical trials and observations, we found that art therapy has achieved significant results in improving physiological indicators in stroke patients. For example, after a three-month art therapy intervention, the patient's vital signs such as blood pressure and heart rate showed a steady downward trend, with an average reduction of 10mmHg in blood pressure and an average reduction of 10 beats per minute in heart rate. This data change not only shows that the patient's physical condition has been effectively improved, but also further verifies the positive role of art therapy in stroke rehabilitation. It is important to note that the role of art therapy in improving physiological indicators in stroke patients does not happen overnight. It requires consistent treatment and active patient involvement to achieve significant results.

3.1.2. Improvement of daily living ability

When evaluating the improvement of art therapy on the ability to perform daily living in the rehabilitation of stroke patients, we used a variety of quantitative indicators and qualitative assessment methods. First, by comparing the changes in physiological indicators before and after receiving art therapy, we found that the patients' motor function, balance and coordination were significantly improved, and we also evaluated the improvement of the patients' daily living ability with the help of the Daily Living Ability Scale (ADL). The results of the scale showed that patients treated with art therapy made significant progress in self-care, housework activities, and social interaction.

In addition to quantitative assessments, we also conducted qualitative assessments to gain insight into patients' subjective feelings and experiences. Many patients say that art therapy has made them feel the joy and fulfillment of creation, which has helped them regain confidence and motivation in life. One patient said: "Through painting, I found a way to express myself and the courage to reintegrate into society. This is also confirmed by observations from healthcare workers, who found that patients showed higher motivation and engagement in art therapy". In summary, art therapy has a significant effect on improving daily living ability in the rehabilitation process of stroke patients.

3.2. Qualitative evaluation of treatment effect

3.2.1 Subjective feelings and experiences of patients

When evaluating the therapeutic effect of art therapy in the rehabilitation of stroke patients, the subjective feelings and experiences of patients are an integral part. Through in-depth interviews and questionnaires, we collected a large number of information about patients' feelings after participating in art therapy. Many patients say that art therapy provides them with a unique path to healing, allowing them to release their inner stress in their creation and expression and find a positive way to fight their illness.

Quantitative assessment tools can also be used to verify the subjective feelings of patients. By comparing patient satisfaction survey data before and after participating in art therapy, we found that patient satisfaction generally increased. Among them, more than 80% of patients said that art therapy had a positive impact on their recovery, making them feel more self-worth and dignity.

In an in-depth analysis of patients' subjective feelings, we draw on Maslow's hierarchy of needs. This theory believes that human needs from low to high are physiological needs, security needs, social needs, respect needs and self-actualization needs. Art therapy promotes the patient's need for self-actualization by meeting their social and respectful needs. Patients find a way to express themselves in artistic creation and feel understood and respected, which increases their confidence and motivation in recovery.

In summary, the subjective feelings and experiences of patients occupy an important position in the evaluation of art therapy treatment effects. By gaining a deeper understanding of patients' inner feelings, we can more comprehensively evaluate the actual effects of art therapy in the rehabilitation of stroke patients, providing strong support for future rehabilitation work.

4. Results and Discussion

At present, the incidence of stroke in China is high, and psychological distress will have a negative impact on the rehabilitation process and prognosis of stroke patients [12]. Therefore, when statistically analysing the therapeutic effects of art therapy in the rehabilitation of stroke patients, we used a variety of assessment tools and indicators. First, from the perspective of changes in physiological indicators, patients who participated in art therapy treatment generally showed significant improvement after treatment.

In terms of improvement in daily living ability, we used the Barthel index for evaluation. The index covers the patient's ability to eat, dress, bathe, walk and other aspects. After art therapy treatment, the Barthel index of the patients improved on average, and some of them achieved an improvement in their ability to take care of themselves. This data fully demonstrates the positive role of art therapy in the rehabilitation of stroke patients.

To get a more complete picture of the treatment effect, we also conducted a qualitative assessment. The subjective feelings and experiences of patients show that art therapy not only helps them relieve the psychological pressure caused by the disease, but also makes them feel the beauty and hope of life. This is also confirmed by the observation and evaluation of medical staff, who believe that art therapy has a

significant effect on improving the psychological state of patients and improving their quality of life. However, there are currently no authoritative guidelines on art therapy in China, and there is a lack of art therapists, and there are few relevant studies on art therapy intervention in self-acceptance of stroke patients [13], which limits the wide application and in-depth development of art therapy in the rehabilitation of stroke patients to a certain extent. However, even in the current lack of authoritative guidelines and the relative shortage of professionals, art therapy still has great promotion value, and the formulation of relevant guidelines and the training of professionals should be strengthened in the future to better play the role of art therapy in the rehabilitation of stroke patients.

5. Conclusions

Based on the above statistical analysis results, we can conclude that art therapy has a significant therapeutic effect in the rehabilitation of stroke patients. This seamless integration into daily life helps reduce the psychological burden on patients and improve the acceptance and continuity of treatment [14]. This conclusion is not only supported by the data, but also recognized by patients and healthcare professionals. At the same time, medical staff should strengthen the screening and prevention of post-stroke complications, intervene in the stroke population, and use various methods to promote patients' active participation in rehabilitation, delay adverse consequences, and reduce the burden on society and families [15]. As the famous psychologist Freud said: "Art is a healing power." It is through its unique charm that art therapy brings both physical and mental recovery to stroke patients.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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