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The Impact of Calligraphy and Painting Training on the Self-Esteem Level of Patients with Schizophrenia in the Rehabilitation Phase

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Abstract: *Objectives*: This study analyzes the value of calligraphy and painting training in enhancing the self-esteem level of patients with schizophrenia in the rehabilitation phase. *Methods*: A total of 100 patients with schizophrenia were selected as research subjects and randomly divided into two groups using a random number table method. The control group, consisting of 50 patients, underwent routine rehabilitation training interventions in the ward, while the experimental group, also consisting of 50 patients, received professional calligraphy and painting training in the rehabilitation therapy department in addition to routine rehabilitation training. The self-esteem levels of patients in both groups were evaluated before intervention and after 24 weeks of intervention. *Results*: Both groups had low scores on the self-esteem scale and the deficit scale before intervention, which improved to varying degrees after intervention. The experimental group had significantly higher scores on the self-esteem scale and the deficit scale after 24 weeks of intervention compared to the control group ($p < 0.05$). *Conclusion*: Strengthening calligraphy and painting training for patients with schizophrenia in the rehabilitation phase can effectively enhance their self-esteem levels, reduce their deficit levels, and have a positive impact on the rehabilitation of patients with schizophrenia.

Keywords: Calligraphy and painting training; Schizophrenia; Rehabilitation phase; Self-esteem level

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1. Introduction

Schizophrenia is a group of chronic mental disorders with an unclear specific etiology. After onset, patients may exhibit manifestations such as incoordination in mental activities, mental disability, and decline. At present, medication is the primary means of treating schizophrenia, and when patients receive appropriate treatment and their main symptoms are controlled, they will enter the rehabilitation phase if they possess insight into their condition. Due to prolonged hospitalization and social disconnection, patients in the rehabilitation phase who rely solely on medication have limited recovery in terms of social functioning and self-management abilities [1]. Research has found that as the functionality of patients with schizophrenia

severely declines, their corresponding physical and mental health are also affected, necessitating enhanced rehabilitation interventions during the rehabilitation phase [2]. In recent years, occupational and recreational therapy has gradually been applied in the rehabilitation treatment of schizophrenia. This method involves using work, labor, entertainment, and other avenues to assist patients in improving their mental state, enhancing physical fitness, boosting self-confidence, improving social skills, and life skills, thereby helping them better adapt to society and resume normal social activities [3]. Calligraphy and painting training is an art therapy approach and one of the most representative forms of occupational and recreational therapy. Since ancient times in China, there has been a viewpoint of "the common origin of calligraphy and painting", where the fluidity, rhythm, and lively lines of calligraphy are skillfully integrated into painting creation, forming a unique artistic language [4]. As an intuitive and emotional form of expression, painting provides patients in the rehabilitation phase of schizophrenia with new perspectives and avenues [5]. Studies have shown that calligraphy and painting training interventions are primarily used clinically for patients with mental illnesses and have achieved favorable application outcomes [6]. Based on this, this study aims to maximize the assistance for patients in the rehabilitation phase of schizophrenia through calligraphy and painting training interventions, helping them reduce or eliminate negative emotions, build confidence, and enhance self-esteem levels.

2. Materials and methods

2.1. General information

The study subjects were patients with schizophrenia, with a total sample size of 100 cases. Inclusion criteria: Patients were diagnosed with schizophrenia according to the "Chinese Classification and Diagnostic Criteria for Mental Disorders, Third Edition (CCMD-3)"; patients had reached the rehabilitation phase criteria after prior pharmacological treatment (with main symptoms under control and possessing insight); patients were able to cooperate in completing assessments using relevant scales; and the study met the informed consent requirements of both patients and their families. Exclusion criteria: Patients with coexisting multiple types of mental disorders; those with physiological defects or who had experienced significant stressful events recently; those with physical, visual, or hearing impairments that prevented them from cooperating in calligraphy and painting training; and patients with a history of drug dependence. The 100 patients were randomly assigned into two groups, with 50 cases in each group. In the control group, there were 39 males and 11 females, with an age range of 30–69 years, and an average age of (54.24 ± 9.59) years. In the experimental group, there were 40 males and 10 females, with an age range of 30–69 years, and an average age of (54.24 ± 9.50) years. The differences in the listed data between the two groups were small ($p > 0.05$), meeting the comparability requirements.

