Feifei Peng Guangchi Xu Caihong Zhu Lanchun Sun Bo Dong Yin Meng Songtao Liu Xinxin Zhang Tao Liu

To explore the influence of human-oriented nursing mode on the self-care ability, unhealthy emotion and quality of life of patients with benign prostatic hyperplasia (BPH), 147 patients with BPH admitted to our hospital from February 2018 to August 2019 were selected and all patients were separated into two groups on the basis of the nursing intervention mode. 77 cases in the research group (RG) were given the human-oriented nursing mode and 70 cases in the control group (CG) were given the conventional nursing mode. The bladder irrigation time (BIT), indwelling catheter time (ICT), postoperative hospitalization time (PHT) and the incidence rate of postoperative complications were observed in the two groups after nursing intervention. Before and after nursing intervention, the self-care ability of patients was evaluated in the two groups by Exercise of Self-Care Agency Scale (ESCA). In the two groups, the anxiety and depression status were evaluated by the Self-rating Anxiety Scale (SAS) and the Self-rating Depression Scale (SDS). The Quality of Life Scale for Benign Prostatic Hyperplasia Patient (BPHQLS) was applied to evaluate the quality of life in both groups before and after nursing intervention. The International Prostate Symptom Score (IPSS) was used to assess the lower urinary tract symptoms (LUTS) of patients in the two groups before and after nursing intervention. The self-made nursing satisfaction questionnaire was used to evaluate the nursing satisfaction in the two groups. The BIT, ICT and PHT in RG after nursing intervention were obviously lower than those in CG, and the incidence of postoperative complications in RG was also obviously lower than that in CG (p < 0.05). The ESCA score of patients in RG after nursing intervention was significantly higher than that in CG (P < 0.05). The SAS and SDS scores of patients in RG after nursing intervention were significantly lower than those in CG (P < 0.05). The BPHQLS score in RG after nursing intervention was obviously higher than that in CG (P < 0.05). The IPSS score of patients in RG after nursing intervention was obviously lower than that in CG (p < 0.05). The nursing satisfaction score in RG after nursing intervention was obviously higher than that in CG (p < 0.05). Conclusion: The application effect of the human-oriented nursing mode on patients with BPH is definite, which can improve self-care ability, unhealthy emotion and effectively ameliorate the quality of

Keywords: human-oriented nursing mode, benign prostatic hyperplasia, self-care, unhealthy emotion, quality of life *Tob Regul Sci.™ 2021;7(4-1): 635-646* DOI: doi.org/10.18001/TRS.7.4.1.16

Feifei Peng Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Guangchi Xu Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Caihong Zhu Nursing department, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar,161000, China, Lanchun Sun Cardiovascular medicine, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Bo Dong Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Yin Meng Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Songtao Liu Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Xinxin Zhang Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, Tao Li Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, * Corresponding author: Tao Li Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China, * Corresponding author: Tao Li Urological Surgery, The Second Affiliated Hospital of Qiqihar Medical University, Qiqihar, 161000, China.

Influence of Human-oriented Nursing Mode on Self-Care Ability, Unhealthy Emotion and Quality of Life of Patients with Benign Prostatic Hyperplasia

enign prostate hyperplasia (BPH) is a common disease of the urinary system in clinical practice ¹. Epidemiological investigation reveals that BPH is more familiar in elderly men, and the older they are, the higher the incidence rate is. With the aggravation of population aging, the incidence rate is increasing year by year ². Clinically, LUTS mainly characterized by progressive obstruction of the lower urinary tract, such as increased number of nocturnal urination, urinary frequency, urgency of urination, thinning of urinary stream, not finishing urination and inability to hold urine ³. The pathogenesis of BPH is not completely clear, but it is generally believed that the occurrence and development of BPH are closely related to androgen in the body and the natural aging process of the body at present 4,5. BPH is an progressive chronic disease. As the patient grows older and the course of the disease lengthens, its clinical symptoms become more and more prominent, which seriously impacts the quality of life of BPH patients and has become one of the primary chronic diseases imperiling the health of elderly men. At present, the clinical treatment of BPH includes drug conservative treatment and surgical treatment. Because the drug treatment effect is not obvious, surgical treatment is the main treatment for most patients ^{6,7}. The gradual decline of various body functions, the decline of self-care ability, the emergence of fear, anxiety, depression and other adverse psychological emotions, and the lack of knowledge related to BPH have a serious impact on postoperative recovery in patients with BPH 8. Clinical nursing after surgical treatment is also an important part of patients' rehabilitation 9. Therefore, it is of great clinical value to explore a reasonable and effective nursing intervention mode for the rehabilitation and prognosis of patients.

