

# Observation on the Application Effect of Quality Nursing Service in Geriatric Cerebral Infarction Care

Jieshuang Liu\*

Jinan Tianqiao People's Hospital Dikou Community Health Service Center, Jinan 250031, Shandong Province, China

\*Corresponding author: Jieshuang Liu, xiaobo781103@163.com

**Copyright:** © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

**Abstract:** *Objective:* To observe the specific effects of quality nursing interventions on geriatric cerebral infarction patients. *Methods:* Eighty geriatric cerebral infarction patients treated in our hospital from January 2022 to December 2022 were selected and randomly divided into two groups using a random number table: 40 patients in the experimental group and 40 in the control group. The experimental group received quality nursing interventions, while the control group received routine nursing measures. After the intervention, nursing satisfaction, daily living ability scores, quality of life measurements, and other observation indicators were analyzed. *Results:* After the intervention, nursing satisfaction in the experimental group was significantly higher than in the control group ( $P < 0.05$ ). Daily living ability scores in the experimental group were also significantly higher than those in the control group ( $P < 0.05$ ). Similarly, quality of life measurements in the experimental group were superior to those in the control group ( $P < 0.05$ ). *Conclusion:* Quality nursing interventions implemented in the experimental group proved effective for geriatric cerebral infarction patients. The intervention significantly improved patients' satisfaction, enhanced their ability to perform daily activities and elevated their quality of life. These findings demonstrate the clinical value of quality nursing interventions and their potential for broader application.

**Keywords:** Quality nursing service; Geriatric cerebral infarction; Nursing effect

**Online publication:** January 2, 2025

## 1. Introduction

Cerebral infarction is a common neurological disease in clinical practice<sup>[1]</sup>. Most patients are elderly, and the condition is characterized by cerebral necrosis caused by hypoxia and ischemia due to cerebral blood supply obstruction. The mortality rate is relatively high. Patients often experience sudden onset and rapid progression of the disease, requiring prompt and active treatment to ensure life safety. After treatment, patients frequently face speech disorders, progressive loss of self-care abilities, and a substantial decline in quality of life. Additionally, their condition often induces negative emotions that hinder treatment outcomes and recovery.

To address this, active nursing care during the treatment phase is essential. However, conventional nursing care has shown limited efficacy<sup>[2,3]</sup>. Quality nursing services, tailored to the patient's specific needs, provide a range

of high-quality interventions aimed at improving physiological and psychological states and enhancing prognosis. The effectiveness of such nursing measures requires further investigation. This study implemented quality nursing interventions in 40 patients in the experimental group and evaluated the outcomes to assess their efficacy.

## **2. Materials and methods**

### **2.1. General information**

The study involved 80 geriatric patients diagnosed with cerebral infarction, treated at the hospital between January 2022 and December 2022. Patients were randomly assigned to either an experimental group or a control group, with 40 patients in each.

The age range of the control group was 62–81 years, with a mean age of  $72.69 \pm 3.64$  years, comprising 22 males and 18 females. The experimental group ranged in age from 60–79 years, with a mean age of  $72.71 \pm 3.69$  years, including 23 males and 17 females. Statistical analysis of baseline demographic data (e.g., gender and age) using appropriate software indicated no significant differences between groups ( $P > 0.05$ ).

Inclusion criteria: (1) Good mental status and communication ability; (2) Voluntary participation with informed consent, as approved by the Ethics Committee.

Exclusion criteria: (1) Patients with malignant tumors; (2) Patients with hematological diseases or major infections; (3) Patients with severe heart, liver, or kidney diseases.

### **2.2. Methods**

#### **2.2.1. Control group**

Routine nursing interventions were implemented. Based on detailed examinations and the patient's conditions, routine interventions included drug guidance, health education, and advice on treatment precautions. Vital signs were closely monitored during the treatment period, and any abnormalities were promptly reported to the physician for appropriate action<sup>[4]</sup>.

#### **2.2.2. Experimental group**

Quality nursing interventions were applied, consisting of the following:

- (1) Enhanced health education: Patient information was comprehensively gathered, and personalized files were created. Using simplified language tailored to patients' educational levels, disease-related factors and treatment processes were explained. Visual aids, such as diagrams, were used to improve understanding. Success stories were shared to build patients' confidence in recovery.
- (2) Psychological support: Emotional support was prioritized by addressing patients' psychological states, alleviating negative emotions, and identifying factors influencing emotional changes. Patients were guided toward establishing a positive mindset to improve compliance and cooperation.
- (3) Dietary guidance: Individualized meal plans were designed, emphasizing high-fiber, low-fat foods supplemented with potassium, calcium, and protein. Balanced nutrition aims to improve patients' resistance and immunity.
- (4) Rehabilitation training: Stabilized patients began rehabilitation early, including physical and speech exercises. Safety measures, such as railings, were implemented to prevent falls. Positional changes were encouraged to avoid pressure sores and joint contractures. Passive joint exercises were performed twice daily for 30 minutes, transitioning to active exercises as tolerated. Gradual progression included

training for independent movement, sitting, standing, and walking.

