Int J Clin Exp Med 2020;13(10):7303-7312
www.ijcem.com /ISSN:1940-5901/IJCEM0116733

Review Article

Research on the improvement of complications and adverse emotions of cervical cancer patients by humanistic care and psychological nursing

Shanshan Chen

Department of Gynaecology, Cancer Hospital of China Medical University, Liaoning Cancer Hospital & Institute, Shenyang 110042, Liaoning Province, China

Received June 22, 2020; Accepted July 28, 2020; Epub October 15, 2020; Published October 30, 2020

Abstract: Objective: To explore the effect of humanistic care and psychological nursing on the incidence rate of complications, the adverse emotions, and the nursing satisfaction of cervical cancer patients. Methods: Altogether 162 cervical cancer patients treated in our hospital from January 2019 to February 2020 were selected and divided into two groups according to different nursing interventions. Humanistic care combined with psychological care was adopted as the joint group (JG) (99 cases) and humanistic care combined with routine nursing intervention as the control group (CG) (63 cases). The clinical indexes, blood pressure, heart rate and complications of the two groups were observed. The anxiety, depression, pain, sleep quality, self-care ability, self-efficacy, self-improvement, quality of life and nursing satisfaction were evaluated before and after nursing. Results: The improvement of clinical operation index, blood pressure and heart rate in the JG was evidently better than that in the CG. After intervention, HAMA, HAMD, VAS and PSQI scores in the JG were lower than those in the CG, ESCA and GSES scores in the JG were evidently higher than those in the CG, the incidence of complications in the JG was lower than that in the CG, QLQ-C30 score and nursing satisfaction in the JG were significantly higher than that in the CG. Conclusion: Humanistic care combined with psychological intervention for cervical cancer patients can improve the patients' self-care ability, reduce the adverse emotions in the treatment process, and effectively improve the life treatment and satisfaction with this intervention.

Keywords: Humanistic care combined with psychological care, cervical cancer patients, complications, adverse emotions

Introduction

Cervical cancer is the most common malignant tumor of reproductive system in clinical gynecologic diseases [1], which severely threatens the physical and mental health of the majority of female patients. Patients suffering from the disease are not only tortured physically and mentally, but also directly endanger the life safety [2, 3]. Clinically, most patients are treated by surgery or chemotherapy. However, the two treatment schemes have great damages to the patient's body and are easy to cause a variety of adverse reactions. Moreover, the treatment period of cervical cancer is relatively long. Therefore, patients applied these schemes are easy to generate fear, negativity and other adverse emotions during the treatment process, resulting in a reduction in the prognosis and curative effect of patients [4-6]. Some studies have pointed out that nursing intervention for patients undergoing cervical cancer surgery can reduce the occurrence of postoperative complications, improve the patients' bad mood and improve the quality of life after surgery [7].

Humanistic care is a kind of nursing intervention for people's living conditions, mainly providing humanistic care services, paying attention to the patient's reagent needs, actively communicating with the patient, patiently and carefully listening to the patient's statements, and further understanding the patient's disease symptom needs, thus giving more effective symptomatic care [8, 9]. And some studies

have also shown that [10] humanistic care can solve the psychological, physical, family and spiritual problems of patients and plan future treatment to carry out targeted holistic care, thus improving the quality of life, family satisfaction and the effectiveness of treatment plans. Although the patients treated by surgery can achieve ideal therapeutic effect, the patients are prone to psychological problems due to the lack of reproductive organs and changes in sex hormone levels after surgery [11]. Therefore, this study also adopted psychological nursing intervention for cervical cancer patients undergone surgery. Psychological nursing is to obtain the psychological state of the patient from the psychological point of view of the patient by adopting various methods such as communication, and then targeted language, behavior, expression and attitude were applied to affect the patient, to help the patient to improve the psychological state, actively face the disease, establish correct psychological concept, and improve the patient's confidence in overcoming the disease, thus improving the patient's compliance and cooperation with the treatment [12-14]. Research has also shown that [15] psychological care for patients after cardiothoracic surgery can improve nursing efficiency, reduce bad emotions and improve postoperative rehabilitation.

In this study, humanistic care and psychological nursing were applied to cervical cancer patients undergone surgery, and the effects of the combination of the two on postoperative complications, adverse emotions and nursing satisfaction were discussed.

