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Original Article

Effect of human-oriented management mode on nursing management in the operating room

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Abstract: Objective: To study and discuss the effect of human-oriented management mode on the satisfaction rate of patients undergoing surgery. Methods: A total of 160 surgical patients admitted to Shandong Provincial Hospital Affiliated to Shandong University from July 2016 to July 2017 were randomly divided into an observation group and a control group, with 80 cases in each group. The observation group adopted human-oriented management mode for nursing management in the operating room, and conventional nursing management mode was performed in the control group. The patient satisfaction rate of nursing, nursing errors, nursing disputes, and the enthusiasm of nurses in the two groups were observed and compared. Results: The operation time and intraoperative bleeding volume in observation group were significantly less than those in the control group (both P<0.001). In the observation group, the rates of perioperative nursing errors (0.00%) and nursing disputes (0.00%) were significantly lower than those in control group (5.00%, P=0.043; 6.25%, P=0.023). The overall satisfaction rate in the observation group was 96.25%, which was significantly higher than that in the control group (80.00%, P=0.002). Conclusion: The application of human-oriented nursing management mode for operating room nursing can significantly improve patient satisfaction of nursing measures as well as reduce perioperative nursing disputes and errors, as a safe and reliable mode. Therefore, it is worthy of clinical application and generalization.

Keywords: Human-oriented management mode, operating room, nursing management

Introduction

The operating room is an important place for treatment in modern hospitals [1, 2]. In operating room, nurses should not only take care of patients and deal with various situations, but also cooperate with the doctors and complete the operation, so that they have heavy medical tasks and mental stress. Nursing disputes and errors occur occasionally, and these carry great importance by hospital managers. Recently, human-oriented nursing management mode has become a popular concept with a core of human-oriented thinking. In this mode, the emotions of medical staff, especially nurses, in operating room is eased, so that a good working environment can be created. Patient satisfaction about nursing can be improved with this approach and the occurrence of disputes between nurses and patients can be decreased [3, 4]. The management mode has achieved good results and socioeconomic benefits in all disciplines of clinical nursing, but its application in operating room management is not clear yet [5, 6]. Therefore, this study selected 160 patients in the operating room of Shandong Provincial Hospital Affiliated to Shandong University from July 2016 to July 2017 as research subjects and explored the application effect of human-oriented management mode on nursing management in operating room.

Materials and methods

General data

The research program was approved by the Ethics Committee of Shandong Provincial Hospital Affiliated to Shandong University. Informed consents were obtained from all subjects.

A total of 160 patients in operating room from July 2016 to July 2017 were selected and divided into observation group and control group according to a random number table, with 80 cases in each group. The observation group adopted human-oriented management mode for nursing management in operating room, and conventional nursing management mode was performed in the control group.

Inclusion criteria: Patients who needed surgical treatment according to clinical diagnosis; patients without surgical contraindications; patients with age greater than 18 and younger than 65 years old; patients with normal level of intelligence; patients who could cooperate with satisfaction survey after surgery.

Exclusion criteria: Patients with surgical contraindications; patients with age younger than 18 or older than 65 years old; patients who were unable to cooperate with subsequent nursing satisfaction survey.

Interventional methods

Conventional nursing management mode was adopted for 80 patients in the control group, which included establishing effective communication mechanism, setting team development goals, defining team code of conduct, and perfecting rules and regulations, etc.

In the observation group, on the basis of conventional nursing management, human-oriented management was also carried out, including 3 specific measures. First, human-oriented care was tested, where large collective staff in the operating room focused on unity and cooperation. Meanwhile, working in the operating room was stressful with heavy medical tasks and nursing disputes and errors occurred frequently, so that managers needed to timely relieve pressure and adjust emotions. They also assessed the mood swing of nurses so that they could be reasonable and caring leaders, and so that the working atmosphere of operating room could be harmonious and positive [7]. Second, human-oriented division of labor was tested. Operating room nursing needed close cooperation. The relationships between doctors and nurses, between anesthetists and nurses, and between nurses needed to be well coordinated. Human-oriented division of labor could improve work efficiency and reduce nursing disputes and errors. For example, surgical materials needed to be well-prepared; surgical procedures had to be performed in order; surgical service awareness of nurses needed to be cultivated, so that nurses better understood operating procedures and key supporting points. With this approach, surgical related matters could be properly arranged according to the characteristics of different doctors [8]. Third, human-oriented incentives were tested. Operating room managers should communicate with nurses timely to create a harmonious atmosphere and fully mobilize the enthusiasm of nurses in operating room. Also, flexible division of labor should be arranged according to nurses' specialties and work characteristics to ensure the effective implementation of human-oriented nursing management in operating room [9].

Observation index

Patient satisfaction of nursing was the main observation index of this study. The basic operation indices (including operation time and intraoperative bleeding volume) within one week of nursing and the occurrence rates of perioperative nursing disputes and errors in both groups was observed [10].

Statistical processing

The data were processed by using SPSS18 statistical software. The measurement data are expressed as mean ± standard deviation ($\bar{x}$ ± sd), and independent samples t-test was used for those comparison between groups. The count data was expressed as rate, and χ^2 test was used for those comparisons between groups. When $P<0.05$, the difference was statistical significant.