In the past, the nursing mode usually focused on the disease itself, without involving the psychological state, social relations and individual needs of patients. The relationship between nurses and patients is not well handled, which seriously affects the improvement of nursing quality 10. With the improvement of medical care level, the conventional nursing intervention mode can no longer meet the needs and expectations of patients for nursing quality human-oriented nursing model refers to a systematic nursing intervention model that takes "humanism" as the core idea and evaluates, plans and carries out work from patients themselves, surrounding environment, psychological state, social relations, physical factors and other factors that have an impact on disease rehabilitation ¹². Its ultimate goal is to enable patients to better recover their health. At the same time, it can also meet patients' physiological, psychological, social and other needs, providing patients with personalized, comfortable, safe and effective care ¹³. In studies by Hunter A et al ¹⁴, it was reported that the application of human-oriented nursing mode in obstetrics and gynecology can reduce the incidence of adverse postpartum events, and also can improve maternal anxiety, depression and other adverse emotions.

This study was designed to implement the human-oriented nursing model for patients with BPH and discuss the effect of this model on patients' self-care ability, adverse emotions and quality of life.

MATERIALS AND METHODS

Baseline Data

147 Patients with BPH admitted to our hospital from February 2018 to August 2019 were selected and all patients were separated into two groups on the basis of different nursing intervention modes. 70 cases in CG were given conventional nursing mode. 77 cases in RG were given human-oriented nursing model. In CG, the age was 60-78 years old, with an average of (68.42±4.73) years old. In RG, the age was 61-79 years old, with an average of (67.35±4.38) years old.

Inclusion and Exclusion Inclusion criteria:

(1) All patients met the diagnostic standard for benign prostatic hyperplasia ¹⁵, and they were

Influence of Human-oriented Nursing Mode on Self-Care Ability, Unhealthy Emotion and Quality of Life of Patients with Benign Prostatic Hyperplasia

confirmed by B-ultrasound examination;

- (2) IPSS 16 was between 4 and 19 points;
- (3) This research was ratified by the Ethics Committee of our hospital. All patients and their families were informed and affixed the fully informed consent form.

Exclusion criteria were as below:

- (1) Patients with prostate malignant tumor;
- (2) Comorbid with serious organic diseases such as heart, liver and kidney;
- (3) Patients with cognitive impairment, language and hearing impairment;
- (4) Comorbid with mental illness or family history of mental illness.

Nursing Methods

In CG, patients were given routine nursing mode, including perioperative nursing, medication guidance, diet guidance, basic life nursing, rehabilitation exercise, health education, prevention measures of postoperative complications, etc.

In RG, patients were given human-oriented nursing mode on the basis of routine nursing in CG: The specific methods were as follows:

- (1) The hospital archives of patients were established, and the responsibility system was implemented between nurses and patients. Medical staff collected the detailed clinical data of patients, analyzed the patient information in detail and understood the needs of patients through communication with patients, systematically analyzed the factors affecting the illness, and formulated detailed nursing plans.
- (2) The comprehensive health education was provided, including health knowledge education for patients and their families. Nursing staff patiently and meticulously explained the relevant knowledge of BPH to patients and their families in easy-to-understand language, and issued simple and understandable "Health Manual for Patients with Prostatic Hyperplasia" and other relevant materials with illustrations, so as to increase the knowledge and correct understanding of the disease to patients and their families, eliminate the anxiety and fear, reduce the pressure, enhance

- the confidence and urge them to actively cooperate with treatment. At the same time, nursing staff guided patients to use nursing equipment rationally and kept the cleanliness of the urethral orifice and body. Nursing staff paid attention to perioperative matters and the correct choice of diet.
- (3) The humanistic environment for medical treatment was provided, including comfortable environment and warm humanistic environment. Ward environment highlighted the signs of humanization. It was shaped as warm and comfortable as home so that patients could experience the same feeling as in their own home. The ward was maintained at a suitable temperature and humidity, with sufficient lighting and fresh air circulation. Simple decorations could be carried out in the ward, such as hanging some murals that could relieve the patient's mood and putting some green plants. At the same time, under the condition of ensuring the quietness and comfort of the ward and sound insulation effect, some light music could be appropriately played according to the needs of patients. Patients' privacy could be enhanced by placing a curtain between beds. Warm humanistic environment: nursing staff started from appearance, language communication, mental outlook, etc. When facing patients, nursing staff served with a smile, neat and decent clothes, elegant and gentle manner, polite and decent language, patient, amiable and approachable attitude when communicating with patients, and always kept positive and full of enthusiasm in
- (4) The comprehensive psychological care was provided. According to the adverse psychological reactions of patients, the reasons were analyzed in detail and comprehensive psychological nursing intervention was carried out in combination with the specific conditions of patients. Nursing staff always took the initiative to communicate with patients, listen to patients patiently, analyze and consider problems from the perspective of patients, and truly take patients as the center to care for them. At the same time, nursing staff