Materials and methods

General data

Altogether 162 cervical cancer patients treated in our hospital from January 2019 to February 2020 were selected and divided into two groups according to different nursing interventions. Humanistic care combined with psychological nursing was adopted as the joint group (JG) (99 cases) and humanistic care combined with routine nursing intervention as the control group (CG) (63 cases). Inclusion criteria: Both groups of patients were diagnosed with cervical cancer [16]; patients underwent cervical cancer surgery; the clinical general data were complete; patients voluntarily accepted relevant nursing and treatment; patients were not dependent on alcohol and drugs; patients could correctly understand the relevant contents of the scale and answer. This study was approved by the Ethics Committee. The subjects and their families have signed a fully informed consent form. Exclusion criteria: patients applied other treatment methods; patients were unwilling to cooperate with this research; patients withdraw from the experiment halfway; patients lost to follow.

Nursing intervention

The CG was given psychological care: (1) Disease introduction: The nursing staff should patiently and carefully explain and introduce the relevant knowledge of the disease to the patient, and answer various questions of the patient, so as to eliminate the doubts of patients and reduce the impact on the prognosis of the patient due to the occurrence of adverse emotions. (2) Psychological counseling: Most patients would have resistance to treatment or strong mood swings, resulting in negative emotions. Under the influence of many negative emotions, it may lead to aggravation of patients' diseases or non-cooperation with treatment. Therefore, nursing staff should give psychological counseling in time, strengthen communication with patients, and help patients adjust their psychological state. (3) Complication intervention: After the operation, the patient was given basic treatment such as analgesia and anti-infection according to the doctor's advice referring to the patient's condition, and the patient was informed of possible complications and preventive measures after medication.

The combined group was given humanistic care combined with psychological nursing intervention: (1) Most patients are lack of certain cognition of their own disease, which is easy to cause greater psychological burden and mental pressure. Therefore, psychological disorders often occur, and the confidence of patients in treatment and rehabilitation is reduced, and patients may even refuse to cooperate with treatment. Therefore, nursing staff needed to popularize different cancer knowledge for each patient, and invite patients' families to give patients spiritual and psychological encouragement, improve patients' confidence in cooperating with treatment, and improve the

follow-up treatment effect. (2) Before the operation, the patient was guided to carry out scientific and appropriate exercises to improve the immunity and resistance, and the anxiety and depression of the patient were relieved continuously during the exercise. During the operation, patients were given care through shaking hands and eye contact. (3) Postoperative guidance: Cervical cancer patients were prone to postoperative pain, abdominal distension and other clinical symptoms, so nursing staff needed to guide patients to choose the appropriate body position to reduce the pain caused by surgery. They could also evaluate the pain intensity of patients and give a variety of relaxation therapy to transfer the pain attention of patients, thus reducing the physiological discomfort of pain to patients. (4) Ward environment care: Patients were given a quiet, harmonious, hygienic and comfortable ward environment. The temperature and humidity in the ward were controlled in the best range, the ward was kept air flowing and tidy to give patients a comfortable mood. The ward light was adjusted to the best at night and the ward environment was kept quiet as far as possible by lightening the steps, thus continuously improving the sleep quality of patients. (5) Postoperative complications: After the operation, the patients were guided to prevent complications and to exercise properly. The complications such as deep vein thrombosis of the lower extremities were prevented by moving limbs and turning over. And the patients' diet was guided after operation.

Outcome measures

1. Clinical indicators: The first defecation, exhaust time, hospitalization expenses and hospitalization days of the two groups of patients were recorded after operation.

2. Blood pressure and heart rate: The changes of systolic pressure, diastolic pressure and heart rate before and after nursing intervention were recorded in the two groups of patients.

3. Mental state: The Hamilton Anxiety Scale (HAMA) and Hamilton depression scale (HAMD) [17] were applied. There were 14 items in the scale, with each item of 0-4 points. The high score after evaluation indicated the more severe anxiety and depression.

4. Pain degree: Visual analogue scale (VAS) [18] was used to measure the pain degree. Patients were given a form to record their pain degree after operation, with a total score of 10 points. The high score after statistics was closely related to the high pain degree.

5. Sleep quality: Pittsburgh Sleep Quality Index Questionnaire (PSQI) [19] was used. There are five items: sleep quality, sleep time, sleep efficiency, sleep disorder and hypnotic drugs. The highest score was 5 points for each item, and the total score of sleep quality was the sum of all items. The high score was closely related to the poor sleep quality of patients.