### 2.3. Observation indicators

- (1) Nursing satisfaction: Satisfaction was assessed using a questionnaire with a total score of 100 points. Higher scores indicated greater satisfaction. Categories included “very satisfied” (85–100 points), “somewhat satisfied” (60–84 points), and “dissatisfied” (0–59 points). Total satisfaction was calculated as: total satisfaction = (very satisfied cases + somewhat satisfied cases) / total cases × 100%.
- (2) Daily living ability scores: Changes in life ability were recorded using the Barthel Index, with scores ranging from 0 to 100. Higher scores indicated better ability.
- (3) Quality of life measurements: The SF-36 scale was used to assess mental health, physical functioning, and social functioning, with scores for each domain ranging from 0 to 100.

### 2.4. Statistical analysis

Data were analyzed using SPSS 26.0. Categorical variables were compared using chi-squared tests, while continuous variables conforming to a normal distribution were expressed as mean ± standard deviation (SD) and analyzed with *t*-tests. Statistical significance was defined as  $P < 0.05$ .

## 3. Results

### 3.1. Nursing care satisfaction

**Table 1** presents the nursing satisfaction outcomes for both groups following the nursing interventions. The experimental group demonstrated a significantly higher total satisfaction rate (95.00%) compared with the control group (72.50%) ( $P < 0.05$ ).

**Table 1.** Comparison of nursing satisfaction [*n* (%)]

Group	Very satisfied	Somewhat satisfied	Dissatisfied	Total satisfaction
Control ( <i>n</i> = 40)	12 (30.00)	17 (42.50)	11 (27.50)	29 (72.50)
Observation ( <i>n</i> = 40)	18 (45.00)	20 (50.00)	2 (5.00)	38 (95.00)
$\chi^2$	-	-	-	7.440
<i>P</i>	-	-	-	0.006

### 3.2. Daily living ability scores

**Table 2** outlines the changes in daily living ability scores before and after nursing care. Post-intervention scores in the experimental group ( $71.37 \pm 4.64$ ) were significantly higher than those in the control group ( $62.23 \pm 5.34$ ) ( $P < 0.05$ ).

**Table 2.** Comparison of daily living ability scores (mean ± SD, points)

Group	Before care	After care
Control ( <i>n</i> = 40)	55.17 ± 3.24	62.23 ± 5.34
Observation ( <i>n</i> = 40)	56.32 ± 3.16	71.37 ± 4.64
<i>t</i>	1.607	8.171
<i>P</i>	0.112	0.000

### 3.3. Quality of life measurements

The quality of life scores, including mental health, physical functioning, and social functioning, are detailed in **Table 3**. Post-intervention, the experimental group scored significantly higher in all three dimensions—mental health ( $84.16 \pm 4.28$ ), physiological functioning ( $82.28 \pm 4.61$ ), and social functioning ( $74.13 \pm 3.24$ )—compared to the control group ( $72.37 \pm 4.64$ ,  $73.13 \pm 4.62$ , and  $68.92 \pm 3.13$ , respectively) ( $P < 0.05$ ).

**Table 3.** Comparison of quality of life measurements before and after intervention (mean  $\pm$  SD, points)

Group	Mental health		Physiological functioning		Social functioning	
	Before	After	Before	After	Before	After
Control ( $n = 40$ )	58.23 $\pm$ 5.34	72.37 $\pm$ 4.64	59.68 $\pm$ 5.67	73.13 $\pm$ 4.62	54.31 $\pm$ 3.65	68.92 $\pm$ 3.13
Observation ( $n = 40$ )	58.79 $\pm$ 5.35	84.16 $\pm$ 4.28	59.93 $\pm$ 5.72	82.28 $\pm$ 4.61	54.37 $\pm$ 3.69	74.13 $\pm$ 3.24
<i>t</i>	0.469	11.812	0.196	8.867	0.073	7.314
<i>P</i>	0.641	0.000	0.845	0.000	0.942	0.000

## 4. Discussion

Cerebral infarction, a prevalent condition, poses significant risks to the health of elderly individuals due to its high rates of disability and mortality. Timely and effective treatment after disease onset is essential for ensuring patient survival<sup>[5,6]</sup>. Despite successful initial treatment, many patients experience sequelae such as physical impairments, which disrupt daily life and negatively affect psychological well-being. Common negative emotions include depression and anxiety, which decrease treatment compliance and hinder recovery. To facilitate patient recovery, proactive nursing interventions are necessary. Conventional care often yields limited results, whereas quality nursing services adopt a “people-oriented” approach<sup>[7,8]</sup>, effectively alleviating patients’ negative emotions, enhancing cognitive awareness, and promoting the smooth implementation of care to achieve better recovery outcomes and prognoses.