used positive language and optimistic attitude to infect and motivate patients. They could also organize regular exchange meetings for BPH patients, invite patients with better recovery status to communicate actively, transmit positive and optimistic treatment ideas, help other patients to improve their confidence in recovery, eliminate unhealthy emotions, reduce psychological pressure and promote the recovery of diseases.

- (5) The service quality of nursing staff was improved. First of all, experts were regularly organized to train nurses' professional skills, and excellent nurses were selected to exchange and learn in advanced hospitals, so as to bring advanced nursing experience to the department and improve the nursing level. Secondly, experience exchange meetings were regularly held to pool the wisdom of the masses. Everyone exchanged and discussed the beneficial nursing comprehensions and experiences to achieve the goal of common learning and progress. Furthermore, professional skills assessment was carried out regularly in hospitals to motivate nurses to take the initiative to learn professional skills and improve their comprehensive quality, thus improving their professional abilities. Finally, we always emphasized the human-oriented concept of nursing, so that the idea of "patient-centered, everything for patients" could penetrate into the minds of every nursing staff and be applied to practical work.
- (6) The comprehensive discharge guidance was provided. The medication guidance, diet guidance and appropriate physical exercise programs were provided for discharged patients according to their conditions. It was possible to establish a continuous nursing file for patients after discharge from hospital, and medical staff regularly knew the rehabilitation of patients through telephone follow-up, home visits and other means, and supervised and guided patients according to specific conditions to ensure their comprehensive rehabilitation.

Outcome Measures

(1) The BIT, ICT, PHT and incidence rate of

postoperative complications were observed in the two groups after nursing intervention.

- (2) Before and after nursing intervention, the self-care ability of patients was evaluated in the two groups by ESCA ¹⁷. The scale included 4 dimensions of self-care skills, self-care responsibility, self-concept and health knowledge level, with a total of 43 items. 5-point scoring method was used. The higher the score, the stronger the patient's self-care ability.
- (3) Before and after nursing intervention, the anxiety and depression status of patients were assessed by using the SAS and the SDS ¹⁸. The total score of SAS scale was 100. A score of 50-70 indicated slight anxiety, a score of 71-90 indicated medium anxiety, and a score > 90 indicated serious anxiety. The higher the score, the more serious the anxiety. The total score of SDS scale was 100. A score of 50-70 indicated slight depression, a score of 71-90 indicated medium depression, and a score > 90 indicated serious depression. The higher the score, the more serious the depression.
- (4) The Quality of Life Scale for Benign Prostatic Hyperplasia Patient (BPHQLS) ¹⁹ was used to evaluate the quality of life in both groups before and after nursing intervention. The scale included 74 items in five dimensions of disease, physiology, society, psychology and satisfaction. 5-point scoring method was used. The higher the score, the higher the quality of life.
- (5) The IPSS ²⁰ was used to assess the LUTS of patients in the two groups before and after nursing intervention. The scale included 7 evaluation indexes of not finishing urination, urinary frequency, dysuria, urgency of urination, thinning of urinary stream, starting and stopping of urination several times, and number of nocturnal urination. 5-point scoring method was used. The higher the score is, the more serious the patient's condition is, with a total score of 35 points, 0 being asymptomatic, 1-7 being mild LUTS, 8-19 being moderate LUTS, and 20-35 being severe LUTS.
- (6) Patients were scored with the self-made "Nursing Satisfaction Questionnaire" ²¹, and the

scoring content was 20 questions in total. Patients scored according to the nursing content of the hospital, with 5 points for each question, with a total score of < 70 being unsatisfactory, 70-89 being satisfactory, and ≥90 being great satisfaction. Satisfaction = (Great Satisfaction+Satisfactory)/Total Cases ×100%.

Statistical Methods

SPSS20.0 (IBM Corp, Armonk, NY, the United States) was applied for statistical analysis. GraphPad Prism 7 was applied to draw the data picture. The counting data was represented by [n(%)]. Chi-square test was applied for the comparison of the counting data between groups. Mean number \pm standard deviation ($\bar{x}\pm sd$) was

used for the measurement data. Independent sample t test was applied for the comparison of the measuring data between groups. Paired t test was applied for the comparison before and after nursing within the group. The difference was statistically significant with P<0.05.