6. Degree of self-improvement: ESCA was adopted [20]. There are 4 different fields and 43 items, with a total score after evaluation of 172 points. Patients were given statistical scores after self-evaluation. A high score indicated a high self-care ability. Self-efficacy Scale (GSES) [21] was applied. There are 10 items in the scale with each item of 1-4 points and a total score of 40 points. After evaluation and statistics, the high score indicated a high self-efficacy of the patient.

7. Complications: The complications occurred during the nursing intervention of the two groups of patients were observed and recorded.

8. Quality of life: QLQ-C30 [22] was applied, with a total of 5 dimensions and a total score of 100 points for each dimension. The high score after evaluation indicated the better quality of life of the patient.

9. Nursing satisfaction: Patients were given a self-made satisfaction questionnaire, with a total score of 100 points. The high score indicated a high satisfaction with the service.

Statistical analysis

SPSS20.0 (IBM Corp, Armonk, NY, USA) was used for statistical analysis. GraphPad Prism 7 was used to visualize the data picture. The counting data were expressed by [n (%)] and compared by Chi-square test. When the theoretical frequency in Chi-square test was less than 5, Chi-square test of continuity correction was used. The measuring data were expressed by mean ± standard deviation ($x \pm sd$) and compared by t test of independent samples. The comparison before and after the intervention

Table 1. Comparison of general data between two groups of patients [n (%)] (x ± sd)

Classification	JG (n=99)	CG (n=63)	t/χ^2 value	*P* value
Average age (years)	52.18±5.32	52.01±5.29	0.198	0.842
Average course of disease (years)	2.73±0.18	2.78±0.14	1.873	0.062
Body mass index (kg/m^2)	23.24±3.71	22.61±3.45	1.082	0.281
Residence			0.440	0.507
Urban	45 (45.45)	32 (50.79)		
Rural	54 (54.55)	31 (49.21)		
Nationality			0.598	0.439
Han	52 (52.53)	37 (59.73)		
Minorities	47 (47.47)	26 (41.27)		
Educational level			0.424	0.514
High school or higher	38 (38.38)	21 (33.33)		
< high school	61 (61.62)	42 (66.67)		
Smoking history			3.143	0.076
Yes	44 (44.44)	37 (58.73)		
No	55 (55.56)	26 (41.27)		
Drinking history			0.838	0.359
Yes	43 (43.43)	32 (50.79)		
No	56 (56.57)	31 (49.21)		
Diet preference			1.440	0.230
Light	47 (47.47)	36 (57.14)		
Spicy	52 (52.53)	27 (42.86)		
History of hypertension			0.566	0.451
Yes	49 (49.49)	35 (55.56)		
No	50 (50.51)	28 (44.44)		
Pathological stage			0.021	0.989
I	42 (42.42)	26 (41.27)		
II	34 (34.34)	22 (34.92)		
III	23 (23.23)	15 (23.81)		

Table 2. Comparison of clinical operation indexes between two groups of patients (x ± sd)

Group	n	First defecation time (h)	First exhaust time (h)	Hospitalization expenses (1,000 yuan)	Hospitalization days (d)
JG	99	68.42±12.83	30.26±3.47	9.92±2.43	7.59±2.14
CG	63	78.94±13.04	39.48±4.05	11.38±2.56	10.17±2.18
t	-	5.055	15.440	3.651	7.427
P	-	<0.001	<0.001	0.001	<0.001

adopted paired t test. When P<0.05, the difference was statistically significant.

Result

General data

There was no significant difference between the JG and the CG in general clinical baseline data such as average age, average course of disease, body mass index, residence, nationality, educational level, smoking history, drinking history, diet preference, hypertension history, and pathological stage (P>0.05). See **Table 1**.

Comparison of clinical operation indexes between two groups of patients

The first defecation time, first exhaust time, hospitalization expenses and hospitalization days in the JG were evidently lower than those in the CG (P<0.05). See **Table 2**.

