

Psychological Rehabilitation Technology and Effectiveness Evaluation of Post-stroke Depression Patients Based on Teamwork

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Abstract. Objective To explore the technical effectiveness evaluation of the teamwork model based on the three-way collaboration of medical, psychological and social support for the treatment of post-stroke depression. Methods 76 patients with post-stroke depression were selected in the rehabilitation department of a hospital. Patients are divided into control group and experimental group. The control group received routine medical and rehabilitation treatment, and the experimental group added psychological rehabilitation intervention on the basis of the control group. The results were assessed by the Hamilton Depression Rating Scale (HAMD), the 12 General Health Questionnaire (GHQ-12), and the Activity of Daily Living Scale (ADL) before and after treatment. Results The scores of the experimental group and the control group on the HAMD, GHQ-12, and ADL scales were lower than those before the treatment; and the experimental group scored on the HAMD, GHQ-12, and ADL after team-based treatment Significantly lower than the control group, the difference was significant ($t = -16.219, p < 0.001$; $t = -10.126, p < 0.001$; $t = -7.021, p < 0.001$). Conclusion Psychological rehabilitation technology based on teamwork can reduce the degree of depression in patients with stroke depression, improve the mental health of patients, reduce the dysfunction of patients and improve their daily living ability. It has clinical reference and promotion.

1. Introduction

Stroke, also known as "cerebral vascular accident", is a common cerebrovascular disease with high morbidity and high disability rate ^[1], which often occurs in the elderly population. Post-stroke depression (PSD) is the most common emotional disorder after stroke. The rate of post-stroke depression in China is 23%-76% ^[2], mainly characterized by low mood, loss of appetite, insomnia, anxiety and other symptoms ^[3]. Because most of the stroke patients are transient and without sign, so after the illness, patients can't accept the current situation at a time, so it is very susceptible to depression. This kind of emotional disorder not only increases the mental suffering of the patient, but also delays the improvement of the patient's daily living ability. If you ignore the emotional disorder of the patient, it will inevitably delay the whole process of rehabilitation, affect the patient's return to the family, the expectation of reintegration, and even worsen the risk factors of cardiovascular and cerebrovascular diseases such as hypertension. The risk of stroke again increases mortality ^[4]. Therefore, how to treat patients with post-stroke depression to make them recover quickly is a meaningful study. This study mainly explores the application effect and effectiveness of team-based psychological rehabilitation technology in patients with post-stroke depression.

2. Object and method

2.1 Object

76 patients with post-stroke depression who were hospitalized in the rehabilitation department of a hospital were selected, and 38 patients with post-stroke depression from October 2018 to January 2019 (screening in the first month) were selected as experimental group. 38 patients with post-stroke

depression from February to May 2019 (screening in the first month) served as a control group. The basic data of the experimental group and the control group were not significantly different ($p > 0.05$), which was comparable, see Table 1.

Table 1 Comparison of general data between the two groups ($\bar{x} \pm s$)

| | | Experimental group (n=38) | Control group (n=38) | t/ χ^2 | p |
|-------------|--------------------|------------------------------|-------------------------|-------------|-------|
| Age | | 63.16±12.47 | 63.58±10.28 | -0.161 | 0.873 |
| Gender | Male | 23 | 25 | 0.226 | 0.634 |
| | Female | 15 | 13 | | |
| Stroke type | Ischemic stroke | 23 | 18 | 1.324 | 0.250 |
| | Hemorrhagic stroke | 15 | 20 | | |

2.2 Methods

The control group received routine medical treatment and rehabilitation treatment. The experimental group used a team-based (medical, psychological and social tripartite cooperation) for a three-month psychological rehabilitation intervention model based on the control group. The clinician performs drug treatment according to the condition of the PSD patient. The rehabilitation therapist evaluates the rehabilitation function of the PSD patient, formulates a reasonable rehabilitation plan according to the actual situation of the patient, and provides rehabilitation training for the patient. Rehabilitation treatments mainly include balancing muscle strength, muscle tone and joint mobility, coordination exercise, exercise control, walking correction and training. The counselor understands the progress of the patient's rehabilitation to the rehabilitation therapist, and observes the state of the daily physical rehabilitation training of the PSD patient. The experimental group is given a psychological rehabilitation intervention for 3 times a week for a period of 3 months. The specific psychological rehabilitation techniques are as follows: 1 Supportive psychotherapy. Through the direct observation of PSD patients, using listening, praise and encouragement, advice and guidance, and reasonable resource calls, establish a good trust relationship with PSD patients. 2 behavioral therapy or cognitive behavioral therapy. According to the actual situation of different PSD patients, targeted interventions such as behavioral therapy techniques (such as relaxation training) or cognitive behavioral therapy (such as Alice's emotional ABC theory) are used to understand the depression status of different PSD patients. 3 group psychotherapy. Analyze the common characteristics of different PSD patients, and use group psychotherapy to conduct psychological rehabilitation intervention. A group or team of members with the same or different issues, and group members discuss issues of common concern so that their behavior can be improved.

