Abstract

Objective: The aim of the study was to understand the experience of negative emotions and coping styles of patients with cervical cancer during the rehabilitation period.

Methods: A descriptive qualitative research method was used. Purposive sampling was used to recruit participants. Semi-structured interviews were conducted with 18 cervical cancer patients and the data were analysed using content analysis.

Results: The analysis identified three relevant themes. Theme 1: Negative emotions in convalescent cervical cancer patients mainly comprised fear of recurrence, worries about sex and feelings of inferiority. Theme 2: Patients used positive and negative coping styles to manage negative emotions. Theme 3: Patients expressed a strong need for rehabilitation information.

Conclusions: Patients with cervical cancer exhibited negative emotions during the rehabilitation period. To help these patients, medical staff should develop an understanding of their needs by communicating more with patients and providing them with targeted care to help them return to society more quickly.

Keywords
Cervical cancer, negative emotion, cancer rehabilitation, qualitative study, content analysis, coping style, patient–nurse communication

Date received: 29 March 2020; accepted: 20 July 2020

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Introduction

Cervical cancer is one of the most common genital malignancies in women. Approximately 500,000 new cases of cervical cancer are reported each year globally, accounting for 5% of all new cancer cases; more than 80% of these occur in developing countries such as China.¹ There are approximately 53,000 deaths from cervical cancer in China per year, accounting for 18.4% of all female deaths from cancer.¹ Cervical cancer is therefore a primary disease that endangers the health and life of women in China.²

Owing to improvements in screening and treatment techniques, the 5-year survival rate of cervical cancer patients has been gradually increasing annually.³ Rehabilitation strategies to help patients resume their normal lives with confidence have attracted much attention.

Cervical cancer involves issues related to personal privacy, sexual history, life habits, sexual partner behaviour, future fertility and marital relationships. In addition to being affected by traditional Chinese cultural attitudes to these issues, patients with cervical cancer often consider discussion of sexual issues taboo.⁴ Therefore, compared with patients with non-cervical cancer, cervical cancer patients do not tend to share their concerns and experiences of pain, which causes chronic stress and negative emotions. Such negative emotions persist until after treatment, causing poorer prognosis and quality of life.⁵ No studies have attempted to understand the experience of negative emotions and coping styles among patients with cervical cancer undergoing rehabilitation in China. Thus, the aim of this study was to understand the experience of negative emotions in the cervical cancer rehabilitation phase and the coping styles associated with their management. It is hoped that the outcomes may inform strategies to help patients overcome their negative emotions and enhance their quality of life.

Methods

Design

A descriptive qualitative research method was used. Participants were recruited using purposive sampling and semi-structured interviews were conducted with 18 cervical cancer patients. The data were analysed using content analysis. Ethical approval was provided by the hospital’s ethics committee (2017-Lun approval No. 086). Written informed consent was obtained from all patients before enrolment in the study.

Sample and recruitment

Patients with cervical cancer were recruited from the radiotherapy outpatient department of the First Affiliated Hospital of Suzhou University. Inclusion criteria were patients aged over 18 years, at the end of the cervical cancer treatment process, with no cognitive impairment and who could communicate effectively. Patients who did not yet know their diagnosis, had functional or organic mental disorders or had other serious diseases were excluded. The number of interviews was determined using the principle of data saturation.

Data collection

Patients visiting the radiotherapy outpatient department from 12 August 2019 to 29 September 2019 were interviewed. The interviews were conducted by trained interviewers (who had 10 years of clinical nursing experience in oncology and a good level of patient trust) in a quiet room that was free of interruptions. Each interview was approximately 30 to 60 minutes long.⁶ Sampling and interviews were stopped when data saturation was reached and
new topics no longer appeared. The following interview guide outline was used:

1. Do you remember the psychological changes that occurred from the time of diagnosis to treatment and until the completion of the treatment?
2. From the end of the treatment to date, has your mental state changed? How have you adjusted?
3. Are there any differences between your current state of mind and lifestyle post-treatment compared with during your illness?
4. What’s your biggest concern now?
5. How do you manage your emotions now? Do you have any help?

Data analysis

Content analysis was used to analyse the data. Immediately after the interview, the recorded contents were transcribed into text by listening to the recording. Then the interview notes were read repeatedly to confirm the transcription. Through repeated comparison, induction, reasoning and deduction of data, repeated relevant words, sentences and paragraphs were summed, coded, classified and analysed to extract relevant themes and factors and form a preliminary framework. Then, the statements obtained were reviewed according to the preliminary framework, taking into account the context of the data. The main framework was revised and then used to generate a detailed description of the results. The themes were then translated into English and confirmed with the interviewees. Any necessary changes were made. Finally, themes related to patients’ negative emotions were documented.

Results

Eighteen patients were interviewed. The mean age (±standard deviation) of the patients was 51.6 ± 8.6 years and ranged from 39 to 70 years. Patient characteristics are shown in Table 1.