Table 3. Comparison of blood pressure and heart rate between two groups of patients before and after intervention (x ± sd)

Group	n	Systolic pressure (mmHg)		Diastolic pressure (mmHg)		Heart rate (times/min)	
		Before intervention	After intervention	Before intervention	After intervention	Before intervention	After intervention
JG	99	132.98±16.23	117.25±12.21	82.36±4.82	70.86±4.91	90.75±12.43	70.54±11.81
CG	63	134.01±16.54	128.37±10.67	83.47±4.94	80.22±5.14	88.32±12.67	87.73±11.93
t	-	0.391	5.929	1.415	11.610	1.204	8.996
P	-	0.696	<0.001	0.159	<0.001	0.230	<0.001

Table 4. Comparison of psychological state between two groups of patients before and after intervention (x ± sd)

Group	n	HAMA		HAMD	
		Before intervention	After intervention	Before intervention	After intervention
JG	99	22.47±3.02	8.21±1.48	23.84±4.38	9.04±1.31
CG	63	21.94±3.05	14.32±1.83	23.57±4.39	15.28±1.49
t	-	1.085	23.340	0.382	28.010
P	-	0.279	<0.001	0.702	<0.001

Table 5. Comparison of VAS score between the two groups of patients before and after intervention (x ± sd)

Group	n	VAS score	
		Before intervention	After intervention
JG	99	38.22±6.24	29.37±4.56
CG	63	37.85±6.25	33.26±6.59
t	-	0.367	4.439
P	-	0.713	<0.001

Comparison of blood pressure and heart rate between the two groups before and after intervention

There was no significant difference in systolic blood pressure, diastolic blood pressure and heart rate between the two groups before the intervention (P>0.05). After intervention, systolic blood pressure, diastolic blood pressure and heart rate of the two groups were evidently decreased (P<0.05), and the JG was lower than the CG (P<0.05). See **Table 3**.

Comparison of psychological state between the two groups before and after intervention

There was no significant difference in HAMA and HAMD scores between the two groups before intervention (P>0.05). After intervention, the HAMA and HAMD scores of the two groups were evidently decreased (P<0.05), and those of the JG was lower than the CG (P<0.05). See **Table 4**.

Comparison of VAS scores between the two groups before and after intervention

There was no significant difference in VAS score between the two groups before intervention (P>0.05). After intervention, the VAS score of the two groups decreased evidently (P<0.05), and the JG was lower than the CG (P<0.05). See **Table 5**.

Comparison of PSQI score between two groups of patients after intervention

After intervention, the sleep quality, sleep time, sleep efficiency, sleep disorder and hypnotic drug scores in the JG were evidently lower than those in the CG (P<0.05). See **Table 6**.

Comparison of self-improvement degree between two groups of patients before and after intervention

There was no significant difference in ESCA and GSES scores before intervention between the two groups (P>0.05). After intervention, the ESCA and GSES scores of the two groups increased evidently, and the JG was evidently higher than the CG (P<0.05). See **Figure 1**.

Table 6. Comparison of PSQI score between two groups of patients after intervention [n (%)]

Group	n	Sleep quality	Sleep time	Sleep efficiency	Sleep disorder	Hypnotic drug	Total score
JG	99	1.26±0.09	1.33±0.11	1.23±0.14	1.31±0.17	1.12±0.15	6.25±0.66
CG	63	1.78±0.12	1.89±0.23	1.76±0.21	1.79±0.24	1.69±0.26	8.91±1.06
t	-	31.430	20.800	19.280	14.890	17.690	19.700
P	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

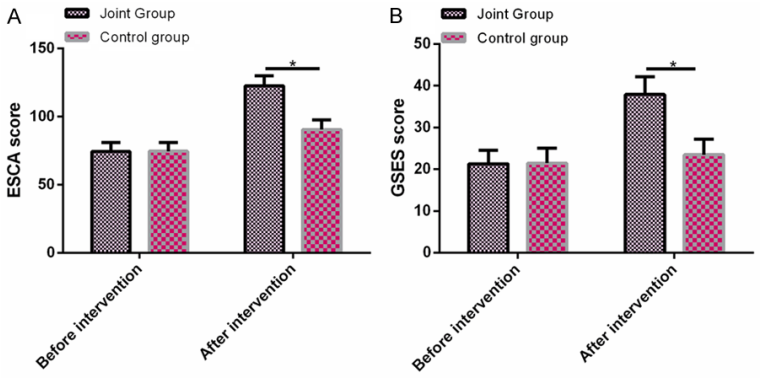

Figure 1. Comparison of self-improvement degree between two groups of patients before and after intervention. A: Comparison of ESCA scores between the two patients before and after nursing intervention. B: Comparison of GSES scores between the two patients before and after nursing intervention. Note: *indicates comparison of the two groups, P<0.05.

Comparison of complications between two groups of patients

The total incidence of adverse reactions after nursing intervention was 5.05% in the JG and 20.63% in the CG. The total incidence of adverse reactions in the JG was evidently lower than that in the CG (P<0.05). See **Table 7**.