RESULTS

Baseline Data

There was no significant difference in both groups in general clinical baseline data such as age, BIM, disease course, marital status, religious belief, place of residence, nation, educational level, smoking history, drinking history, previous occupation (P>0.05). (Table 1)

Table 1. Comparison of baseline data in the two groups [n(%)] (x±sd)

	1		0 1 -	(. /1 (./	
Classification	RG (n=77)	CG (n=70)	t/χ² value	P value	
Age/years old			1.424	0.156	
	67.35±4.38	68.42±4.73			
$BMI(kg/m^2)$			0.949	0.344	
	23.42±3.68	22.86±3.45			
Course of disease			0.449	0.654	
	3.72±1.15	3.63±1.28			
Marital status			0.547	0.760	
Married	52(67.53)	46(65.71)			
Unmarried	8(10.39)	10(14.29)			
Widowed	17(22.08)	14(20.00)			
Religious belief			0.701	0.402	
Yes	15(19.48)	10(14.29)			
No	62(80.52)	60(85.71)			
Place of residence			0.242	0.623	
City	42(54.55)	41(58.57)			
Rural	35(45.45)	29(41.43)			
Nation			0.006	0.934	
Han nationality	50(64.94)	45(64.29)			

Feifei Peng et al.

Influence of Human-oriented Nursing Mode on Self-Care Ability, Unhealthy Emotion and Quality of Life of Patients with Benign Prostatic Hyperplasia

Minority nationality	27(35.06)	25(35.71)		
Educational level			0.030	0.861
≥ high school	33(42.86)	31(44.29)		
< high school	44(57.14)	39(55.71)		
Smoking history			0.001	0.973
Yes	24(31.17)	22(31.43)		
No	53(68.83)	48(68.57)		
Drinking history			0.044	0.834
Yes	31(40.26)	27(38.57)		
No	46(59.74)	43(61.43)		
Previous occupation			1.113	0.953
Civil servants	10(12.99)	9(12.85)		
Company employee	9(11.69)	12(17.14)		
Self-employed	12(15.58)	9(12.86)		
Workers	20(25.97)	17(24.29)		
Farmers	23(29.87)	21(30.00)		
Others	3(3.90)	2(2.86)		

Comparison of Bit, Ict and Pht in Both Groups After nursing intervention, the BIT, ICT

and PHT in RG were significantly shorter than those in CG (P < 0.05). (Table 2)

Table 2. Comparison of BIT, ICT and PHT between the two groups (d, x±sd)

Grouping	n	BIT	ICT	PHT
RG	77	2.34±0.21	5.13±0.23	5.31±1.13
CG	70	2.91±0.24	5.96±0.31	8.74±1.32
t	-	15.360	18.540	16.970
P	-	<0.001	<0.001	<0.001

Comparison of Incidence of Postoperative Complications in Both Groups

After nursing intervention, the incidence of

postoperative complications in RG was obviously lower than that in CG (p < 0.05). (Table 3)

Influence of Human-oriented Nursing Mode on Self-Care Ability, Unhealthy Emotion and Quality of Life of Patients with Benign Prostatic Hyperplasia

Table 3. Comparison of incidence of postoperative complications between the two groups [n(%)]

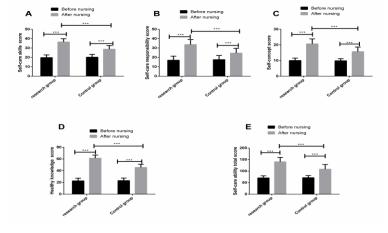
Grouping	g n	Postoperative hemorrhage	Infection	Venous thrombosis of lower limbs	Bladder spasm	Urinary incontiner ce	Posterior urethra stricture	l Total incidence of complications
RG	77	1(1.30)	0(0.00)	0(0.00)	2(2.59)	1(1.30)	0(0.00)	4(5.19)
CG	70	4(5.71)	3(4.29)	1(1.43)	4(5.71)	2(2.86)	0(0.00)	14(20.00)
χ^2	-							7.479
P	-							0.006

Comparison of Self-Care Ability in Both Groups before and after Nursing Intervention

There was no obvious difference in the four-dimensional scores of self-care skills, self-care responsibility, self-concept and health knowledge level and the total score of self-care ability in both groups before the nursing intervention (P > 0.05),

while the four-dimensional scores and the total score of self-care ability in both groups after the nursing intervention were obviously higher than those before the intervention (P < 0.05), and the scores in RG were significantly higher than those in CG (P < 0.05). (Figure 1)

Figure 1. Comparison of self-care ability between the two groups before and after nursing intervention.