This study evaluated the clinical effects of quality nursing interventions for geriatric cerebral infarction patients. The experimental group, which received quality nursing, reported significantly higher satisfaction levels than the control group ( $P < 0.05$ ). Additionally, daily living ability scores in the experimental group were notably higher compared to the control group ( $P < 0.05$ ). Furthermore, quality of life metrics, including mental health, physiological function, and social function scores, were significantly improved in the experimental group ( $P < 0.05$ ). These findings align with the results of Zhao’s study<sup>[9]</sup>. According to the study, the emotional and communication scores of the observation group were higher than those of the control group after nursing interventions, with statistically significant differences ( $P < 0.05$ ). Additionally, nursing satisfaction was significantly higher in the observation group compared to the control group ( $P < 0.05$ ).

The observed improvements can be attributed to several aspects of quality nursing interventions. Enhanced health education helps patients understand disease-related factors, corrects misconceptions, and facilitates seamless treatment and nursing care. Psychological interventions address patients’ emotional changes, fostering a positive and optimistic outlook while enhancing treatment compliance. Tailored dietary interventions ensure adequate nutrition, strengthening immunity and resistance. Gradual rehabilitation exercises, tailored to patient tolerance levels, effectively restore physical function. Measures such as passive joint exercises, bed mobility training, and

progressive activities like sitting up, standing, and walking further contribute to recovery. Additionally, daily inspections reduce the risk of complications and accidents, promoting a safer recovery environment <sup>[10]</sup>.

## 5. Conclusion

In conclusion, quality nursing interventions significantly improve patient outcomes in the treatment of geriatric cerebral infarction. These measures enhance patient satisfaction, daily living ability, and quality of life compared to conventional nursing care, making them highly suitable for widespread clinical adoption.

## Disclosure statement

The author declares no conflict of interest.

## References

- [1] Li X, 2022, The Effect of Extended Nursing Care on Treatment Compliance and Rehabilitation of Patients with Cerebral Infarction. *J Pract Liver Dis*, 25(3): S13.
- [2] Meng X, 2021, Observation on the Application Effect of Quality Nursing Service in the Nursing of Senile Cerebral Infarction. *China Health Nutr*, 31(15): 1–2.
- [3] Li X, Yao J, Han X, et al., 2023, Discussion on the Effect of Personalized Psychological Care on Elderly Patients with Cerebral Infarction. *Life Sci Instrum*, 21(z1): 205.
- [4] Zhang Q, 2023, Research Progress of Rehabilitation Nursing for Sequelae of Cerebral Infarction. *Life Sci Instrum*, 21(z1): 496.
- [5] Sun M, Wang X, Shen M, et al., 2023, Effects of Personalized Psychological Care on Anxiety and Depression in Patients with Cerebral Infarction. *Int J Psychiatry*, 50(3): 550–552 + 556.
- [6] Song Y, Lin H, Wu H, 2021, Application Value of Standardized Nursing Care in Patients with Cerebral Infarction and Its Effect on Patients' Limb Function. *J Changchun Univ Tradit Chin Med*, 37(2): 401–403.
- [7] Lei Q, 2021, Observation on the Effect of Anticipatory Nursing Intervention on the Occurrence of Deep Vein Thrombosis in Long-Term Bedridden Elderly Patients with Cerebral Infarction. *Thromb Hemost*, 27(6): 1038–1039.
- [8] Shang C, Mao Y, Chen L, et al., 2021, Effect of Personalized Psychological Care on Elderly Patients with Cerebral Infarction. *Int J Psychiatry*, 48(5): 923–926.
- [9] Zhao X, 2022, The Effect of Quality Nursing Service Applied to Elderly Patients with Cerebral Infarction. *China Health Nutr*, 32(19): 76–78.
- [10] Liu Y, 2022, Analysis of the Application Effect of General Practice Nursing on Elderly Patients with Cerebral Infarction – A Review of General Practice Nursing. *China Radiat Health*, 31(6): S3.

### Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.