Comparison of QLQ-C30 score between two groups of patients before and after intervention

There was no significant difference in scores of somatic function, role function, cognitive function, emotional function and social function between the two groups before intervention (P>0.05). After intervention, those in the two groups were all increased (P<0.05), and the JG was evidently higher than the CG (P<0.05). See **Figure 2**.

Nursing satisfaction of the JG after nursing was higher than that of the CG

After nursing intervention, the patients in the JG were evidently higher than those in the CG in terms of timeliness of service, standardization of management, service attitude, hospitalization environment and comprehensive quality score of nursing staff (P<0.05). See **Table 8**.

Discussion

The mortality rate of cervical cancer is relatively high, and patients are prone to urinary retention, recurrent urinary tract infection and other complications after treatment [23, 24]. Patients must also bear the physical and mental pain, mental stress and economic burden brought by long-term anti-cancer treatment. These negative emotions will cause decrease of stress adaptation, coping ability and quality of life of patients [25, 26]. Therefore, it is of great significance to strengthen the clinical nursing of cervical cancer patients for improving their psychological state and quality of life.

In this study, we applied humanistic care combined with psychological nursing intervention to interfere with the clinical indicators, psychological status, self-improvement degree and quality of life of cervical cancer patients, and found that the patient's condition improved evidently after the combined intervention. For example, in the studies by Ebu NI and others [27], health education and nursing intervention for cervical cancer patients can improve patients' knowledge and concepts and improve patients' self-efficacy. In the studies by Yang YL and others [28], psychological intervention measures for cervical cancer patients can relieve depression and anxiety and improve the self-efficacy. In this study, the first defecation time, first exhaust time, hospitalization expenses and hospitalization days of patients in the JG were evidently lower than those in the CG after intervention, indicating

Table 7. Comparison of complications in intervention between two groups of patients [n (%)]

Category	JG (n=99)	CG (n=63)	χ^2 value	*P* value
Incision infection	1 (1.01)	2 (3.17)	0.992	0.319
Abdominal distension	1 (1.01)	2 (3.17)	0.992	0.319
Urinary system infection	0 (0.00)	1 (1.59)	1.581	0.208
Nausea and vomiting	1 (1.01)	3 (4.76)	2.250	0.133
Deep venous thrombosis of lower limb	0 (0.00)	1 (1.59)	1.581	0.208
Tired	2 (2.02)	3 (4.76)	0.967	0.325
Total incidence of adverse reactions	5 (5.05)	13 (20.63)	9.468	0.002