There was no significant difference in self-care skill score (A), self-care responsibility score (B), self-concept score (C), health knowledge level score (D) and total score of self-care ability (E) between the two groups before nursing intervention, while the four-dimensional scores and total score of self-care ability in the two groups after nursing intervention were significantly higher than those before intervention (p < 0.05), and the scores in RG were significantly higher than those in CG (p < 0.05). Note: ***P<0.001.

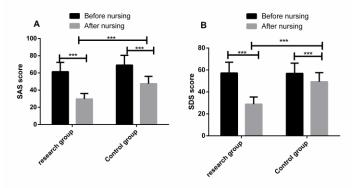
Comparison of Sas and Sds Scores in Both Groups before and after Nursing Intervention

There was no obvious difference in SAS and SDS scores in both groups before nursing intervention (p > 0.05). After nursing

intervention, the SAS and SDS scores in both groups were significantly lower than those before nursing intervention (p < 0.05), and the SAS and SDS scores of patients in RG after nursing intervention were obviously lower than those in

CG (p < 0.05). (Figure 2)

Figure 2. Comparison of SAS and SDS scores before and after nursing intervention.



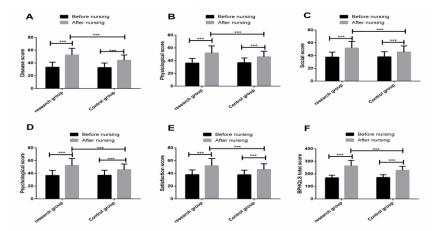
There was no significant difference in SAS (A) and SDS (B) scores between the two groups before nursing intervention (p > 0.05). After nursing intervention, the SAS and SDS scores in the two groups were significantly lower than those before nursing intervention (p < 0.05), and the SAS and SDS scores of patients in RG after nursing intervention were significantly lower than those in CG (p < 0.05). Note: ***P<0.001.

Comparison of Quality of Life Scores in Both Groups before and after Nursing Intervention

There was no obvious difference in the five-dimensional scores of disease, physiology, society, psychology, satisfaction and total scores of BPHQLS in both groups before nursing intervention (P > 0.05), but after nursing intervention, the five-dimensional scores of

disease, physiology, society, psychology, satisfaction and total scores of BPHQLS in the two groups were obviously higher than those before nursing intervention (P < 0.05), and the scores in RG patients after nursing intervention were obviously higher than those in CG (P < 0.05). (Figure 3)

Figure 3. Comparison of quality of life scores between the two groups before and after nursing intervention.



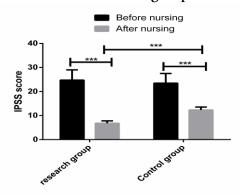
There was no significant difference in disease score (A), physiological score (B), social score (C), psychological score (D), satisfaction score (E) and BPHQLS total scores (F) between the two groups before nursing intervention. After nursing intervention, the five-dimensional scores and BPHQLS total scores in the two groups were significantly higher than those before intervention (p < 0.05), and the scores in RG were significantly higher than those in CG (p < 0.05). Note: ***P<0.001.

Comparison of Ipss Scores in Both Groups before and after Nursing Intervention

There was no obvious difference in IPSS score in both groups before nursing intervention (p > 0.05). After nursing intervention, the IPSS scores

in the two groups were obviously lower than those before nursing intervention (p < 0.05), and the IPSS scores of patients in RG after nursing intervention were significantly lower than those in CG (p < 0.05). (Figure 4)

Figure 4. Comparison of IPSS scores between the two groups before and after nursing intervention.



There was no significant difference in IPSS score between the two groups before nursing intervention (p > 0.05). After nursing intervention, the IPSS scores in the two groups were significantly lower than those before nursing intervention (p < 0.05), and the IPSS scores of patients in RG after nursing intervention were significantly lower than those in CG (p < 0.05). (Figure 4) Note: ***P<0.001.