2.2. Methods

A questionnaire on general patient information was uniformly designed for the study period, and staff were trained in the assessment methods using the Self-Esteem Scale and the Feelings of Inadequacy Scale. The initial assessments using these scales were conducted on the 100 enrolled patients to clarify the training objectives and develop training plans and schedules.

2.2.1. Control group

Patients received conventional rehabilitation guidance, including medication adherence as prescribed, enhanced cognitive training, psychological counseling, and behavioral training. Patients were guided and encouraged to participate in daily life activities, such as dressing, grooming, toileting, and item counting, and were given spiritual or material rewards to improve their enthusiasm for behavioral training, thereby facilitating rapid recovery of social functioning.

2.2.2. Experimental group

Patients entered the calligraphy and painting studio in the rehabilitation department and received calligraphy and painting training under the guidance of professional artists.

2.2.3. Study design

The training plan was strictly implemented, with interventions conducted once a day, five days a week, for a total of 24 consecutive weeks, with each session lasting 1 hour. Patients were encouraged to actively cooperate in the calligraphy and painting training projects through demonstration, instruction, and sharing. During the training process, active communication and interaction with patients were promoted to facilitate mutual communication among patients, healthcare providers, and fellow patients. The psychological status of patients was promptly understood, and psychological counseling was provided to alleviate negative anxiety. Training effects and responses were evaluated, and the training plan was adjusted accordingly. After 24 weeks, the Self-Esteem Scale and the Feelings of Inadequacy Scale were used again to assess changes in patients' self-esteem levels.

2.3. Observation indicators

The assessment results of the Self-Esteem Scale and the Feelings of Inadequacy Scale before and after intervention in the control and experimental groups were compared. Specifically, the Rosenberg Self-Esteem Scale (SES) and the Feelings of Inadequacy Scale (FIS) were used. The SES consists of 10 items, and patients were asked to select a number from 1 to 4 based on the actual situation of each item, with corresponding scores ranging from 10 to 40. Higher scores indicated higher self-esteem levels. The FIS consists of 36 items, with each item evaluated using a 7-point rating scale. The total score ranged from 0 to 216, with higher scores indicating lower feelings of inadequacy and stronger self-esteem.

2.4. Statistical methods

The assessment results at different time points were statistically analyzed using genuine SPSS 26.0 software. The corresponding data were measured data, expressed as mean ± standard deviation, with paired *t*-tests conducted within groups and independent *t*-tests conducted between groups. $p < 0.05$ was used as the criterion for statistically significant differences.

3. Results

3.1. Self-esteem scale scores before and after intervention

The differences in Self-Esteem Scale scores betwe1en the two groups at enrollment were small ($p > 0.05$). After 24 weeks of intervention, the Self-Esteem Scale score in the control group was lower than that in the

experimental group, with a significant difference ($p < 0.05$). The difference in scores between enrollment and 24 weeks of intervention in the control group was small ($p > 0.05$), while the difference in the experimental group was significant ($p < 0.05$). The data are shown in **Table 1**.

Table 1. Self-esteem scale scores before and after intervention ($\overline{x} \pm s$, n = 50, points)

Item	Group	Self-esteem scale score	*t*	*p*
Enrollment	Experimental group	23.22 ± 11.57	1.365	0.175
	Control group	20.06 ± 11.57		
24-week Intervention	Experimental group	35.24 ± 11.44	6.086	0.001
	Control group	20.54 ± 12.68		

3.2. Scores on the feelings of inadequacy scale before and after intervention

There was a minimal difference in the scores on the Feelings of Inadequacy Scale between the two groups at the time of enrollment ($p > 0.05$). When comparing the scores on the Feelings of Inadequacy Scale (24 weeks after intervention), the control group scored lower than the experimental group ($p < 0.05$). Both groups showed improved scores after 24 weeks of intervention, but the experimental group demonstrated a significantly greater improvement, with a notable difference ($p < 0.05$). The data is presented in **Table 2**.