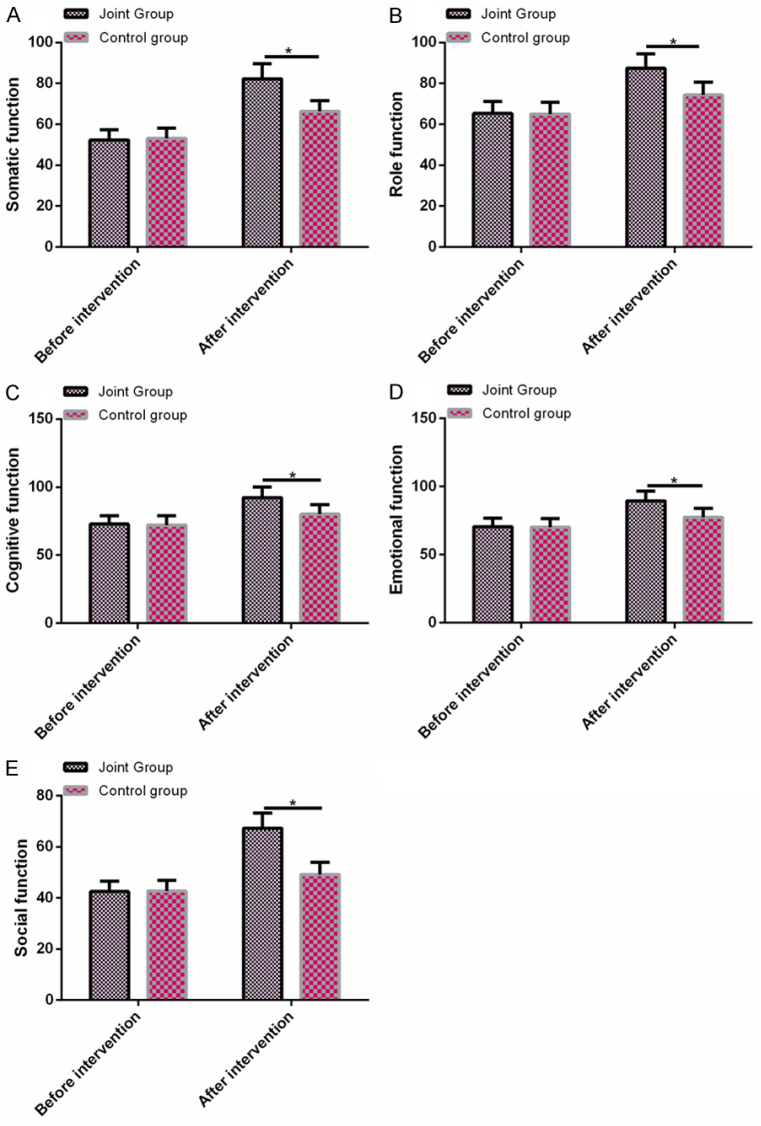

Figure 2. Comparison of QLQ-C30 scores between the two groups before and after nursing intervention. A: Comparison of somatic function scores between the two patients before and after nursing intervention. B: Comparison of role function scores between the two patients before and after nursing intervention. C: Comparison of cognitive function scores between the two patients before and after nursing intervention. D: Comparison of emotional function scores between the two patients before and after nursing intervention. E: Comparison of social function scores between the two patients before and after nursing intervention. Note: *indicates comparison of the two groups, P<0.05.

that humanistic care combined with psychological nursing has provided thoughtful nursing services to postoperative patients and helped them recover as soon as possible. Moreover, the blood pressure and heart rate of the patients in the postoperative JG were evidently better than those in the CG, indicating that humanistic care combined with psychological nursing has strengthened the patients' confidence in surgical treatment. This study applied different psychological interventions according to the patient's personality, psychology and condition, and applied MAHA and HAMD to evaluate the patient's psychological state. The results showed that the MAHA and HAMD scores of the patients in the JG were evidently lower than those in the CG after intervention, indicating that the combination of humanistic care and psychological intervention could better eliminate the patients' fear, anxiety and depression during treatment, keep the patients optimistic psychology during treatment and improve the curative effect. Research showed that [29] most cervical

Table 8. Comparison of nursing satisfaction between two groups of patients [n (%)]

Group	n	Timeliness of service	Management standardization	Service attitude	Hospitalization environment	Comprehensive quality of nursing staff
JG	99	25.48±2.94	24.73±2.89	13.93±2.04	14.58±2.46	10.93±0.78
CG	63	20.37±2.51	19.85±2.36	10.48±2.01	11.45±2.42	7.48±0.73
t	-	11.400	11.230	10.550	7.945	28.130
P	-	<0.001	<0.001	<0.001	<0.001	<0.001

cancer patients suffered from pain, anorexia, insomnia and other adverse reactions during treatment, and it is essential to improve the patient-centered nursing effectiveness to the greatest extent. The results of this study showed that the VAS score of patients in the JG was evidently lower than that in the CG after intervention, indicating that humanistic care combined with psychological nursing intervention could reduce postoperative pain of patients. The improvement of sleep quality in the JG was evidently better than that in the CG, indicating that humanistic care combined with psychological nursing intervention not only relieved the pain symptoms of patients, but also improved the sleep quality of patients.

Researches have also shown that [30] patients' self-management skills will be affected by their cognition of diseases and pain management attitude. The ESCA and GSES scores of the patients in the JG after treatment were evidently higher than those in the CG, indicating that humanistic care combined with psychological nursing could strengthen the patients' self-management and self-care ability while strengthening the patients' cognition of diseases. Moreover, the incidence of complications in the intervention process of the JG was evidently lower than that of the CG, indicating that humanistic care combined with psychological nursing could enable nurses to supervise each other, strengthen the nursing of patients and reduce complications. Researches have shown that [31] cervical cancer would evidently affect the quality of life of patients, so efforts should be made to improve the quality of life of cervical cancer patients, especially in alleviating pain, discomfort, anxiety, depression and other aspects. However, the results of this study showed that the quality of life of patients in the JG after nursing intervention was evidently higher than that in the CG, indicating that humanistic care combined with psychological nursing could improve the psychological state, quality of life, and therapeutic effect of the patients. Finally, we made a nursing satisfaction survey. The results showed that the nursing satisfaction of the patients in the JG was higher than that in the CG, indicating that the patients had a high recognition of the nursing and this nursing intervention provided a powerful reference for subsequent clinical application.

