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Relationship between Stigma and Marital Satisfaction in Cervical Cancer Patients

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Abstract

Objective: To investigate the status quo of stigma and marital satisfaction of patients with cervical cancer, and analyze the correlation between them, to provide a reference for making intervention plans for patients with cervical cancer. **Methods:** 216 patients in a third-class first-class hospital in Zhengzhou were investigated by convenient sampling method, using a general information questionnaire, social impact scale, and Olson marriage quality questionnaire. **Results:** The total stigma score of cervical cancer patients was 73.00 (62.00, 76.00), which was high. The total marital satisfaction score is 36.00 (26.00, 38.00), in the middle level. There was a negative correlation between marital satisfaction and stigma ($P < 0.01$). The influencing factors of the stigma of cervical cancer patients include diagnosis time, family per capita monthly income, children's situation, medical insurance type, and treatment method. **Conclusion:** The stigma of patients with cervical cancer is at a high level, and their marital satisfaction is at a medium level. Medical staff should give them health education through various channels, pay attention to low-income patients, improve marital satisfaction, and reduce stigma.

Keywords

Cervical Cancer, Stigma, Marital Satisfaction, Correlation

1. Introduction

Cervical cancer is a serious threat to women's lives and health and is one of the top ten malignant tumors in China [1]. Disease shame refers to an individual's psychological shame experience due to the disease, which is manifested as being labeled, discriminated, devalued, alienated avoided, and not understood and accepted [2]-[4]. Domestic and international studies have shown that disease shame can bring many negative emotions to patients and affect the quality of their

marriages [5]-[7]. Marital satisfaction refers to the subjective evaluation of married couples on their marital relationship, and the level of marital satisfaction has an important impact on marital stability and quality [8] [9]. For married couples, a cancer diagnosis can increase marital distress [10]. Cervical cancer patients exhibit guilt in their marital home, lack of knowledge about sexuality, and the presence of disease shame can have an impact on the marital relationship [11] [12]. Therefore, it is necessary to explore the relationship between cervical cancer patients' sense of shame and marital satisfaction. Thus, this study investigated the current situation of cervical cancer patients' sense of shame and marital satisfaction, analyzed the influencing factors of sense of shame and the relationship between marital satisfaction and sense of shame, and aimed to provide a reference for the development of interventions to reduce patients' sense of shame.

2. Objects and Methods

2.1. Subject of the Study

The convenience sampling method was used to select 215 patients with cervical cancer admitted to the Department of Oncology and Department of Gynecology of a tertiary-level hospital in Zhengzhou City, Henan Province, China, from February to July 2023 as the study subjects. Inclusion criteria: 1) pathologic diagnosis of cervical cancer; 2) age ≥ 18 years; 3) married; 4) clear mind and good communication ability; 5) voluntary participation in this study. Exclusion criteria: 1) patients with other malignant tumors; 2) being involved in other subjects. In this study, 10 times the sample variables were taken, and considering the 20% failure rate, 13 variables were determined, and the final sample size was determined to be 78 - 156 cases. The final sample size included in this study was 216 cases. This study was approved by the hospital ethics committee.

2.2. Methodology

2.2.1. Research Tools

1) General Information Questionnaire

It was designed by the researcher and included age, time of diagnosis, education, occupation, per capita monthly household income, children's status, type of health insurance, and treatment modality.

2) Social Impact Scale (Social Impact Scale, SIS)

The scale was developed by Fife *et al.* [13] in 2000 and translated into Chinese by Aywoan and Pan *et al.* [14] in 2007 to measure the stigma of cancer and HIV-infected or AIDS patients. It includes 4 dimensions of social exclusion, internalized shame, economic discrimination, and social isolation, with a total of 24 entries. A Likert 4-point scale was used, with scores ranging from 1 to 4 in order from strongly disagree to strongly agree. The total score ranged from 24 to 96 and was categorized into 3 levels, low (24 - 47), moderate (48 - 71), and high (72 - 96), with the higher the score, the higher the level of disease stigma [15]. The Cronbach's alpha coefficient for this scale is 0.85 to 0.90. The Cronbach's alpha

coefficient in this study was 0.937.

3) Marital Satisfaction on Olson's Marital Quality Questionnaire (Olson Enrich Marital Inventory)

The questionnaire consists of 10 items with a total score of 10-50 on a 5-point Likert scale, ranging from 1 to 5 on a scale of 1 to 5 in descending order, with high scores indicating that most aspects of the marital relationship are harmonious and low scores reflecting marital dissatisfaction [16]. The Cronbach's alpha coefficient of the scale was 0.86. The Cronbach's alpha coefficient in this study was 0.907.