A comprehensive treatment model combining PSD patients, clinicians, rehabilitation therapists, psychological counselors, and PSD patient caregivers is formed.

2.3 Evaluation index

Hamilton Depression Scale (HAMD-24): this scale is the most common scale used to assess depression in the clinical treatment^[5]. It's normal when the total score is less than 8 points; the total score is 8-20 points, there may be depression; the total score is 21-35 points, there must be depression (mild or moderate depression); Score more than 35 points, it represents severe depression. The higher the score, the more severe the depression. HAMD has good reliability and validity. According to the related literature, the reliability score of HAMD total score is $r=0.99$, and the validity coefficient is 0.37 ^[6].

Twelve General Health Questionnaires (GHQ-12): the scale of the subject is extensive and is considered "probably the best mental health measurement tool"^[7]. The score range is 0-12 points, the general score is below 2 points for the low score range, 2-7 is divided into the medium range, and the 7 points is the high range. Divided into ranges. The higher the score, the worse the mental health. The Cronbach's α coefficient of this scale is 0.702 ^[8].

The Activity of Daily Living Scale (ADL): this scale mainly used to assess the daily living ability of the subjects ^[9]. The total score below 14 is completely normal, and more than 16 indicates that there is a different degree of functional decline, the total score is more than 22 points, suggesting that the function has obvious obstacles. The higher the score, the more obvious the dysfunction of the patient and the lower the ability of daily living. The Cronbach's α coefficient of the scale is 0.822^[10].

2.4 Statistical processing

Data analysis and processing were performed using SPSS20.0 software. The measurement data were expressed as ($\bar{x} \pm s$), and the differences were compared by t test. The comparison of the count data was performed by chi-square (χ^2) test, and the difference was statistically significant at $p < 0.05$.

3. Results

Before the psychological rehabilitation intervention, there was no significant difference in the scores on the HAMD, GHQ-12 and ADL scales between the two groups ($p > 0.05$), indicating that there was no difference in the scores between the two groups on the three scales. Sex. After the experimental group conducted a three-month psychological rehabilitation intervention based on teamwork, the scores of the three scales on the HAMD, GHQ-12 and ADL scales were significantly lower than those of the control group, and the difference was statistically significant ($P < 0.05$), see Table 2, which shows that psychological rehabilitation intervention based on teamwork is effective in patients with post-stroke depression, can effectively improve the degree of depression in patients with PSD, improve the mental health of patients, and reduce the physical dysfunction of patients. And the ability to improve their daily lives.

Table 2 Comparison of HAMD, GHQ-12, and ADL scores before and after team intervention in two groups of PSD patients ($\bar{x} \pm s$)

| Group | HAMD score | | GHQ-12 score | | ADL score | |
|------------------------|------------|------------|--------------|-----------|------------|------------|
| | Pretest | Post test | Pretest | Post test | Pretest | Post test |
| Experiment al group | 24.16±2.20 | 7.53±1.62 | 10.84±1.37 | 5.79±1.66 | 48.55±3.20 | 40.11±2.18 |
| Control group | 23.95±2.61 | 16.61±3.05 | 10.97±1.05 | 9.18±1.23 | 48.58±3.01 | 44.29±2.96 |
| t | -0.161 | -16.219 | -0.470 | -10.126 | -0.037 | -7.021 |
| p | 0.873 | <0.001 | 0.640 | <0.001 | 0.971 | <0.001 |

4. Conclusion

The psychological rehabilitation intervention based on the teamwork mode combines the professionals of various professions, and the professionals provide multi-directional treatment for PSD patients. Clinicians, rehabilitation therapists, psychological counselors, and patient caregivers form a care team to participate in the treatment and rehabilitation of patients with PSD^[11]. They work together to enhance the PSD patient's confidence and determination of PSD patients in the rehabilitation training, shortening the treatment cycle, which will play a part in the overall rehabilitation of patients^[12].

In summary, the psychological rehabilitation technology based on teamwork of medical, psychological and social cooperation has a significant role in helping PSD patients early recover. Psychological rehabilitation technology can help patients with PSD reduce the degree of depression, improve the psychological health status of patients, reduce the dysfunction of patients and thus improve the daily living ability of patients, which is worthy of promotion.

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