Although this study confirmed that humanistic care combined with psychological care can bring better benefits to patients with cervical cancer, there are still some limitations in this study. For example, we have not analyzed the factors affecting the adverse prognosis of patients, and will gradually conduct supplementary research from the above perspectives in the future.

To sum up, humanistic care combined with psychological intervention for cervical cancer patients can improve the self-care ability, reduce the adverse emotions in the treatment process, and effectively improve the quality of life and satisfaction with this nursing.

Disclosure of conflict of interest

None.

Address correspondence to: Shanshan Chen, Department of Gynaecology, Cancer Hospital of China Medical University, Liaoning Cancer Hospital & Institute, No.44 Xiaoheyan Road, Dadong District, Shenyang 110042, Liaoning Provincial, China. Tel: +86-18900917379; E-mail: shanshanxhen01@outlook.com

References

[1] Cheng Y, Yang M and Peng J. Correlation the between the regulation of miRNA-1 in c-Met-induced EMT and cervical cancer progression. Oncol Lett 2019; 17: 3341-3349.

[2] Guo F, Chen YZ, Li L, Chen C, Jin JH, Yang J, Chen JJ, Chen XY, Guo M and Chen YM. Long

non-coding RNA XLOC_008466 acts as an oncogenic molecular in cervical cancer tumorigenesis. Biomed Pharmacother 2018; 98: 88-94.
[3] Zhou JG, Zhou NJ, Zhang Q, Feng YY and Zhou H. Apatinib for patients with advanced or recurrent cervical cancer: study protocol for an open-label randomized controlled trial. Trials 2018; 19: 500.
[4] Tesfai FM, Kroep JR, Gaarenstroom K, De Kroon C, Van Loenhout R, Smit V, Trimbos B, Nout RA, van Poelgeest MIE and Beltman JJ. Fertility-sparing surgery of cervical cancer >2 cm (international federation of gynecology and obstetrics 2009 stage IB1-IIA) after neoadjuvant chemotherapy. Int J Gynecol Cancer 2020; 30: 115-121.
[5] Xiao J, Zhou J, Liang L, Liu F, Liang H, Xu C and Meng J. Sensitivity of ASPP and P-gp to neoadjuvant chemotherapy combined with gene therapy in locally advanced cervical cancer. J BUON 2019; 24: 967-974.
[6] Hanprasertpong J, Geater A, Jiamset I, Padungkul L, Hirunkajonpan P and Songhong N. Fear of cancer recurrence and its predictors among cervical cancer survivors. J Gynecol Oncol 2017; 28: e72.
[7] Bae H and Park H. Sexual function, depression, and quality of life in patients with cervical cancer. Support Care Cancer 2016; 24: 1277-1283.
[8] Khademi M, Mohammadi E and Vanaki Z. A grounded theory of humanistic nursing in acute care work environments. Nurs Ethics 2017; 24: 908-921.
[9] Simpkin AL, Dinardo PB, Pine E and Gaufberg E. Reconciling technology and humanistic care: lessons from the next generation of physicians. Med Teach 2017; 39: 430-435.
[10] Dy SM, Isenberg SR and Al Hamayel NA. Palliative care for cancer survivors. Med Clin North Am 2017; 101: 1181-1196.
[11] Yuan P, Liu Z, Qi J, Yang X, Hu T and Tan H. Laparoscopic radical hysterectomy with enclosed colpotomy and without the use of uterine manipulator for early-stage cervical cancer. J Minim Invasive Gynecol 2019; 26: 1193-1198.
[12] Kwok MK, Leung GM and Schooling CM. Breast feeding and early adolescent behaviour, self-esteem and depression: Hong Kong's 'children of 1997' birth cohort. Arch Dis Child 2013; 98: 887-894.
[13] Lewis S. Guidance for psychological therapists: information for GPs advising patients on antidepressant withdrawal. Br J Gen Pract 2020; 70: 245.
[14] Jauhar S, McKenna PJ and Laws KR. NICE guidance on psychological treatments for bipolar disorder: searching for the evidence. Lancet Psychiatry 2016; 3: 386-388.
[15] Sun H, Liu H, Li J and Wang X. The patterns of graded psychological nursing care for patients after cardiothoracic surgeries. Iran J Public Health 2017; 46: 899-905.
[16] Zhu YL, Zhang WH, Liu BB, Zhang P, Zhang J and Wang L. Preliminary study of the clinical value of colposcopy in diagnosing vagina invasion in cervical cancer. Zhonghua Fu Chan Ke Za Zhi 2020; 55: 322-326.
[17] Yin G, Li Y, Xu W and Han N. Chart review of patients receiving valsartan-amlodipine single-pill combination versus valsartan and amlodipine combination for blood pressure goal achievement and effects on the Hamilton anxiety rating/Hamilton depression rating scales. Medicine (Baltimore) 2019; 98: e18471.
[18] Shukla RH, Nemade SV and Shinde KJ. Comparison of visual analogue scale (VAS) and the nasal obstruction symptom evaluation (NOSE) score in evaluation of post septoplasty patients. World J Otorhinolaryngol Head Neck Surg 2020; 6: 53-58.
[19] Zhang H, Li Y, Zhao X, Mao Z, Abdulai T, Liu X, Tu R, Wang Y, Qian X, Jiang J, Tian Z, Luo Z, Dong X, Wang C and Bie R. The association between PSQI score and hypertension in a Chinese rural population: the Henan rural cohort study. Sleep Med 2019; 58: 27-34.
[20] Guo L, Soderhamn U, McCallum J, Ding X, Gao H, Guo Q, Liu K and Liu Y. Testing and comparing two self-care-related instruments among older Chinese adults. PLoS One 2017; 12: e0182792.
[21] Yuan H, Yang Y, Zhang Y, Xue G and Chen L. The health-related quality of life among patients on maintenance haemodialysis: evaluation using the "EQ-5D". J Clin Nurs 2019; 28: 4004-4011.
[22] Husson O, de Rooij BH, Kieffer J, Oerlemans S, Mols F, Aaronson NK, van der Graaf WTA and van de Poll-Franse LV. The EORTC QLQ-C30 summary score as prognostic factor for survival of patients with cancer in the "real-world": results from the population-based PROFILES registry. Oncologist 2020; 25: e722-e732.
[23] Wang HF, Wang DB, Chen YH and Zhou MY. Relief of urinary retention after radical hysterectomy for cervical cancer patients by acupressure: a randomized controlled trial. Zhongguo Zhong Xi Yi Jie He Za Zhi 2015; 35: 425-428.
[24] Jeremic K, Stefanovic A, Milincic N, Mitrovic M, Jeremic J and Mircic A. Intestinal surgery and surgery of urinary tract in treatment of recurrent cervical cancer-case report. Eur J Gynaecol Oncol 2011; 32: 460-462.