2.2.2. Survey Methodology

After the consent of the relevant departments and divisions of the hospital, the questionnaire was used, and the survey was conducted by trained master's degree students in strict accordance with the inclusion and exclusion criteria, after obtaining the informed consent of the study subjects, using a unified instruction, and if there were any questions, they were explained on the spot. The questionnaires were collected and reviewed on the spot, and if there were any missing items or omissions, they were promptly added. The research data were entered and checked by two persons to ensure the accuracy of the data. A total of 240 questionnaires were distributed, 24 invalid questionnaires were excluded, and 216 valid questionnaires were finally obtained, with an effective recovery rate of 90%.

2.2.3. Methods of Data Analysis

SPSS 27.0 software was used for analysis. The count data were expressed as frequency and percentage, and for the measurement data obeying normal distribution, they were expressed as mean ± standard deviation, and for the measurement data not obeying normal distribution, they were expressed as median and quartile. ANOVA was used for the comparison of measures obeying normal distribution, rank sum test was used for those not obeying normal distribution, Spearson's correlation was used to explore the relationship between stigma and marital satisfaction, and multiple linear regression was used for multifactorial analysis. The test level $\alpha = 0.05$, and $P < 0.05$ was considered a statistically significant difference.

3. Results

3.1. Sickness Stigma and Marital Satisfaction Scores

216 cervical cancer patients had a total score of 73.00 (62.00, 76.00) for stigma, which was at a high level, a medium level for social exclusion, and a high level for intrinsic shame, economic discrimination, and social isolation. 216 cervical cancer patients had a total score of 36.00 (26.00, 38.00) for marital satisfaction, which was at a medium level. See **Table 1**.

3.2. Univariate Analysis of General Information and Stigma of Patients with Cervical Cancer

The general information of the 16 cervical cancer patients is shown in **Table 2**. The differences in the scores of stigma for different ages, length of diagnosis,

Table 1. Stigma scores of cervical cancer patients (n = 216).

dimension	Scoring range	Stigma [M(P_{25}, P_{75})]
Total Morbidity and Stigma Score	24.00 - 96.00	73.00 (62.00, 76.00)
sense of social exclusion	9.00 - 36.00	24.00 (21.00, 27.00)
internal shame	5.00 - 20.00	16.00 (13.00, 17.00)
economic discrimination	3.00 - 12.00	10.00 (9.00, 11.00)
sense of social isolation	7.00 - 28.00	22.00 (20.00, 23.00)

education level, per capita monthly family income, children's status, type of health insurance, and treatment modalities were compared, and the differences were statistically significant (all $P < 0.05$).

Table 2. Comparison of stigma scores among married cervical cancer patients with different demographic characteristics (n = 216).

sports event	number of examples [n (%)]	score	H	P
Age (years)			33.068	<0.001
<45	128 (59.3)	75.00 (64.00, 80.25)		
45 - 60	72 (33.3)	68.00 (54.00, 73.00)		
>60	16 (7.4)	69.00 (62.00, 76.00)		
Duration of diagnosis			30.986	<0.001
≤1 month	80 (37.0)	67.50 (62.00, 76.00)		
1 - 3 months	32 (14.8)	76.50 (66.75, 84.00)		
3 - 6 months	56 (25.9)	75.00 (62.00, 76.00)		
6 - 9 months	24 (11.1)	70.00 (54.00, 70.00)		
>9 months	24 (11.1)	76.00 (64.00, 81.00)		
educational attainment			17.974	<0.001
Junior high school and below	48 (22.2)	71.50 (54.00, 75.00)		
College or Bachelor's Degree	64 (29.6)	68.00 (62.00, 75.00)		
High school or junior college	104 (48.1)	63.00 (59.00, 79.75)		
Monthly per capita household income			54.016	<0.001
<3000 yuan	32 (14.8)	74.00 (70.75, 75.75)		
3000 - 5000 yuan	136 (63.0)	75.00 (64.00, 78.00)		
5000 - 10,000 yuan	32 (14.8)	62.00 (59.00, 62.00)		
>10,000 yuan	16 (7.4)	65.00 (62.00, 68.00)		