Comparison of Nursing Satisfaction in Both Groups after Nursing Intervention

After nursing intervention, the nursing satisfaction of RG was 94.81%, and that of CG

was 74.29%. The nursing satisfaction of the patients in RG after nursing intervention was obviously higher than that of the patients in CG (p < 0.05). (Table 4)

Table 4. Comparison of nursing satisfaction between the two groups after nursing intervention [n(%)]

Items	RG (n=77)	CG (n=70)	χ^2 value	P value
Great satisfaction	63(81.82)	43(61.43)	-	-
Satisfactory	10(12.99)	9(12.86)	-	-
Dissatisfaction	4(5.19)	18(25.71)	-	-
Nursing satisfaction	73(94.81)	54(74.29)	12.131	<0.001

DISCUSSION

BPH is one of the most familiar benign diseases causing dysuria in men ²². The occurrence and development of BPH are related to complex metabolic disorders and it is pathological states in which various metabolic components are

abnormally aggregated ²³. Some researches have found that the development of BPH is closely bound up with metabolic factors such as hypertension, hyperglycemia and obesity ²⁴. LUTS caused by prostatic enlargement and bladder outlet obstruction, which cause sleep

psychological anxiety, depression, disorder, separation from society and other adverse psychological reactions, and they are important reasons for the decrease of quality of life in BPH patients ²⁵. Due to its long course of disease, long treatment time and easy recurrence of the disease, it has adverse effects on the rehabilitation of patients ²⁶. Self-care ability refers to a person's ability to carry out self-care activities or self-care ²⁷. Some studies have shown that maintaining strong self-care ability can slow down the development of patients with chronic diseases, promote the recovery of diseases, prevent the deterioration of diseases, and improve adverse psychological problems 28. Therefore, how to ameliorate the self-care ability of BPH patients and their quality of life in nursing work is the focus of clinical research.

Human-oriented nursing mode brand-new nursing mode. The core idea of "human-oriented" is always implemented and applied in the whole nursing process. All work is carried out around patients 29. Human-oriented nursing fully integrates the professional skills of nursing staff with the concept of humanization, which brings great benefits to patients, medical staff, patients' families, hospitals and society 30. In this study, we adopted a human-oriented nursing model to intervene BPH patients, and found that the rehabilitation effect of patients was obvious after intervention. In studies by Petit-Steeghs V et al 31, it is reported that the application of human-oriented nursing intervention in obstetrics and gynecology can significantly reduce the adverse events of puerperal women and improve the adverse psychological emotions such as anxiety and depression. In the results of this study, the hospitalization time, BIT and ICT in RG were significantly shorter than those in CG, and the incidence rate of postoperative complications was obviously lower than that in CG. Meanwhile, the IPSS score after intervention was significantly reduced and obviously lower than that in CG, and the LUTS were significantly improved, which showed that the human-oriented nursing mode could promote the recovery of the patient's

condition, reduce the postoperative adverse events and improve the curative effect of operation to patients. Studies by Mitchell KR et al. 32 have shown that after human-oriented nursing intervention, the self-care ability of patients can be obviously improved, the health behavior consciousness of patients can be strengthened, and thus the quality of life of patients can be ameliorated in the nursing work of liver cancer patients. In the results of this study, it was found that the self-care skills, self-care responsibility, self-concept, health knowledge level score and total score of self-care ability of BPH patients were obviously higher than those of CG after the human-oriented implementing intervention, suggesting that this nursing mode could enhance the self-care ability of patients, which was similar to the research results of Mitchell KR and others. Also, in De Nunzio C et al. 33 researches, it was found that the implementation of a human-oriented nursing model for BPH patients can reduce the anxiety and depression of patients and psychological events such as no social contact. The results of this study revealed that the SAS and SDS scores of RG were obviously lower than of CG, which implied that human-oriented nursing mode could improve the unhealthy emotions (anxiety and depression) and promote the psychological health of patients. The guidelines of the Europran Association of Urology (EAU) suggest that the selection of treatment methods for BPH patients should focus on ameliorating the quality of life related to patients' health. Therefore, we evaluated the quality of life of BPH patients after implementing the human-oriented nursing intervention in this study. The results showed that the disease, physiology, society, psychology, satisfaction score and the total scores of quality of life in RG were obviously higher than those in CG, indicating that the human-oriented nursing mode could significantly ameliorate the quality of life of BPH patients, which might be the influence of the improved self-care ability on the quality of life after the intervention. However, in Alcántara

Influence of Human-oriented Nursing Mode on Self-Care Ability, Unhealthy Emotion and Quality of Life of Patients with Benign Prostatic Hyperplasia

Montero A et al. 34 researches, it is suggested that strengthening the self-care ability of patients can ameliorate the quality of life of patients by improving their health behaviors and knowledge level. The quality of life of patients is related to self-care ability, health behaviors and other factors, which is similar to the results of this research. Finally, we also compared the satisfaction degree in the two groups after nursing. Statistics showed that the satisfaction degree of patients in RG after the human-oriented implementing intervention was significantly higher than that in CG, which has also shown that the patients are more willing to accept the human-oriented nursing intervention.

