Impact of Preoperative Confidence Nursing on Anxiety and Self-Efficacy in Patients Undergoing Surgery Under Local Anesthesia (Postprint)

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Abstract

Objective: To investigate and analyze the effect of preoperative confidence nursing on fear and self-efficacy in patients undergoing surgery under local anesthesia. Methods: One hundred twenty patients scheduled for surgery under local anesthesia between October 2020 and December 2022 were randomly divided into a control group (n=60) and an observation group (n=60) using a random number table method. The control group received conventional nursing intervention for local anesthesia surgery, while the observation group received additional preoperative confidence nursing. Fear status (FVAS score), self-efficacy (GSES scale), and patient satisfaction with nursing care (HCAHPS scale) were compared between the two groups before and after the intervention. Results: Prior to nursing intervention, no statistically significant differences were observed in FVAS scores or GSES scale scores between the two groups ($P>0.05$). Following nursing intervention, the observation group exhibited lower FVAS scores, higher GSES scale scores, and higher HCAHPS scale scores compared to the control group, with statistically significant differences ($P<0.05$). Conclusion: Preoperative confidence nursing significantly improves fear and self-efficacy status in patients undergoing surgery under local anesthesia, yields higher clinical satisfaction, and demonstrates relatively high application value in this patient population.

Full Text

Preamble

Title: Study on the Influence of Preoperative Confidence Care on Fear and

Self-Efficacy Status in Patients Undergoing Local Anesthesia Surgery
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Abstract

Objective: To investigate and analyze the effect of preoperative confidence care on fear and self-efficacy status in patients undergoing local anesthesia surgery.

Methods: Patients undergoing local anesthesia surgery were divided into a control group (n=) and an observation group (n=) using a random number table method. The control group received routine nursing care for local anesthesia surgery, while the observation group received preoperative confidence care in addition to routine care. Fear status (FVAS score), self-efficacy (GSES scale), and patient satisfaction with nursing care (HCAHPS scale) were compared between the two groups before and after the nursing intervention.

Results: There was no statistically significant difference in FVAS scores and GSES scale scores between the two groups before the intervention (P>). After the intervention, the observation group showed lower FVAS scores, higher GSES scale scores, and higher HCAHPS scale scores compared to the control group, with statistically significant differences (P<).

Conclusion: Preoperative confidence care can significantly improve fear and self-efficacy status in patients undergoing local anesthesia surgery, resulting in higher clinical satisfaction and demonstrating relatively high application value in this patient population.

Keywords: preoperative confidence care; local anesthesia surgery; fear state; self-efficacy state

Introduction

Patients undergoing local anesthesia surgery represent a special clinical population. Since local anesthesia has minimal impact on cardiopulmonary function and effectively controls anesthesia-related complications while allowing patients to remain relatively conscious, psychological and emotional stress responses to surgery become particularly prominent. This represents a critical area requiring improvement and a key focus of nursing interventions. Furthermore, surgical patients commonly experience low self-efficacy, which is associated with insufficient confidence in prognosis and fear-related emotions. Therefore, improving self-efficacy status in surgical patients is highly meaningful for ameliorating adverse psychological and emotional stress responses.

Nursing care, as a clinical intervention that significantly influences patients' psychological and emotional states, demonstrates considerable effectiveness in improving adverse psychological and emotional responses, though outcomes vary across different nursing models. Preoperative psychological nursing, as a targeted intervention addressing patients' treatment and prognosis confidence, has been relatively understudied in local anesthesia surgery patients. Consequently, this study investigates the influence of preoperative confidence care on fear and self-efficacy status in local anesthesia surgery patients.

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1. Materials and Methods

1.1 Participants and Grouping

Patients undergoing local anesthesia surgery were divided into a control group (n=) and an observation group (n=) using a random number table method. Baseline characteristics were comparable between groups (P>), indicating balanced groups.

Control Group Demographics: Included males and females, aged years with mean age of ( ) years. Education levels: primary school (cases), junior high (cases), high school (cases), technical secondary school (cases), and college or above (cases). Surgery types: ophthalmic surgery (cases), oral and maxillofacial surgery (cases), gynecological surgery (cases), and other surgeries (cases).

Observation Group Demographics: Included males and females, aged years with mean age of ( ) years. Education levels: primary school (cases), junior high (cases), high school (cases), technical secondary school (cases), and college or above (cases). Surgery types: ophthalmic surgery (cases), oral and maxillofacial surgery (cases), gynecological surgery (cases), and other surgeries (cases).

This study was approved by the hospital's Medical Ethics Committee.

Inclusion Criteria: (1) Aged years; (2) Undergoing local anesthesia surgery at our hospital; (3) Provided informed consent and signed consent form.

Exclusion Criteria: (1) Previous surgical history; (2) Special conditions such as pregnancy or lactation; (3) Communication barriers; (4) Illiteracy; (5) Cognitive impairment; (6) Psychiatric history; (7) Chronic diseases such as hypertension or coronary heart disease; (8) History of cerebrovascular disease; (9) Incomplete clinical data.

1.2 Interventions

Control Group: Received routine nursing care for local anesthesia surgery, including comprehensive assessment of patients' conditions, surgery, and other

aspects, targeted health education, answering patient and/or family questions, and counseling for abnormal psychological and emotional problems.

Observation Group: Received preoperative confidence care in addition to routine care. A detailed and comprehensive assessment of patients' treatment and prognosis confidence was conducted preoperatively, and confidence care measures were formulated based on assessment results. Patients were categorized into three confidence levels: low, moderate, and adequate.