Continued

Children (number)			41.790	<0.001
0	32 (14.8)	77.00 (65.50, 84.00)		
1	56 (25.9)	70.00 (62.00, 76.00)		
2	88 (40.7)	75.00 (64.00, 76.00)		
3	24 (11.1)	54.00 (34.00, 81.00)		
4	8 (3.7)	70.00 (70.00, 70.00)		
5	8 (3.7)	49.00 (49.00, 49.00)		
Type of medical insurance			15.440	<0.001
residents' medical insurance	96 (44.4)	67.50 (55.00, 76.00)		
Employee medical insurance or provincial medical insurance	80 (37.0)	72.50 (64.00, 78.00)		
Self-financed	40 (18.5)	75.00 (75.00, 75.00)		
Treatment			9.455	0.024
surgeries	120 (55.6)	75.00 (62.00, 76.00)		
radiotherapy	16 (7.4)	78.00 (70.00, 86.00)		
Surgery + Chemotherapy	56 (25.9)	70.00 (62.00, 75.00)		
chemotherapy	24 (11.1)	75.00 (64.00, 76.00)		

3.3. Correlation Analysis of Cervical Cancer Patients' Sense of Shame and Marital Satisfaction

The results of correlation analysis showed that there was a negative correlation between marital satisfaction and sense of shame in cervical cancer patients ($r = -0.238$, $P < 0.01$). See **Table 3**.

Table 3. Correlation analysis of cervical cancer patients' sense of shame and marital satisfaction.

	Total Morbidity and Stigma Score	sense of social exclusion	internal shame	economic discrimination	sense of social isolation	Marital satisfaction
Total Morbidity and Stigma Score	1	-	-	-	-	
Sense of social exclusion	0.943**	1	-	-	-	
Internal shame	0.779**	0.691**	1	-	-	
Economic discrimination	0.844**	0.820**	0.545**	1	-	

Continued

Sense of social isolation	0.886**	0.791**	0.607**	0.681**	1	
Marital satisfaction	−0.238**	−0.204**	0.003	−0.238**	−0.416**	1

Note: **indicates P < 0.01.

3.4. Multiple Linear Regression Analysis of Factors Affecting Cervical Cancer Patients' Sense of Shame

Multivariate regression analysis was conducted using the stigma score as the dependent variable and the marital satisfaction score and statistically significant independent variables in the general data as independent variables. independent variables assigned: age: <45 years = 1, 45 - 60 years = 2, >60 years = 3; length of time since diagnosis: <1 month = 1, 1 - 3 months = 2, 3 - 6 months = 3, 6 - 9 months = 4, 9 - 12 months = 5; literacy level: Junior high school or below = 1, high school or junior college = 2, college or bachelor's degree = 3; per capita monthly family income: <3000 = 1, 3000 - 5000 = 2, 5000 - 10,000 = 3, >10,000 = 4. The results of multivariate linear regression showed that the length of time of diagnosis, per capita monthly family income, children's status, type of health insurance, and treatment modality were the influencing factors of the sense of stigma of patients with cervical cancer (P < 0.05), explaining 39.3% of the variance. See **Table 4**.

Table 4. Results of multiple linear regression analysis of factors influencing the sense of shame in cervical cancer patients.

independent variable	regression coefficient	standard error	Standardized regression coefficient	t	P
(Constant)	76.681	5.925		12.941	<0.001
Duration of diagnosis	1.436	0.533	0.168	2.692	0.008
Monthly per capita household income	−6.008	1.006	−0.388	−5.970	<0.001
Children's situation	−5.692	0.878	−0.571	−6.484	<0.001
Type of medical insurance	3.980	1.162	0.246	3.426	<0.001
Treatment	1.404	0.522	0.156	2.687	0.008

Note: R^2 = 0.416, adjusted R^2 = 0.393, F = 18.407, P < 0.001.

4. Discussion

4.1. Married Patients with cervical Cancer Have High Levels of Stigma and Moderate Levels of Marital Satisfaction

In this study, the total score of stigma of 216 cervical cancer patients was 73.00 (62.00, 76.00) points, which was at a high level, similar to the findings of Li Rong [17] [18], Ge Lina [19], and Chen Ying [20]. The total marital satisfaction score of

cervical cancer patients was 36.00 (26.00, 38.00), which was at a medium level. Analyzing the reasons, it may be that more patients < 45 years old were included in this study, the patients were younger and still in the denial stage of the disease, the public perception of cervical cancer was mostly related to sexual transmission, and the patients could not accept that they suffered from cervical cancer.