Although this study has revealed that human-oriented nursing can bring better benefits to patients with BPH, there is still room for improvement in this study. For example, we can further evaluate the treatment compliance of patients with BPH and analyze the risk factors that affect the adverse prognosis of patients with BPH, which will help nurses from what aspects to avoid the risk, and thus improve the curative effect of patients. In the future, we will gradually carry out supplementary studies from the above perspectives.

To sum up, human-oriented nursing intervention can improve the self-care ability, improve the adverse emotions, improve the patient's nursing satisfaction and effectively ameliorate the quality of life in patients with BPH.

ACKNOWLEDGEMENTS

This study is financially supported by Qiqihar Science and Technology Project(SFGG-201932), Effects of MiR-214/SOX4 axis on proliferation, migration, invasion and tumorigenicity of prostate cancer cells.

REFERENCES

- 1. Langan RC. Benign Prostatic Hyperplasia. *Prim Care*. 2019;46(2):223-232.
- 2. Robert G, De La Taille A, Descazeaud A. Données épidémiologiques en rapport avec la prise en charge de l'HBP [Epidemiology of benign prostatic

- hyperplasia]. Prog Urol. 2018;28(15):803-812.
- 3. Mobley D, Feibus A, Baum N. Benign prostatic hyperplasia and urinary symptoms: Evaluation and treatment. *Postgrad Med.* 2015;127(3):301-307.
- 4. Aaron L, Franco OE, Hayward SW. Review of Prostate Anatomy and Embryology and the Etiology of Benign Prostatic Hyperplasia. *Urol Clin North Am.* 2016;43(3):279-288.
- 5. Nicholson TM, Ricke WA. Androgens and estrogens in benign prostatic hyperplasia: past, present and future. *Differentiation*. 2011;82(4-5):184-199.
- 6. Malling B, Røder MA, Brasso K, Forman J, Taudorf M, Lönn L. Prostate artery embolisation for benign prostatic hyperplasia: a systematic review and meta-analysis. *Eur Radiol.* 2019;29(1):287-298.
- 7. Rossanese M, Crestani A, Inferrera A, et al. Medical treatment for benign prostatic hyperplasia: Where do we stand?. *Urologia*. 2019;86(3):115-121.
- 8. Te AE. Recent advances in prostatectomy for benign prostatic hyperplasia. *F1000Res.* 2019;8:F1000 Faculty Rev-1528.
- 9. Leedahl DD, Vo PH, Maxson PM, Lovely JK. Benign Prostatic Hyperplasia Implications for Pharmacologic Treatment and Perioperative Care. *J Pharm Pract.* 2013;26(1):52-58.
- 10. Lalani M, Fernandes J, Fradgley R, Ogunsola C, Marshall M. Transforming community nursing services in the UK; lessons from a participatory evaluation of the implementation of a newcommunity nursing model in East London based on the principles of the Dutch Buurtzorg model. *BMC Health Serv Res.* 2019;19(1):945.
- 11. Fishman NW, Lowe JI, Ryan SF. Promoting an Alternative to Traditional Nursing Home Care: Evaluating the Green House Small Home Model. An Introduction from the Funders and the Green House Project. Health Serv Res. 2016;51 Suppl 1(Suppl 1):344-351.
- 12. Byrne AL, Baldwin A, Harvey C. Whose centre is it anyway? Defining person-centred care in nursing: An integrative review. *PLoS One.* 2020;15(3):e0229923. Published 2020 Mar 10.
- 13. Sladdin I, Ball L, Bull C, Chaboyer W. Patient-centred care to improve dietetic practice: an integrative review. *J Hum Nutr Diet.* 2017;30(4):453-470.
- 14. Hunter A, Devane D, Houghton C, Grealish A, Tully A, Smith V. Woman-centred care during pregnancy and birth in Ireland: thematic analysis of women's and clinicians' experiences. *BMC Pregnancy Childbirth*. 2017;17(1):322.
- 15. Bschleipfer T, Oelke M, Rieken M. Diagnostik und diagnostische Strategie beim benignen Prostatasyndrom: Ein Überblick [Diagnostic procedures and diagnostic strategy for lower urinary tract symptoms/benign prostatic hyperplasia: An overview]. *Urologe A*. 2019;58(3):238-247.
- 16. Bayoud Y, de la Taille A, Ouzzane A, et al. International Prostate Symptom Score is a predictive factor of lower urinary tract symptoms after radical

