Relationship between uncertainty tolerance and acceptance in postoperative patients with cervical cancer

Abstract:

Background and Objectives: The main objective of the study is to explore the relationship between uncertainty tolerance and positive acceptance of post-surgical patients with cervical cancer and provide reference opinions for gynecological nurses to carry out targeted health education for patients. **Methods:**This cross sectional study was conducted in Nishtar Hospital Multan with the collaboration of BVH and Avicenna Hospital, Lahore during March 2021 to September 2021. The "Uncertainty Tolerance Scale" and "Positive Acceptance Scale" were used to investigate 233 post-operative patients of cervical cancer.**Results:**The uncertainty tolerance and acceptance aggressiveness scores were 3.74±0.34 and 1.96±0.20, respectively, with a significant correlation coefficient between uncertainty tolerance and acceptance aggressiveness ($r= -0.516$, $P<0.05$). **Conclusion:**It is concluded that the uncertainty tolerance and positive acceptance levels of patients after cervical cancer surgery werelow and were negatively correlated with each other. The gynecological nurses should consider the patients' uncertainty tolerance post-surgery and developtailored health education and intervention programs to improve the positive acceptance level of post-surgical patients with cervical cancer.

Keywords: cervical cancer; uncertainty tolerance; positive acceptance

Introduction:

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The incidence of cervical cancer in China is 15.36 per 100,000, and is among the commonest malignant tumors in women in my countryin this country (1). In recent years, with the popularization of early screening and the improvement of surgical techniques, cervical cancer is promptly diagnosed and treated, which has significantly improved the prognosis(2). However, 29% to 38% patients of cervical cancer still end up in relapse after treatment (3). Uncertainty tolerance mainly refers to the individual differences among patients during coping with the prognosis, situations, cognitive alterations, mood changes, language,and behavior of patients with cervical cancer. Several studies show that the individuals with a low tolerance for uncertainty tend to negatively interpret and evaluate the disease information or the surrounding environment(4). This negative attitude may lead to an increase in psychological and physical stress, with detrimental effects on disease course. Accepting and enterprising is a coping method for individuals to actively accept their medical condition, the environment, and positively respond to stress events(5). Chinese scholars have taken positive acceptance as an important criterion for mental health (6). At present, there are no reports on the uncertainty tolerance and positive acceptance of patients with cervical cancer. This study aims to fill this gap by investigating the status and relationship between uncertainty tolerance and positive acceptance in patients with cervical cancer. Additionally, we provide reference opinions for physical and mental rehabilitation and extended nursing.

Objectives

The main objective of the study is to explore the relationship between uncertainty tolerance and positive acceptance of post-surgical patients with cervical cancer and provide reference opinions for gynecological nurses to carry out targeted health education for patients.

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Methodology of the study

This cross sectional study was conducted in Nishtar Hospital Multan with the collaboration of BVH and Avicenna Hospital, Lahore during March 2021 to September 2021.

Inclusion criteria:

All the patients were the diagnosis of cervical cancer with stagingIb to IIa,extensive hysterectomy and pelvic and abdominal lymph node dissection, adequate reading, and comprehension skills; and a written informed consent to participate in this study, None of the patients had undergone radiotherapy and/or chemotherapy before surgery.

Exclusion criteria:

The exclusion criteriawere the presence of other organic diseases and/or co-morbidities.

Data collection

We used questionnaire survey method, which investigated the demography of patients including age, marital status, medical insurance type, cancer stage, pathological type, and complications. In addition, we also investigated the patient's relevant medical records for related information.

The "Uncertainty Tolerance Scale"for the data collection. The scale includes four dimensions: powerlessness caused by uncertainty, accidents are negative, unfair future uncertainty, and pressure caused by uncertainty.A total of 27 items uses Likert 5-level scoring method, The answer to each entry is set from "1" (not like me at all) to "5" (exactly like me), and the total score ranges from 27 to 135 points. The higher the scale score, the lower the uncertainty tolerance of the cervical cancer patient population. The test-retest reliability of each

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dimension of the scale in this study is 0.852～0.876.