4.2. Stigma Is Negatively Correlated with Marital Satisfaction in Cervical Cancer Patients

The results of this study showed that the sense of shame was negatively correlated with marital satisfaction, indicating that the marital satisfaction of patients decreased with the rise of the sense of shame. Analyzing the reasons, it may be that patients with high marital satisfaction feel more care and support from their husbands, and can better regulate negative emotions and face the disease, which in turn reduces the level of disease shame. Studies have shown that therapeutic communication based on humanistic care [16] and supportive psychological interventions [21] can help patients receive more care from their spouses, promote husband and wife communication, effectively improve husband and wife relationships and quality of life, and increase patients' marital satisfaction. Therefore, healthcare professionals should carry out psychological intervention for cervical cancer patients as early as possible, strengthen health education about the disease, enable patients to master the coping skills of negative emotions, and use the self-expression intervention method [22] to improve the intimate relationship between husband and wife, change the cognition of the disease, enable patients to accept the disease, reduce the sense of shame of the patient, and improve the degree of marital satisfaction.

4.3. Factors Influencing Stigma in Married Cervical Cancer Patients

4.3.1. Length of Time to Diagnosis

The results of this study showed that the length of diagnosis was an influential factor in the sense of shame in married cervical cancer patients, similar to the findings of Zhao Min [23] *et al.* This study showed that the intrinsic shame of cervical cancer patients was at a high level. The diagnosis and treatment of the disease make patients to have problems such as ovarian or uterine damage, vaginal narrowing, etc., but married cervical cancer patients have a greater need for sexual life, due to the disease, patients tend to show a sense of guilt in marriage and family; lack of knowledge about sexual life; dare not have sex or significantly reduced the number of sexual life [24]. Healthcare professionals should pay attention to the sexual life of patients with cervical cancer, provide relevant knowledge channels for patients and their families to obtain, help patients and their spouses to establish an intimate husband and wife relationship, reduce the patient's sense of shame, and improve the patient's marital satisfaction. Studies have shown [22], that couple self-expression can reduce the level of patients' sense of shame, and improve the level of couple support coping, patients should be encouraged to communicate with patients with the same disease, and psychological interventions for

patients to avoid isolation of patients from the community, and to eliminate their intrinsic sense of shame [25].

4.3.2. Monthly Per Capita Household Income

The present study showed that low per capita monthly family income was an influential factor in patients' sense of sickness and shame, which was similar to the findings of Liu Xiaojing [26] and Yao Min [27], among others. This study showed that the total score of patients' sense of shame and economic discrimination was at a high level, which may be related to the fact that patients with low per capita monthly family income have economic difficulties and receive less social support, the treatment of the disease adds to the financial burden of the patients, the diagnosis of the disease leads to the fact that patients are often not able to work and live normally, and the patients have to consider the source of income of their families while facing high costs of treatment. Patients have feelings of guilt and are in a state of anxiety. It is suggested that healthcare professionals should pay attention to this kind of population, provide psychological care to them, guide patients to express their negative emotions, improve their social support, and keep them in a positive state of mind.

4.3.3. Types of Health Insurance and Treatment Modalities

The results of this study show that self-payment and treatment modality are influential factors in patients' sense of stigma. The possible reason for this is that patients with health insurance have a lower financial burden compared to those who pay out-of-pocket, patients end up paying less than those who pay out-of-pocket, and psychological stress is lower than those who pay out-of-pocket. Patients with cervical cancer often need surgery and chemotherapy, and the treatment makes the patients' physical integrity damaged, postoperative ovaries or uterus missing, loss of fertility and female characteristics, endocrine disorders [28], resulting in vaginal narrowing, dryness, loss of elasticity and other problems, the patients have a heavier psychological burden, that they are no longer a complete woman, self-esteem is damaged, and they feel a sense of guilt for the spouse's need for sexual life [17]. Therefore, healthcare professionals should carry out relevant psychological guidance for patients to improve their negative emotions and make them accept body changes, such as acceptance commitment therapy [29] can be used to intervene in the patient's body imagery, so that the patient can accept the body changes brought about by the disease.

5. Summary

To summarize, cervical cancer patients' sense of shame is at a high level and marital satisfaction is at a medium level. Sense of shame is negatively correlated with marital satisfaction. Healthcare professionals should pay attention to assessing the situation of disease shame in married patients with cervical cancer, reducing their intrinsic shame and social isolation, promoting better communication with their spouses, lowering their level of disease shame, and improving marital satisfaction.

The sample size of this study is small, only selecting patients from one hospital, the sample has a certain selection bias, and the included patients are all post-treatment patients, in the future, the sample can be enlarged to further explore the study of the sense of shame and marital satisfaction in married cervical cancer patients, and longitudinal studies can be conducted to compare the differences in the patients' marital satisfaction over time.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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