[25] Meira KC, Silva GWDS, Dos Santos J, Guimarães RM, de Souza DLB, Ribeiro GPC, Dantas ESO, Carvalho JBL, Jomar RT and Simões TC. Analysis of the effects of the age-period-birth cohort on cervical cancer mortality in the Brazilian Northeast. PLoS One 2020; 15: e0226258.
[26] Isaka Y, Inada H, Hiranuma Y and Ichikawa M. Psychological impact of positive cervical cancer screening results among Japanese women. Int J Clin Oncol 2017; 22: 102-106.
[27] Ebu NI, Amissah-Essel S, Asiedu C, Akaba S and Pereko KA. Impact of health education intervention on knowledge and perception of cervical cancer and screening for women in Ghana. BMC Public Health 2019; 19: 1505.
[28] Yang YL, Liu L, Wang XX, Wang Y and Wang L. Prevalence and associated positive psychological variables of depression and anxiety among Chinese cervical cancer patients: a cross-sectional study. PLoS One 2014; 9: e94804.
[29] Kim YJ, Munsell MF, Park JC, Meyer LA, Sun CC, Brown AJ, Bodurka DC, Williams JL, Chase DM, Bruera E and Ramondetta LM. Retrospective review of symptoms and palliative care interventions in women with advanced cervical cancer. Gynecol Oncol 2015; 139: 553-558.
[30] Jahn P, Kuss O, Schmidt H, Bauer A, Kitzmantel M, Jordan K, Krasemann S and Landenberger M. Improvement of pain-related self-management for cancer patients through a modular transitional nursing intervention: a cluster-randomized multicenter trial. Pain 2014; 155: 746-754.
[31] Endarti D, Riewpaiboon A, Thavorncharoensap M, Praditsitthikorn N, Hutubessy R and Kristina SA. Evaluation of health-related quality of life among patients with cervical cancer in indonesia. Asian Pac J Cancer Prev 2015; 16: 3345-3350.