The Impact of Psychological Nursing Intervention on Negative Emotions and Quality of Life in Elderly Patients with Chronic Hemodialysis for Uremia

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Abstract: Objective: This study aimed to investigate the impact of psychological nursing intervention on negative emotions and quality of life in elderly patients undergoing chronic hemodialysis for uremia. Methods: From January 2022 to June 2023, a total of 80 elderly patients receiving chronic hemodialysis for uremia were selected for the study. They were divided into two groups using a sealed envelope method, with 40 patients in each group. The control group received routine nursing interventions, while the observation group received psychological nursing intervention. Results: After 2 weeks of intervention, the observation group had significantly lower scores for negative emotions (P<0.05), higher scores for quality of life (P<0.05), and greater nursing satisfaction (P<0.05) compared to the control group. Conclusion: Implementing psychological nursing intervention for elderly patients undergoing chronic hemodialysis for uremia can reduce negative emotions, improve quality of life, and increase nursing satisfaction. This intervention holds clinical significance.

Keywords: uremia, chronic hemodialysis, routine nursing intervention, psychological nursing intervention, negative emotions, quality of life

1. Introduction

Uremia is a severe disease, and chronic hemodialysis is a commonly used treatment method. It can continuously remove metabolic waste from the body, help eliminate excess water, and effectively correct various conditions such as electrolyte and acid-base imbalances, thus accelerating partial or complete patient recovery rates [1]. However, hemodialysis involves complex procedures and demands high operational skills from healthcare professionals [2]. Inadequate nursing care during hemodialysis may lead to psychological issues in patients, reduce treatment confidence, and even increase the risk of complications, thereby affecting the patients' quality of life. This study was conducted from January 2022 to June 2023, involving 80 elderly patients receiving chronic hemodialysis for uremia. The application effects of psychological nursing intervention were investigated, as detailed in the following report.

2. Data and Methods

2.1 General data

From January 2022 to June 2023, a total of 80 elderly patients undergoing chronic hemodialysis for uremia were selected for this study. The patients were divided into two groups using a sealed envelope method, with 40 patients in each group. The control group consisted of 23 males and 17 females; their ages ranged from 61 to 80 years with an average age of (70.74±2.35) years. Their weights ranged from 40 to 87 kg with an average weight of (63.79±3.24) kg. The duration of dialysis ranged from 6 to 54 months with an average duration of (30.32±4.51) months. Among them, 25 cases had chronic glomerulonephritis, 11 cases had diabetic nephropathy, and 4 cases had hypertensive nephropathy. The observation group comprised 22 males and 18 females; their ages ranged from 61 to 79 years with an average age of (70.36±2.31) years. Their weights ranged from 40 to 86 kg with an average weight of (63.34±3.20) kg. The duration of dialysis ranged from 6 to 55 months with an average duration of (30.79±4.55) months. Among them, 23 cases had chronic glomerulonephritis, 12 cases had diabetic nephropathy, and 5 cases had hypertensive nephropathy. The two groups exhibited comparable characteristics without significant differences (P>0.05).

2.2 Methods

Control Group: Routine nursing interventions were implemented, including providing basic knowledge about hemodialysis, instructing patients on medication administration, outlining post-dialysis care points, and guiding patients in performing home care.

Observation Group: Psychological nursing interventions were conducted, incorporating the following aspects: (1) Health Education: Proactively assess the patient's existing knowledge and combine it with diagnostic results to provide tailored health education. Communicate accurate disease diagnosis, relevant test findings, and the rationale behind abnormal indicators and disease progression. Explain treatment plans based on the patient's lifestyle habits and medical history, emphasizing expected outcomes and treatment precautions. Enhance patients' accurate understanding of their condition and hemodialysis, promoting adherence to clinical treatment. (2) Psychological Care: Actively assess the patient's psychological state, engage in open communication, and understand emotional fluctuations. Promptly identify issues such as low treatment confidence and lack of enthusiasm for treatment. Introduce cases illustrating positive treatment outcomes and enhance patients' accurate understanding of the disease. Boost patients' treatment confidence and adherence. If resistance towards treatments like hemodialysis is detected, analyze the reasons behind this resistance. Utilize psychological techniques to help patients overcome these issues, fostering accurate perceptions of the disease and treatment while regulating their psychological state. (3) Cognitive Correction: Chronic hemodialysis is a lifelong commitment, leading many patients to experience intense negative emotions and harboring misconceptions about their condition and treatment. Create a safe and confidential environment, allowing patients to express their genuine thoughts and feelings. Guide patients in self-assessing their thoughts, differentiating between thoughts and reality. Gradually pinpoint the true concerns underlying their anxieties and separate inaccurate thoughts from their mindset. (4) Family Support: Actively communicate with patients' family members, elucidating the emotional and physiological impact of hemodialysis and uremia on the patient. Address the emotional and physical distress patients currently experience, highlighting reasons such as financial burden or concerns about their children's future. Educate family members about the patient's psychological challenges, foster a private atmosphere for patient-family discussions, encourage increased support and encouragement from family members, and instill the patient with treatment confidence through an optimistic and positive outlook towards their condition. Encourage patients to participate in outdoor activities when emotionally ready, facilitating social engagement, a more relaxed mindset, and enhanced adherence to nursing care.