Results

General data

In the observation group, there were 39 males and 41 females, with an age range of 20-41 years old, an average age of 26.8±4.3 years old. The educational level was 24 cases of secondary school or below, 45 cases of junior college and 11 cases of undergraduate or above. In the control group, the age range of patients was 24-40 years old, with an average age of 27.2±4.4 years old, including 43 males and 37

Table 1. Comparison of the general data between two groups

Group	Age (year old)	Gender (male/female)	Education		
			Secondary school and below	Junior college	Undergraduate and above
Observation group (n=80)	26.8±4.3	39/41	24	45	11
Control group (n=80)	27.2±4.4	43/37	27	41	12
t/χ^2	0.582	0.527		0.406	
P	0.562	0.400		0.816	

Table 2. Comparison of operation index between the two groups ($\overline{x}$ ± sd)

Group	Operation time (min)	Intraoperative bleeding volume (mL)
Observation group (n=80)	130.3±36.0	216.0±21.2
Control group (n=80)	153.1±42.0	258.0±31.6
t	3.687	9.872
P	<0.001	<0.001

Table 3. Comparison of nursing errors and nursing disputes rate between the two groups

Group	Nursing error	Nursing dispute
Observation group (n=80)	0 (0.00)	0 (0.00)
Control group (n=80)	4 (5.00)	5 (6.25)
χ^2	4.103	5.161
P	0.043	0.023

females. The educational level was 27 cases of secondary school or below, 41 cases of junior college and 12 cases of undergraduate or above. The differences of age, gender, educational level and other general data between the two groups were not statistically significant (all P>0.05), so the two groups were comparable. See **Table 1**.

Comparison of operation index between the two groups

The operation time and intraoperative bleeding volume in the observation group were less than those in the control group (both P<0.001). See **Table 2**.

Occurrence of nursing errors and disputes in both groups

The rates of nursing errors and nursing disputes in the observation group were both 0.00%. The rates of nursing errors and disputes in the control group were 5.00% and 6.25% respectively. The differences between the two groups were statistically significant (P=0.043, P=0.023). See **Table 3**.

Patient satisfaction rate of nursing in two groups

There were 46 cases of great satisfaction, 31 cases of satisfaction and 3 cases of dissatisfaction in the observation group, with a total satisfaction rate of 96.25%. There were 30 cases of great satisfaction, 34 cases of satisfaction and 16 cases of dissatisfaction in the control group, with a total satisfaction rate of 80.0%. The satisfaction rate in the observation group was significantly higher than that in the control group (P=0.002). See **Table 4**.

Discussion

Operating room nursing is one of the important parts of the hospital and the performance appraisal; the quality of nursing in operating room directly affects the recovery speed and quality of patients undergoing surgery. Human-oriented management in operating room not only reduces nursing errors and disputes, improves the patient satisfaction about nursing, but also promotes nurses' enthusiasm for work [11, 12]. With the improvement of people's living standards, new surgical techniques and widespread application of new medical devices, the requirement of nursing quality in operating room is increasingly demanded by patients. Nursing managers should implement human-oriented management mode to encourage nurses in operating room to fully mobilize their enthusiasm and creativity, also to reduce their psychological pressure and negative emotions, so that the work efficiency can be improved [13, 14]. In addition, human-oriented nursing management in operating room also maximizes the cohesion among nursing staff, improves the quality of physical nursing servic-

Table 4. Comparison of patient satisfaction rate of nursing between two groups

Group	Great satisfaction	Satisfaction	Dissatisfaction	Satisfaction rate
Observation group (n=80)	46 (57.5)	31 (38.75)	3 (3.75)	96.250
Control group (n=80)	30 (37.50)	34 (42.50)	16 (20.00)	80.000
χ^2				10.093
P				0.002

es, and reduces the incidence of adverse nursing events [15, 16]. In addition, it improves the medical procedures and further clarifies the division of labor in operating room, which reduces the waste of human resources and improves the economic and social benefits of hospitals [17, 18].

This study shows that operation time and bleeding volume in the observation group were significantly less than those in the control group, indicating that with the implementation of human-oriented nursing management mode in operating room, the mental pressure of doctors and nurses was relieved, with better mutual cooperation, tacit understanding and surgical efficiency [19, 20].

Wu analyzed 200 surgical patients and found that the patient satisfaction rates of nursing, surgical doctors and nursing staffs in the experimental group were significantly higher than those in the control group. The occurrence of disputes in the experimental group was significant lower than that in the control group (all P<0.05) [21]. Chen's study about the application effect of human-oriented management concepts on nursing management in operating room has also suggested favorable results: effective reduction of nurse-patient disputes and improvement of patient satisfaction of treatment and worth of clinical generalization [22]. A study by Li et al. has also pointed out that the concept of human-oriented management creates favorable conditions for surgery, ensures the safety of surgical patients, and improves the nurse-patient relationship, suggesting that it is worthy of clinical application [23]. In this study, there were 46 cases of great satisfaction, 31 cases of satisfaction and 3 cases of dissatisfaction in the observation group, with a total satisfaction rate of 96.25%. There were 30 cases of great satisfaction, 34 cases of satisfaction and 16 cases of dissatisfaction in the control group, with a total satisfaction rate of 80.0%. The difference of satisfaction rates between the two group was statistically significant (P=0.002). There was no nursing disputes or errors in the observation group, however, there were 4 cases of nursing disputes and 5 cases of nursing errors in the control group. The occurrences of nursing disputes and errors in the observation group were significantly lower than those in the control group (P=0.043, P=0.023). These findings are consistent with previous studies. We conclude that through human-oriented management, the pressure of nurses in operating room are relieved, which leads to a better working condition, higher patient satisfaction rate as well as less nursing errors and disputes, thus, the image of hospital and medical staff was improved.

However, this study also has some limitations, such as insufficient sample size and a small number of observation indicators. Further study of larger sample size and more research indicators is needed. Nevertheless, the current situation of hospital is many hospital beds and surgical patients, but the proportion of nursing staff is small, so that large-scale application of human-oriented nursing is limited by objective conditions.

In summary, implementation of human-oriented management in the operating room can significantly improve patient satisfaction, decrease perioperative nursing errors and disputes, as a safe and reliable mode, it is worthy of further promotion in clinic.

Disclosure of conflict of interest

None.

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