

## Research Article

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# Effects of out-of-hospital continuing nursing on schizophrenia patients' rehabilitation and quality of life

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**Abstract:** Objective: This paper aims to explore specific effects of out-of-hospital continuing nursing on schizophrenia patients' health rehabilitation and quality of life, and further improve application and popularization of out-of-hospital continuing nursing.

**Methods:** The 180 schizophrenia patients discharged from our hospital from March 2014 to March 2016 were selected as the subjects. The patients were divided into two groups according to the randomized double-blind method. Both groups received routine discharge guidance, and the observation group received out-of-hospital continuing nursing on this basis. Questionnaires and scales were used to compare differences of the two groups after discharge from hospital, such as medication compliance, recurrence rate of schizophrenia, awareness of health knowledge and quality of life.

**Results:** After 6 months of nursing for the observation group, complete medication compliance rate was 71.11% (64/90), awareness rate of schizophrenia-related health knowledge was 96.67% (87/90), and recurrence rate was 8.89% (8/90). For the control group, complete medication compliance rate was 45.56% (41/90), awareness rate of schizophrenia-related knowledge was 46.67% (42/90) and the recurrence rate of disease was 26.67% (24/90). Hence, the observation group enjoys significant advan-

tages compared with the control group. Statistical analysis ( $P < 0.05$ ) showed statistical significance; In addition, life quality scores showed that the quality of life of the observation group was obviously better than the control group; the difference was statistically significant ( $P < 0.05$ ).

**Conclusion:** Out-of-hospital continuing nursing for schizophrenia patients after discharge can effectively improve medication compliance, awareness rate of health knowledge, effectively reduce incidence of schizophrenia and improve the quality of life of patients. Thus, the nursing concept and related methods are worthy of publicity and application in a wider range.

**Keywords:** Schizophrenia; Out-of-hospital continuing nursing; Quality of life; Rehabilitation effect

## 1 Introduction

Schizophrenia is an unexplained severe mental illness, mostly seen in young adults with slow or subacute onset, which often manifests clinical syndromes of different symptoms involving sensory, thinking, emotional and behavioral obstacles and incongruity of mental activity. Patients are generally conscious and have basic normal brainpower, but some patients will appear to have cognitive impairment in the course of disease. Clinical studies show that duration of schizophrenia is generally persistent and recurring; some patients may even have exacerbated or worsened conditions, but some patients will eventually decline and have mental disability, which seriously disrupts normal order of life of patients and their families and reduces their quality of life [1]. However, through careful care and follow-up treatment, some schizophrenia patients can remain cured or in a basic state of recovery (Figure 2-3).

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Our hospital has comprehensively studied the related contents and requirements of the *Outline of Chinese Nursing Care Development Plan (2011-2015)* issued by the Ministry of Health, further defined the “patient-centered” concept of medical care services, further expanded scope and time of care for schizophrenia patients, and implemented out-of-hospital nursing and has achieved good care results. The relevant work experience and concrete results were retrospectively analyzed, as described below.

## 2 Materials and methods

### 2.1 General Information

The 180 subjects were selected from March 2014 to March 2016 and were divided into two groups according to the randomized double-blind method. The observation group consisted of 90 cases: 52 males and 38 females. The average age was  $27.5 \pm 2.3$  years, the average duration of disease was  $4.15 \pm 0.24$  years, and education levels included 6 cases of illiteracy, 32 cases of primary school, 36 cases of junior middle school, and 16 cases of high school and above. The control group consisted of 90 cases: 48 males, 42 females. The average age was  $28.2 \pm 2.1$  years, the average duration of disease was  $4.52 \pm 0.18$  years, and education levels included 5 cases of illiteracy, 34 cases of primary school, 38 cases of junior middle school, and 13 cases of high school and above. There was no statistically significant difference between the two groups in their general treatment. The mental state at discharge and rehabilitation state were also similar ( $P > 0.05$ ), and the results were credible.

### 2.2 Inclusion and exclusion criteria

Inclusion criteria included: Meeting diagnostic criteria for schizophrenia in the Classification and Diagnostic Criteria for Mental Disorders, Third Edition (CCMD-3) and International Classification of Diseases, tenth (ICD-10) [2]; recurrent attacks; meeting image examination standard (see Fig.1); aged 18-59 years; without serious physical illness and organic brain disease; achieve clinical recovery at discharge; patients and their families are willing to cooperate with the study; at least one person has been living with the patient and has a better understanding of the patient’s condition. Those who did not meet the above requirements were excluded from the study.

The study was signed and approved by the hospital ethics committee. All patients’ family members voluntarily participated in the survey and signed an informed consent form.