Table 2. Scores on the feelings of inadequacy scale before and after the intervention ($\overline{x} \pm s$, n = 50, points)

Item	Group	Feelings of inadequacy scale score	*t*	*p*
Enrollment	Experimental group	67.06 ± 11.09	0.000	1.000
	Control group	67.06 ± 10.98		
24-week Intervention	Experimental group	172.16 ± 16.96	31.302	0.001
	Control group	78.76 ± 12.55		

4. Discussion

The specific pathogenesis of schizophrenia remains unclear, but numerous studies suggest that its onset is attributed to brain dysfunction caused by the interplay of multiple factors. In recent years, there has been an upward trend in the number of clinically diagnosed schizophrenia patients. Patients in the acute phase may exhibit aggressive behavior, but standardized treatment can help control symptoms and stabilize the condition. Due to the long treatment duration and high recurrence rate of such diseases, patients in the rehabilitation phase can benefit from rehabilitation methods to facilitate the recovery of relevant functions and enable an earlier return to normal life [7].

With advancements in clinical research on rehabilitation treatment for schizophrenia, occupational and recreational therapy has gradually been applied, forming a relatively mature theoretical framework. Its basic theories consist of two aspects: first, the recovery concept, which focuses on the patient themselves, understanding and respecting their differences. It aims not only to help patients eliminate symptoms and control the disease but also to leverage their self-efficacy, actively guiding and assisting them in discovering the meaning of life, filling them with hope, and recognizing their own value. Second, the case-centered approach involves establishing a collaborative partnership between staff and the case, encouraging the case to actively participate in goal setting, assessment, intervention, and feedback processes to enhance their

occupational performance [8]. Occupational and recreational therapy encompasses various specific methods in practice, with calligraphy and painting training being a researched approach. Through calligraphy and painting training, patients in the rehabilitation phase of schizophrenia can promote their own recovery in practical applications, with three practical values: Firstly, as an important intervention measure, calligraphy and painting training requires patients to use both their hands and minds. During implementation, it can guide patients' thinking, help them diverge their thoughts, calm down, and allow inner emotions to be vented through calligraphy and painting training, providing an effective emotional outlet. Different calligraphy and painting training sessions help patients break free from self-perception, redefine their self-perception and value, thereby achieving emotional catharsis and rebuilding self-perception. Secondly, during calligraphy and painting training, staff provide targeted guidance to help patients feel the meaning and value of life through their creations, truly understand the essence of life, love life, and protect themselves. Additionally, by appreciating the calligraphy and painting works of other patients or renowned artists, patients can diverge their thinking, learn to analyze and consider problems from multiple perspectives, break free from fixed self-thinking patterns, no longer dwell on certain issues, cherish life, fulfill responsibilities, and realize self-worth. Thirdly, calligraphy and painting training is a creative process without fixed patterns or requirements. Patients can integrate creativity and imagination into calligraphy and painting training through divergent thinking and understanding of relevant content. This creative process helps stimulate innovative thinking, cultivate imagination, and problem-solving abilities [9].

The data results show that both the control group and the experimental group had low scores on the self-esteem scale and the sense of deficiency scale before intervention, indicating that insufficient self-esteem and a strong sense of self-deficiency are prevalent among schizophrenia patients and require correction [10]. Analysis: Due to the long course of schizophrenia and disconnection from society during long-term hospitalization, patients are unable to participate in work, household chores, etc. Over time, they not only lose their ability to work but also experience a decrease in life confidence, leading to feelings of inferiority and self-doubt. After 24 weeks, the data showed that the control group, through conventional rehabilitation treatment, had slightly improved scores on the self-esteem scale and the sense of deficiency scale, but the changes were not significant. This indicates that conventional rehabilitation training has a promoting effect on improving patients' self-esteem levels, but the overall effect is not strong. The experimental group, on the other hand, showed significantly improved scores on the self-esteem scale and the sense of deficiency scale after professional guidance training by painters, indicating that calligraphy and painting training has a positive effect on enhancing the self-esteem levels of patients in the rehabilitation phase of schizophrenia. Analysis: Calligraphy and painting training can effectively release inner pressure and soothe emotions; immersive creation helps patients improve concentration and endurance; patients' works have the opportunity to participate in exhibitions after assessment and selection, providing them with a sense of participation and accomplishment; staff analyze patients' psychological dynamics through their works, enabling targeted psychological counseling and providing effective support and guidance to achieve the goal of enhancing rehabilitation effects.

5. Conclusion

In summary, strengthening calligraphy and painting training for patients in the rehabilitation phase of schizophrenia can effectively enhance their self-esteem levels, reduce their sense of deficiency, and have a

positive impact on the rehabilitation of schizophrenia patients.

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Disclosure statement

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