Negative emotional experiences

Fear of recurrence: Cancer not only causes great physical harm to patients but also has a substantial psychological impact. After treatment, patients with cervical cancer began to feel better and were able to accept the negative effects of cancer. However, they remained worried about tumour recurrence.

Patient A: ‘I always worry about the problem; I’m afraid of recurrence and often can’t sleep at night.’

Patient E: ‘I don’t worry when I’m checked, I’m afraid when I wait for the results. Cancer is like a bomb; I don’t know when it will explode.’

Patient I: ‘I’m afraid when I’m checked. My blood pressure was 170/130 mmHg. Because I still have a little bleeding, I’m worried something new is going to happen to me. If there’s a recurrence or metastasis, I don’t want any more treatment. But I really don’t want to get worse. My family borrowed a lot of money for me to see the

Table 1. Characteristics of patients (N = 18).

| Characteristics     | Categories     | N (%) |
|---------------------|----------------|-------|
| Marital status      | Married        | 16 (88.9) |
|                     | Divorced       | 2 (11.1) |
| Education level     | Illiterate     | 3 (16.7) |
|                     | Primary school | 9 (50.0) |
|                     | High school    | 4 (22.2) |
|                     | College        | 2 (11.1) |
| Tumour stage        | IIa–IIb        | 13 (72.2) |
|                     | IIa–IIIb       | 5 (27.8) |
| Employment status   | Unemployed     | 13 (72.2) |
|                     | White collar   | 1 (5.5) |
|                     | Blue collar    | 1 (5.5) |
|                     | Retired        | 3 (16.8) |
| Religion            | Yes*           | 1 (5.6)  |
|                     | No             | 17 (94.4) |

*Buddhism.
doctor; I don’t want to waste any more money.’

**Worries about sex:** A harmonious and happy sex life plays an important role in maintaining a happy and stable relationship. Anti-tumour treatment impaired the sexual function of patients. As most of the patients believed that sexual activity caused cervical cancer, they worried that such activity would lead to a recurrence and were fearful of having sex.

Patient B: ‘It’s been over a year since the end of my treatment and I haven’t had sex yet. I’m so scared!’

Patient C: ‘We don’t have sex now; psychologically, there is a phobia. My husband is suffering, I am also suffering. I do not want to talk to my family, I want to live alone.’

Patient I: ‘I know I can have a sexual life, but I’m still afraid in case the wound inside has not healed well or I have a haemorrhage. It was when I was having sex that I bled and went to the hospital.’

**Inferiority complex:** Anti-tumour treatment has some toxic side effects, such as hair loss, skin pigmentation and lymphedema. These lead to poor body image and low spirits, resulting in a psychological sense of inferiority.

Patient E: ‘I don’t think we’re normal people right now; they don’t look at us in a normal way. Maybe they’re afraid I’ll infect them.’

Patient F: ‘Before the cancer diagnosis, I did all the housework. Now, I don’t have so much energy. My husband told me not to try to be brave. Now, I work for a while and then rest for a while. I feel that I am a burden to the family.’

Patient L: ‘I used to like to go out and dance every day, but now I don’t dance, I just watch people dance. I think they all know that I have cancer; they don’t want to be with me. Anyway, I don’t care if you don’t say hello to me; I’ll not say hello to you. But my neighbour is very good; she doesn’t dislike me at all. She often comes to my house to spend time with me and is not afraid of my illness.’

**Coping styles**

**Positive responses:** Patients’ physical discomfort improved gradually post-treatment, but their negative emotions persisted. A few patients adopted a relatively positive approach (e.g. returning to work, practising mindfulness meditation or relaxation exercises) to alleviate their negative emotions.

Patient A: ‘I don’t spend a lot of time in bed now. I get up regularly every day, drink a glass of warm water after getting up and then eat. Now I’m learning to take care of my body and I feel good about myself. I’ve been looking for a job, I want to go to work, and I want to make money to take care of my children.’

Patient C: ‘I am still at work. I do financial work. I do not usually regard myself as a patient. I have experienced life and death. I am now very grateful to God for giving me the opportunity to be reborn. I will grasp each day of life and cherish all that I have now.’

Patient N: ‘I’m in recovery now. I’ve been doing some mental activities, relaxation exercises, and have recently learnt mindfulness meditation. These exercises help me become calmer.’

**Negative responses:** In the interviews, patients expressed different emotional responses under stress. Some patients adopted negative coping styles, such as avoidance or submission.

Patient F: ‘Everyone was born, and I know everyone gets sick, but why did I get this cancer? A lot of people say to me, “Don’t be afraid, it does no good; many people have the same problem.” But I think they don’t know me at all; every day, I think, “How long have I got to live?” I am not happy every day.’
Patient K: ‘I said to myself, “Don’t think about anything; if heaven lets you die you have to die.” Thinking is useless, but sometimes I still cannot control it. The more I don’t want to think, the more I think.’