Influence of Human-oriented Nursing Mode on Self-Care Ability, Unhealthy Emotion and Quality of Life of Patients with Benign Prostatic Hyperplasia

- prostatectomy. Int J Urol. 2015;22(3):283-287.
- 17. Cho H, Park E. Canonical Correlation Between Self-Care Agency and Health-Related Self-Efficacy with Chronic Viral Hepatitis Patients. *Osong Public Health Res Perspect.* 2019;10(5):281-288.
- 18. Dunstan DA, Scott N, Todd AK. Screening for anxiety and depression: reassessing the utility of the Zung scales. *BMC Psychiatry*. 2017;17(1):329.
- 19. Cam K, Muezzinoglu T, Aydemir O, Buyukalpelli R, Toktas G, Gemalmaz H. Development of a quality of life scale specific for patients with benign prostatic hyperplasia. *Int Urol Nephrol.* 2013;45(2):339-346.
- 20. Arshad Z, Zaidi SZ, Jamshaid A. Development, validity and reliability of an URDU version of the International Prostate Symptom Score. *J Pak Med Assoc.* 2018;68(2):200-202.
- 21. Karaca A, Durna Z. Patient satisfaction with the quality of nursing care. *Nurs Open.* 2019;6(2):535-545.
- 22. Rastrelli G, Vignozzi L, Corona G, Maggi M. Testosterone and Benign Prostatic Hyperplasia. Sex Med Rev. 2019;7(2):259-271.
- 23. Foo KT. What is a disease? What is the disease clinical benign prostatic hyperplasia (BPH)? World J Urol. 2019;37(7):1293-1296.
- 24. Wu S, He H, Wang Y, Xu R, Zhu B, Zhao X. Association between benign prostate hyperplasia and metabolic syndrome in men under 60 years old: a meta-analysis. *I Int Med Res.* 2019:47(11):5389-5399.
- 25. Hu W, Liu W, Yu F, Wu Y, Fang X, Hao W. Alternatively Activated Macrophages are Associated with Prostate Volume and Lower Urinary Tract Symptoms Severity of Patients with Benign Prostate Hyperplasia. *Clin Lab.* 2017;63(7):1057-1062.
- 26. Jones P, Rai BP, Aboumarzouk OM, Somani BK. Prostatic Urethral Lift Vs Prostate Arterial Embolization: Novel Nonablative Strategies in the Management of Lower Urinary Tract Symptoms Secondary to Benign Prostate Hyperplasia. *Urology*. 2016;87:11-17.
- 27. Hua CY, Huang Y, Su YH, Bu JY, Tao HM.

- Collaborative care model improves self-care ability, quality of life and cardiac function of patients with chronic heart failure. *Braz J Med Biol Res.* 2017;50(11):e6355.
- 28. Mohammadpour A, Rahmati Sharghi N, Khosravan S, Alami A, Akhond M. The effect of a supportive educational intervention developed based on the Orem's self-care theory on the self-care ability of patients with myocardial infarction: a randomised controlled trial. *J Clin Nurs.* 2015;24(11-12):1686-1692.
- 29. Louw JM, Marcus TS, Hugo J. How to measure person-centred practice An analysis of reviews of the literature. *Afr J Prim Health Care Fam Med.* 2020;12(1):e1-e8.
- 30. Bachnick S, Ausserhofer D, Baernholdt M, Simon M; Match RN study group. Patient-centered care, nurse work environment and implicit rationing of nursing care in Swiss acute care hospitals: A cross-sectional multi-center study. *Int J Nurs Stud.* 2018;81:98-106.
- 31. Petit-Steeghs V, Lips SR, Schuitmaker-Warnaar TJ, Broerse JEW. Client-centred maternity care from women's perspectives: Need for responsiveness. *Midwifery*. 2019;74:76-83.
- 32. Mitchell KR, Brassil KJ, Fujimoto K, Fellman BM, Shay LA, Springer AE. Exploratory Factor Analysis of a Patient-Centered Cancer Care Measure to Support Improved Assessment of Patients' Experiences. *Value Health.* 2020;23(3):351-361.
- 33. De Nunzio C, Presicce F, Lombardo R, et al. Patient centred care for the medical treatment of lower urinary tract symptoms in patients with benign prostatic obstruction: a key point to improve patients' care a systematic review. *BMC Urol.* 2018;18(1):62.
- 34. Alcántara Montero A, Estacio García Μ, Martínez-Berganza Asensio ML. Evidence-basedmedicine and patient-centred medicine in the management of lower urinary tract symptoms due benign prostatic hyperplasia in Care. Semergen. 2018;44(8):527-529.