2.3 Observational Indicators

(1) Negative Emotions: Negative emotions were evaluated using the Self-Rating Anxiety Scale [3] and the Self-Rating Depression Scale [4]. The assessment consisted of 20 items with a total score of 80. A lower score indicates better outcomes. (2) Quality of Life: The World Health Organization Quality of Life Brief Scale (WHOQOL-BREF) [5] was used to assess participants' quality of life. The domains evaluated were environment, physical health, psychological health, and social relationships. The assessment included 8, 7, 6, and 3 items respectively, with scores ranging from 1 to 5 for each item. A higher score indicates better quality of life. (3) Satisfaction: Nursing satisfaction was assessed using a nursing satisfaction questionnaire, categorized as "very satisfied", "satisfied", and "unsatisfied".

2.4 Statistical Methods

Statistical analysis was performed using SPSS 26.0. Descriptive statistics were presented as [n (%)]. The chi-square test was used for categorical data, and continuous data were expressed as () and analyzed using the t-test. A significance level of $P<0.05$ indicated statistical significance.

3. Results

3.1 Negative Emotions in Both Groups

Before the intervention, there were no significant differences in negative emotion scores between the two groups ($P>0.05$). After 2 weeks of intervention, the negative emotion scores in both groups decreased compared to before the intervention. The observation group had significantly lower negative emotion scores than the control group ($P<0.05$). See Table 1 below.

Table 1. Negative Emotions in Both Groups (n=40 cases, $\bar{x} \pm s$, scores)

Group	Anxiety Score		Depression Score	
	Before Intervention	Intervention (2 Weeks	Before Intervention	Intervention (2 Weeks
Observation Group	56.43±3.67	37.02±3.21[a]	59.98±3.87	38.31±3.45[a]
Control Group	55.55±3.62	44.18±3.35[a]	59.32±3.83	45.79±3.56[a]
t-value	0.897	5.423	0.874	5.402
P-value	0.211	0.001	0.224	0.001

Note: Compared to pre-intervention within the same group, [a]P<0.05.

3.2 Quality of Life in Both Groups

Before the intervention, there were no significant differences in quality of life scores between the two groups (P>0.05). After 2 weeks of intervention, the quality of life scores in both groups increased compared to before the intervention. The observation group had significantly higher quality of life scores than the control group (P<0.05). See Table 2 below.

Table 2. Quality of Life in Both Groups (n=40 cases, $\bar{x} \pm s$, scores)

Group	Environment		Physical		Psychological		Social Relationships	
	Before Intervention	Intervention (2 Weeks	Before Intervention	Intervention (2 Weeks	Before Intervention	Intervention (2 Weeks	Before Intervention	Intervention (2 Weeks
Observation Group	20.12±3.07	29.97±3.25a	17.23±2.55	28.69±2.86a	14.32±2.21	25.76±2.58a	7.23±0.75	12.76±0.89a
Control Group	20.65±3.12	26.03±3.19a	17.68±2.59	24.12±2.77a	14.78±2.26	21.74±2.52a	7.46±0.77	10.65±0.84a
t-value	0.965	5.782	0.951	5.745	0.933	5.711	0.912	5.684
P-value	0.201	0.001	0.207	0.001	0.214	0.001	0.221	0.001

Note: Compared to pre-intervention within the same group, [a]P<0.05.