Strong need for rehabilitation information

An understanding of disease rehabilitation can help cancer patients to be more aware of self-care, gain some satisfaction from understanding their illness and enhance their confidence to overcome the disease. All interviewees felt the need to acquire rehabilitation knowledge. Some interviewees believed that their current health knowledge no longer met their rehabilitation needs. Patients with a high level of education chose to obtain information about cervical cancer rehabilitation through expert consultations, reading relevant materials and searching on the Internet.

Patient F: ‘I searched on the Internet for information about the treatment of cervical cancer, but what was written on the Internet was not suitable for me. It would be better if the hospital provided relevant lectures for us to listen to.’

Patient R: ‘At one point, when a woman came over for a check-up at the clinic, the doctor told me, “This person was as sick as you are, more than you are, and it’s been almost 10 years.” I just chatted with this patient, asked her about her situation. After talking to her, I felt that she had given me a lot of confidence.’

Patient G: ‘During the course of treatment, or even now, I check information on the Internet and ask about other people’s experiences.’

Patient P: ‘During my outpatient examination, I consulted the doctor about relevant information during the period of rehabilitation. I also consulted the Internet about relevant problems at other times.’

Discussion

The results of the study showed that negative emotions were prevalent in patients with cervical cancer during rehabilitation, and mainly consisted of fear of recurrence, worries about sex and feelings of inferiority. The degree of disease-related knowledge, treatment effects, and family and social support are important factors that can prompt psychological changes in patients. Therefore, to relieve distress during the cervical cancer rehabilitation process, patients should focus on their physical and mental states, accept appropriate nursing intervention measures, seek scientific and reasonable explanations of the disease, be aware of their own concerns and satisfy their psychological and physiological needs. Medical staff should help patients seek value and significance in life, which will have a positive effect on their physical and mental health. Conversely, by understanding specific negative emotions in patients, nurses can apply targeted nursing measures to help patients better alleviate negative emotions.

Illness can affect a person’s role in life and force them to change dramatically. All respondents in this study were cervical cancer patients and had multiple family and social roles. Although they had completed their treatment, most patients still worried about changes to their self-image, the effect on their family life and work, severe mental trauma and the effect on their social activities and interpersonal relationships. Coping styles have a substantial effect on patients’ quality of life and mental and physical conditions. Patients who adopt active coping styles have confidence in their disease treatment and can correctly evaluate their situation, which boosts their immunity and effectively promotes recovery. In this study, some patients adopted negative coping styles, such as avoidance. Therefore, nurses should communicate with patients and conduct psychological
counselling to help them improve their coping ability, encourage them to promptly address the conflict between expectations and reality and assist them in building their self-confidence.

During the rehabilitation period, patients are most worried about the disease outcome and are more eager to obtain professional and authoritative information about disease treatment and rehabilitation from medical professionals.\textsuperscript{14,15} The results showed that most respondents felt they needed to obtain information about treatment and rehabilitation related to the disease, and some respondents also mentioned their sexual problems. Owing to intense clinical work and insufficient attention from medical staff, patient health education has become a mere formality, and there is a particular lack of sexual guidance.\textsuperscript{16} Traditional Chinese cultural values mean that patients are conservative and shy about discussing sex.\textsuperscript{4} Additionally, factors such as age and education level can mean that patients seldom take the initiative to consult medical staff about postoperative sexual rehabilitation or express their sexual needs.\textsuperscript{16} For example, older patients may be less likely to raise issues about their sexual lives, and more educated patients may be able to access information sources other than their doctors. Therefore, nurses should actively communicate with patients, especially at the beginning of rehabilitation.\textsuperscript{17–19} The WeChat platform and telephone follow-up activities could be used to publicize disease knowledge so that patients can obtain correct information about disease rehabilitation and improve their quality of life.

**Limitations**

Our study has some limitations. The sample size was determined by the saturation of interview data. The data have limited generalizability owing to their qualitative nature. Although we acknowledge the limited generalizability of qualitative findings, the insights obtained from this study could be extrapolated to other Asian countries where similar cultural responses to cervical cancer may be prevalent.

**Conclusion**

We investigated the negative emotional experiences and coping styles of patients with cervical cancer in China. The psychological needs of patients with cervical cancer persist beyond the treatment period. Thus, care should be provided to patients with cervical cancer even after discharge to help them to obtain a better quality of life.

**Relevance to clinical practice**

Loss of sexual function caused by antitumour therapy and degeneration caused by adjuvant therapy can result in substantial damage to patients’ self-esteem, leading to negative emotions such as inferiority. Many patients often refuse to return to society because of internal shame and social discrimination. A good state of mind is essential to improve patients’ quality of life and family well-being. Therefore, nursing staff need to understand the negative emotional status, coping style and needs of patients with cervical cancer to better help these patients return to society.

**Declaration of conflicting interest**

The authors declare that there is no conflict of interest.

**Funding**

This work was supported by Suzhou Industrial Technology Innovation Project (SYSD2017081).

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