- **Adequate Confidence:** Patients received motivational communication to further enhance surgical coping confidence and were guided to communicate with other patients to consolidate and strengthen their treatment confidence.
- **Moderate Confidence:** In addition to the above measures, patients' knowledge and understanding of disease and surgical treatment were assessed to identify individual knowledge gaps. Health education content was supplemented based on these gaps, with implementation methods selected according to each patient's personality traits and comprehension ability, while psychological nursing measures were intensified and applied more frequently.
- **Low Confidence:** Based on the above measures, psychological nursing was further strengthened. Family members received health education and guidance on basic methods for 疏导 ing adverse psychological emotions. While nursing staff intensified preoperative psychological care, family members were guided to provide supplementary psychological and emotional nursing interventions. Successful surgical cases were shared and explained.

The frequency of nursing care was increased preoperatively, with confidence care interventions continuing from preoperative period until surgery completion, supplemented with non-verbal encouragement and support such as eye contact and touch.

1.3 Outcome Measures

Fear Status (FVAS Score): Evaluated using the FVAS scoring method before and after nursing intervention. The post-intervention assessment was conducted at the point of most severe intraoperative fear. The scoring range is 0-10 points, with patients selecting scores based on their perceived fear level: 0 points = no fear, 1-3 points = mild fear, 4-6 points = moderate fear, and 7-10 points = severe fear. Higher scores indicate more severe fear.

Self-Efficacy (GSES Scale): Evaluated using the GSES scale before and after intervention. The scale includes 10 assessment items, each scored 1-4 points, with total scores ranging from 10-40 points. Scores of 10-19 indicate very low efficacy, 20-29 indicate low efficacy, 30-34 indicate high efficacy, and 35-40 indicate very high efficacy.

Patient Satisfaction with Nursing Care (HCAHPS Scale): Evaluated using the HCAHPS scale before discharge. The scale includes 18 assessment items covering five dimensions: service attitude, professional competence, patient care, nursing management, and health education. Each dimension is converted to a 100-point scale, with higher scores indicating higher satisfaction.

1.4 Statistical Methods

Data analysis was performed using SPSS software. Measurement data are expressed as mean ± standard deviation ($\bar{x} \pm s$) and count data as [n(%)]. Independent samples t-tests and ^{2} tests were used for inter-group comparisons of measurement and count data, respectively. Ranked data were analyzed using rank-sum tests. The significance level was set at α=0.05, with P<0.05 considered statistically significant.

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2. Results

2.1 Comparison of FVAS Scores Between Groups

There was no statistically significant difference in FVAS scores between the two groups before the intervention (P>0.05). After the intervention, the observation group showed significantly lower FVAS scores compared to the control group (P<0.05) .

Comparison of FVAS Scores Between Groups Before and After Nursing Intervention

2.2 Comparison of GSES Scale Scores Between Groups

There was no statistically significant difference in GSES scale scores between the two groups before the intervention (P>0.05). After the intervention, the observation group showed significantly higher GSES scale scores compared to the control group (P<0.05) .

Comparison of GSES Scale Scores Between Groups Before and After Nursing Intervention

2.3 Comparison of Patient Satisfaction with Nursing Care

The observation group demonstrated significantly higher HCAHPS scale scores compared to the control group (P<0.05) .

Comparison of Patient Satisfaction with Nursing Care Between Groups (points)

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3. Discussion

Local anesthesia surgery is widely used clinically, and research related to various aspects of local anesthesia surgery is abundant. Because patients undergoing local anesthesia remain relatively conscious, their psychological and emotional stress responses are particularly prominent. Abnormal psychological and emotional fluctuations are extremely detrimental to the smooth progress of surgery, making interventions targeting psychological and emotional aspects in local anesthesia surgery patients a high priority. Fear represents an extremely prominent aspect in these patients, and the need for prevention and intervention is substantial. Controlling fear not only improves patient treatment compliance but also effectively controls adverse physiological stress responses, including beneficial effects on hemodynamics and stress hormones, which are closely related to the smoothness of surgery and postoperative recovery outcomes and speed. Therefore, fear control effectiveness represents an important aspect for evaluating interventions.

Additionally, self-efficacy is an effective indicator reflecting patients' treatment and prognosis confidence. Its fluctuation in local anesthesia surgery patients can significantly influence treatment attitudes, behaviors, and emotional responses, and is closely related to patients' quality of life. Consequently, improving self-efficacy in local anesthesia surgery patients is highly necessary. Recent clinical research on interventions for local anesthesia surgery patients demonstrates that nursing care provides effective intervention across multiple domains including treatment compliance, basic living, psychological emotions, and other aspects, though outcomes vary across different nursing models. Identifying nursing models more suitable for local anesthesia surgery represents a key focus of clinical research. Preoperative confidence care, as a targeted nursing model addressing preoperative confidence in surgical patients, remains extremely understudied in local anesthesia surgery patients.

Our study results demonstrate that preoperative confidence care in local anesthesia surgery patients yields significantly better outcomes than routine nursing care, as evidenced by lower post-intervention FVAS scores and higher GSES and HCAHPS scale scores ($P<0.05$). These findings suggest that preoperative confidence care offers prominent advantages in this patient population, effectively controlling fear while improving treatment confidence and gaining greater patient recognition.

The mechanisms underlying these benefits likely involve targeted interventions and counseling addressing patients' uncertainty about disease and prognosis and fear emotions. Through tailored nursing interventions, patients' disease and treatment knowledge is effectively enhanced, reducing disease uncertainty and fear while improving prognosis confidence. This approach also addresses patients' questions, helping control psychological doubts and further strengthening treatment confidence. In summary, preoperative confidence care significantly improves fear and self-efficacy status in local anesthesia surgery patients,

yields higher clinical satisfaction, and demonstrates relatively high application value in this patient population.

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Note: Figure translations are in progress. See original paper for figures.