3.3 Satisfaction in Both Groups

The observation group exhibited greater nursing satisfaction compared to the control group (P<0.05). See Table 3 below.

Table 3. Satisfaction in Both Groups (n=40 cases, n/%)

Group	Very Satisfied	Satisfied	Unsatisfied	Nursing Satisfaction
Observation Group	24 (60.00%)	15 (37.50%)	1 (2.50%)	39 (97.50%)
Control Group	16 (40.00%)	16 (40.00%)	8 (20.00%)	32 (80.00%)
X²-value	-	-	-	5.231
P-value	-	-	-	0.001

4. Discussion

Maintenance hemodialysis is a commonly used clinical treatment for uremia, effectively eliminating toxins and excess substances from the bloodstream, extending survival, and maintaining normal activities of life [6]. However, most elderly patients with uremia require lifelong treatment to ensure their quality of life. Many of these patients suffer from weakened physical conditions and various underlying diseases, requiring high demands for hemodialysis. Consequently, their quality of life declines, and negative emotions become more pronounced [7]. Long-term hemodialysis can also increase financial burdens and disrupt family harmony, leading to a higher likelihood of psychological issues arising. With the improvement and evolution of medical concepts, nursing has become a common approach for maintaining maintenance hemodialysis, assisting patients in completing hemodialysis smoothly, ensuring its effectiveness and safety. However, routine nursing interventions often focus more on treatment procedures and overlook patients' psychological needs, resulting in strong psychological stress reactions. Psychological nursing intervention is a highly advocated nursing model today and a significant component of nursing work. It assists clinical practice by helping patients improve their psychological state, stabilize emotions, and create a positive mental environment, allowing patients to face their illness and treatment optimistically and ultimately improving clinical outcomes and enhancing quality of life [8].This study demonstrates that patients in the observation group had significantly lower negative emotion scores, higher quality of life scores, and greater nursing satisfaction scores after intervention compared to the control group. This suggests that the psychological nursing intervention used in the observation group was significantly superior to routine nursing intervention. This is primarily due to the fact that psychological nursing intervention is centered around the patient, considering their cognitive, psychological, and communication needs. Through a series of scientifically designed nursing measures, it proactively addresses the patients' reasonable needs, ensuring patient satisfaction and expediting their recovery process.

In conclusion, psychological nursing intervention for elderly patients undergoing maintenance hemodialysis for uremia can reduce negative emotions, enhance quality of life, and increase nursing satisfaction, signifying its significant clinical value.

References

[1] Li QL. Exploring the Positive Impact of Targeted Psychological Nursing on Uremic Patients Undergoing Hemodialysis. China Health and Nutrition. 2020;30(12):181.

[2] Gao L. The Impact of Psychological Nursing Based on Control Theory on Negative Emotions, Disease Shame, and Quality of Life of Uremia Patients Undergoing Hemodialysis. Journal of Qiannan National Medical College. 2022;35(3):205-207.

[3] Li FR. The Impact of Psychological Nursing Based on Control Theory on Negative Emotions, Disease Shame, and Quality of Life of Uremia Patients Undergoing Hemodialysis. International Journal of Nursing. 2020;39(21):3899-3902.

[4] Yuan JC. Evaluation of the Effect of Psychological Nursing Intervention on Anxiety and Depression in Maintenance Hemodialysis Patients with Uremia. World Latest Medical Information Digest (Continuous Electronic Journal). 2020;20(59):253-254.

[5] Zhao HF, Li B. The Impact of High-Quality Nursing Combined with Psychological Nursing on Hemodialysis Patients with Uremia. Clinical and Medical Literature Electronic Journal. 2020;7(95):76,78.

[6] Ji SS, Cao HY. The Impact of Psychological Nursing Intervention on the Quality of Life of Elderly Uremia Patients Undergoing Maintenance Hemodialysis. Maternal and Child World. 2023(11):169-171.

[7] Gao LQ. The Impact of Observational Psychological Nursing Intervention on the Quality of Life of Elderly Patients with Uremia Undergoing Maintenance Hemodialysis. Health Must Read. 2023(4):165-166.

[8] Huang HP. Value Analysis of Applying Psychological Nursing Intervention in the Treatment of Elderly Uremia Patients Undergoing Maintenance Hemodialysis. World Latest Medical Information Digest (Continuous Electronic Journal). 2020;20(95):317-318.