### 2.3 Nursing methods

The patients in control group received routine discharge guidance before discharge; on the basis of this, the patients in observation group received more systematic out-of-hospital continuing nursing including: (1) establishing a special out-of-hospital nursing group composed of deputy chief physician, nurse-in-charge, nurse practitioner and conducting a comprehensive nursing training program among the team members. (2) establishing a complete patient file including general information, lifestyle, medication (drug name, dosage, method of medication) psychological state of patients [3]. On this basis, developing a continuing nursing plan, assessing the schizophrenia patients to be discharged by a charge

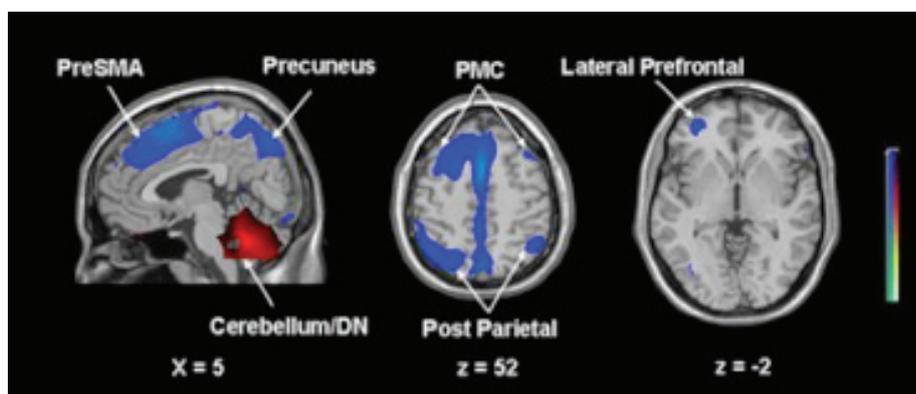


Figure 1: Image manifestation of a schizophrenic patient with recurrent attacks

nurse, and developing the appropriate care plan according to the assessment results (3) carrying out follow-up visit in a variety of ways after discharge, including telephone follow-up (conducting monthly telephone follow-up once after discharge, each telephone follow-up lasting 2-5 minutes, which could also be extended according to the specific circumstances; keeping abreast of the patient's disease control, reminding and urging patients to take medicine on time and according to the prescribed amount, ; if poor disease control is found, urging them to return to hospital for timely examination and treatment, meanwhile increasing the frequency of telephone follow-up k [4]) home follow-up. Visit the home of patient once every 3 months to understand patient's medication; having face-to-face explanations for patients and their families who fail to adhere to medication to understand the reasons, providing guidance, improving the patient's confidence in the medical staff, and helping them maintain a good compliance behavior; letter guidance (medical staff provide patients with health education knowledge guidance, medication guidance, etc. from time to time by postal letters [5, 6]); discharge guidance based on a third party new media platform. Follow-up visits can be realized through the WeChat platform. The department needs to establish a WeChat platform and the patient is asked to join the WeChat platform through their mobile phone the same day as discharge. After discharge, the medical staff communicate with patients or their families once monthly through the WeChat platform [7]. Communication contents include understanding the patient's medication at home, sleep, diet, social function, disease control and mental state, , providing targeted health guidance, psychological counseling and communication skills guidance to patients and their families again, and deciding the next appointment time with the patient. After communication, the communication contents will be recorded and fed back to the doctor in a timely manner; holding exchange meeting among the wardmates once every 2 months in the first half year and once 3-4 months in the second half years [8,9].

## 2.4 Clinical observation indicators

Mediation compliance, awareness rate of health knowledge, and disease recurrence rate of the two groups six months after discharge were compared.

The rehabilitation state and mental state were compared between the two groups after six months of discharge using brief psychiatric scale (BPRS) and Morning-side Rehabilitation Status Scale (MRSS).

The quality of life was compared between the two groups at 6 months after discharge using the generic quality of life inventory (GQOLI).

## 2.5 Statistical methods

In this study of the specific effect of out-of-hospital continuing nursing on schizophrenia patients' rehabilitation and quality of life, we used SPSS17.0 statistical software to analyze and deal with the data. The count data was expressed as (n, %) and tested by chi-squared method [10]. The measurement data were expressed as ( $\bar{x} \pm s$ ) and tested by t. Only when  $P < 0.05$  is satisfied, the differences are considered to have significance in statistics.

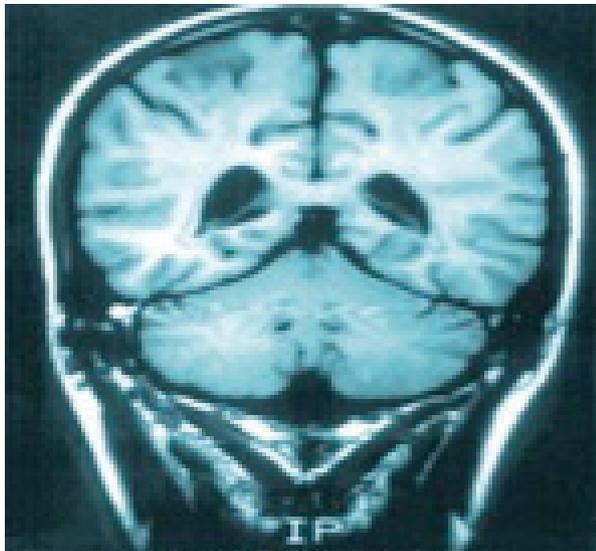
## 3 Results

For the observation group, complete medication compliance rate was 71.11% (64/90), awareness rate of schizophrenia related health knowledge was 96.67% (87/90), and recurrence rate was 8.89% (8/90). For control group, complete medication compliance rate was 45.56% (41/90), awareness rate of schizophrenia related knowledge was 46.67% (42/90) and the recurrence rate of disease was 26.67% (24/90). Hence, the observation group enjoys significant advantages compared with the control group. Statistical analysis ( $P < 0.05$ ) showed statistical significance. Brain CT scans also showed significant change after treatment. The brain CT image of an example patient before and after treatment is shown in Fig.2. See Table 1, Table 2, and Table 3 below for detailed data:

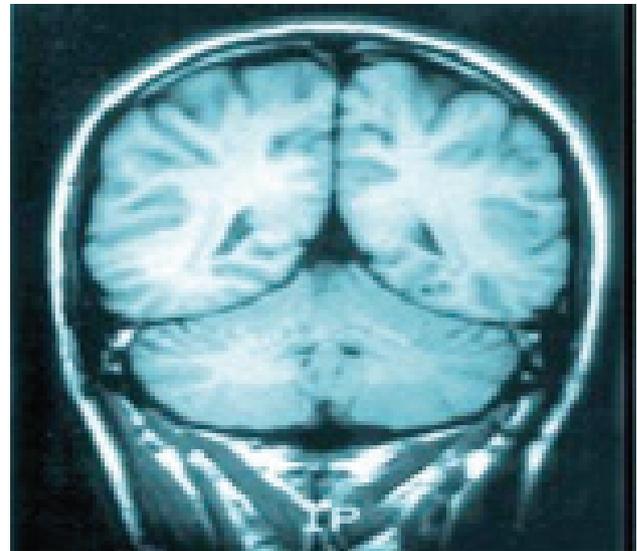
According to the generic quality of life inventory (GQOLI), the quality of life of the observation group was significantly better than that of the control group. Comparison between groups has statistical significance ( $P < 0.05$ ). The specific data was as follows Table 4.

## 4 Discussions

Through analysis of the relevant literature and summary of one's own work experiences, we found that many patients maintain a good mental state during hospitalization, but after discharge they voluntarily suspend medication or do not adhere to medication, which increases the recurrence rate of the disease and reduces patients' quality of life [11]. In order to improve this problem, clinical staff urgently needed to develop a more systematic,



(a) The brain CT image of an example patient before treatment



(b) The brain CT image of the same example patient after treatment

**Figure 2:** Change in brain CT images before and after treatment

**Table 1:** Comparison of medication compliance of the two groups 6 months after discharge [(n, %), n = 90]

Group	Non-compliance	Partial compliance	Complete compliance
Observation group	5(5.56%)	21(23.33%)	64(71.11%)
Control group	29(32.22%)	20(22.22%)	41(45.56%)
X <sup>2</sup>	20.887	0.032	12.091
P	0.000	0.859	0.000

**Table 2:** Disease awareness and recurrence rate of the two groups 6 months after discharge [(n, %), n = 90]

Group	Awareness rate	Recurrence rate
Observation group	96.67%(87/90)	8.89%(8/90)
Control group	46.67%(42/90)	26.67%(24/90)
X <sup>2</sup>	55.404	9.729
P	0.000	0.002

**Table 3:** Comparison of BPRS, MRSS scale scores of the two groups 6 months after discharge [( $\bar{X} \pm s$ ), n = 90]

Group	BPRS	MRSS
Observation group	21.18±5.42	30.25±4.35
Control group	27.55±7.12	48.62±7.28
t	6.753	20.549
P	0.000	0.000

**Table 4:** Comparison of quality of life of the two groups 6 months after discharge [( $\bar{X} \pm s$ ), n = 90]

Item	Observation group	Control group	t	P
Somatic function	45.99±10.22	38.57±8.81	5.217	0.000
Psychological function	53.75±11.15	42.24±10.58	7.104	0.000
Social function	53.27±12.85	40.32±10.06	7.528	0.000
Material life	54.75±11.43	55.36±11.26	0.361	0.719

comprehensive out-of-hospital nursing system to ensure that patients still have high medication compliance after discharge and ensure stable mental state [12].

As can be seen from the result, medication compliance, awareness rate of disease knowledge, etc. of patients with out-of-hospital continuing nursing are significantly higher than those of the control group. The relapse rate was only 8.89% (8/90), which was significantly lower than that of the control group 26.67% (24/90). At the same time, scores of life quality of observation group were significantly higher than those of the control group, there was significant difference ( $P < 0.05$ ) in comparison between groups. The results of this study are consistent with the findings of Chen Min, Yin Xuebing, which demonstrated the value of out-of-hospital continuing nursing [13, 14].

## 5 Conclusion

In summary, out-of-hospital continuing nursing can help reduce the recurrence rate of disease and improve the quality of life of patients. It is suggested that relevant medical units implement the nursing concept and measures to further improve nursing quality for patients with schizophrenia disease.

**Conflict of interest statement:** Authors state no conflict of interest

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