We adopted the "Positive acceptance Scale" compiled by Dai Ji et al.(8) under the background of Chinese culture. The scale includes 25 items in two dimensions of aggressiveness and acceptance. The scale adopts the Likert 5-level scoring method, and the answer to each item is set from "1" (completely non-conforming) to "5" (completely conforming), with a total score of 25 to 125 points. The higher the scale score, the better the acceptance and aggressiveness of the patients with cervical cancer. The test-retest reliability of the two dimensions of the scale in this study is 0.831 and 0.853.For those patients who have difficulty completing the questionnaire independently, the researcher read and explained the questionnaire, and then filled it on behalf of the patient.

Statistical methods

All data was analyzed using SPSS 22.0. K-S normality test was used for measurement, statistical description was applied as ($\bar{x} \pm s$), and Pearson correlation analysis iwas used for data correlation analysis.

Results

All measurements were taken on the day the patients were discharged from the hospital. After obtaining an informed consent, the investigator used a unified instruction to explain the questionnaire filling method without guidance. Except for some disease-related information, the investigator examined the medical records, completed by the surveyed person.I would put this part in material and methods

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Table 1. General information of 233 patients.

item	number of people	percentage（%）
age		
＜30	17	7.30
30～50	156	66.95
＞50	60	25.75
marital status		
unmarried	6	2.58
married	215	92.27
Divorced	8	3.43
Widowed	4	1.72
Type of medicalinsurance		
town	107	45.92
rural	126	54.08
Cancer staging		
I_{b1}	43	18.45
I_{b2}	91	39.06
IIa_1	75	32.19
IIa_2	24	10.30
Pathological type		
Squamous cell carcinoma	198	84.98
Adenocarcinoma	35	15.02
complication		
Urinary retention	9	3.86
Urinary system infection	13	5.58
Systemic infection	10	4.29
Abdominal incision infection	6	2.59

Table 2. Uncertainty tolerance scores of patients after cervical cancer surgery (n=233,).

Dimension	Range of points	Average score of items	Total score
powerlessness caused by uncertainty	8～40	4.34±0.52	34.73±4.15

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Accidents are negative	9～45	4.24±0.48	38.19±4.30
pressure caused by uncertainty	6～30	4.06±0.47	24.39±2.84
An uncertain future is unfair	4～20	3.75±0.43	15.02±1.72
Uncertainty tolerance	27～135	3.74±0.34	101.06±9.18

Table 3. The correlation between uncertainty tolerance and positive acceptance (r value).

variable	acceptance	positive	Positive acceptance
Impotence caused by uncertainty	-0.242**	-0.360**	-0.379**
The pressure of uncertainty	-0.326**	-0.268**	-0.381**
Accidents are negative	-0.354**	-0.378**	-0.466**
An uncertain future is unfair	-0.407**	-0.305**	-0.459**
Uncertainty tolerance	-0.391**	-0.420**	-0.516**

Discussion

The uncertainty tolerance score of patients after cervical cancer surgery was3.74±0.34, which is close to the peak value of 5, indicating a low uncertainty tolerance of cervical cancer patients' post-surgery.Accordingly, if the treatment, prognosis, or outcome of the disease cannot be predicted, the patient will most likely have a sense of uncertainty. Similarly,in the presence of physical discomfort and lack of information, the patient's sense of control is insufficient, and the uncertainty tolerance is further reduced(9). The dimensional "inability caused by uncertainty" has the highest score, partly related to multiple uncontrollable situations such as poor recovery in the early postoperative period, concerns about cancer recurrence and metastasis, a fear of possible side effects of radiotherapy and chemotherapy, and high medical expenses(10). Cancer is currently the leading cause of death worldwide,

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and the exact prognosis of the disease is difficult to determine despite novel treatments.However, compared with other malignant tumors, the cure rate of cervical cancer patients is higher; and may further improve with the development of medical treatment, the spread of information, and the application of vaccines(11). Thus, the scale "an uncertain future is unfair" has a low score in our observation. The results of this study support the Mishel theory, that the occurrence and development of life-threatening diseases are also accompanied by changes in the tolerance about disease uncertainty (12).

Conclusion

It is concluded that the uncertainty tolerance and positive acceptance levels of patients after cervical cancer surgery were low and were negatively correlated with each other. The gynecological nurses should consider the patients' uncertainty tolerance post-surgery and develop tailored health education and intervention programs to improve the positive acceptance level of post-surgical patients with cervical cancer.

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