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Effect of Standard Oncology Nursing Care Intervention on Reducing "Sexual Dysfunction" among Cervical Cancer Survivors' Women

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ABSTRACT

There is an increasing awareness about the effect of gynecologic reproductive cancer treatment on sexual dysfunction. The assessment and treatment of sexual problems should become an important part of the standard care of cancer survivors' women. There were great challenges reported by the cervical cancer survivors' women. Nurses are the facilitators of the healing process and honor the cancer cervix survivors' subjective experiences and beliefs about their health and values. The study aimed to assess the severity of sexual dysfunction symptoms and determining the effect of the standard oncology nursing care intervention on reducing "sexual dysfunctions" among cervical cancer survivors' women. Women's sexual dysfunctions are assessed using Female Sexual Function Index (FSFI). "Pre-posttest" questionnaires supplemented by structured interview questionnaire are administered to 50 women diagnosed with cervical cancer and treated by chemoradiotherapy in the Menoufiya University of the cancer institute of the Menoufiya Governorate-Arab Republic of Egypt. Results revealed significant decrease in sexual dysfunctions among cervical cancer survivors' women as measured by the FSFI checklist at posttesting. Results along with the interviews revealed that the effectiveness of standard oncology nursing care intervention on reducing sexual dysfunctions among cervical cancer survivors' women. The study concluded and recommended that nursing care service through the provision of "educational counseling" on sexuality can be an important part of the standard "oncology nursing practice" and could be an alternative to overcome symptoms of sexual dysfunctions among cervical cancer survivors' women and their husbands.

Keywords

Nursing care intervention, Cervical cancer, Sexual dysfunction, Cervical cancer survivors.

Introduction

Cervical cancer is the second most common cancer among female in the world, it is "a preventable disease". Approximately eighty-five percent of the global "cervical cancer" burden occurs in the less developed countries of the world, where most women present with advanced disease [1]. There have been estimated 527,600 new cervical cancer cases and 265,700 deaths worldwide in 2012. Cancer cervix is the second most commonly diagnosed cancer and third leading cause of cancer death among "women" in less developed countries [2]. In Egypt, current percentages estimates indicated that eight thousand and sixty-six women are diagnosed with cervical cancer and three thousand and seventy-three die from the "disease" annually [3].

Advances in the treatment of "gynecologic malignancies" have extended the duration of survival of many women. The women during this time experienced many disease-related side effects during and after the treatment; among these are nausea and vomiting, peripheral neuropathy, anemia, pain, emotional distress, fatigue, and sexual dysfunction. Women need to understand these side effects before the treatment [4].

Cancer pathology and its treatment lead to "sexuality dysfunction". Cervical cancer survivors experience reduced sexual desire and arousal, orgasm, and dyspareunia that results in a significant personal distress, especially who treated by chemoradiotherapy

[5-8]. Psychological issues, such as self-image disturbance, decreased self-esteem, and reduced marital intimacy, are also common problems among "cervical cancer survivors" [9-11]. These phenomena affect the quality of life of cancer survivor's women and may lead to divorce or marital separation [12,13].

Majority of women suffering from "sexual dysfunction" symptoms never seek any medical help or advice for it and majority did not even report this to their regular ontological follow-up care providers. Despite realizing the importance of the assessment of sexual health, physicians caring for women with sexual dysfunction still refrained from addressing it or counseled women inadequately about the sexual implications of their cancer or treatment [14].

Sexual problems cannot be "easily addressed" by women and their husbands after cervical cancer treatment. Hence, information and education must be provided to solve sexual dysfunction and restore sexual relationship among women and their husbands after cervical cancer treatment [15-20].

Counseling and education on sexuality are "nursing care interventions" used to assist women to resolve their sexual problems. In nursing counseling, a nurse provides information and assists women in making and executing a decision; the nurse also guides the survivor to adapt to psychological and physiological changes to optimize survivors' autonomy and regain self-confidence. The nursing role is very important to give education and support [21-24].

Cancer survivors' is the period from the time of diagnosis until the end of life, they need support, education, and counseling [25]. "Psychosexual counseling" can significantly improve "sexual function" in women with gynecology or reproductive cancer [26]. Counseling and education for women after treatment of cancer reduce sexual dysfunction symptoms, improve the marital relationship, and enhance the quality of life among cancer survivors' women [27-29].

The standard nursing care in "cancer survivor's patients' care", depending on the phase of the condition, is to educate the woman and encourage her to attend counseling programs, making sure that the woman gets her physiological, physical, social, spiritual, emotional, and sexual needs met during the treatment, as well as, providing vital support that these women often need during care [30].

In Egypt, few studies reported the presence of "sexual dysfunction symptoms" and their effects on the marital relationship of cervical cancer survivors. However, a standard for nursing care intervention service has not yet been established in Egypt to promote sexual health for women with gynecologic cancers. This study was a part of larger studies for the implementation of standard oncology nursing care intervention for sexual dysfunction among cervical cancer survivors' women in Egypt. "Sexual nursing care" intervention conducted in "50" cervical cancer survivors and their husbands were qualitatively and quantitatively evaluated. Factors affecting the success of nursing care intervention were investigated.

Aims of the study

The aims of the current study are to (1) assess the severity of sexual dysfunction in the studied group. (2) determine the effect of the standard oncology nursing care intervention on reducing sexual problems among "cancer cervix survivors' women".

The Significance of the study

Cervical cancer ranked as the thirteen most frequent malignancies among women in Egypt and the tenth most frequent cancer among women between 15 and 44 years old of age [5]. Cervical carcinoma and its treatment lead to problems in many "dimensions of life", therefore physical, psychological, social, spiritual, and sexual problems of the women. It should be considered before any treatments are given, especially for women receiving chemoradiotherapy.

Good treatments should cover all of the women's' problems for good compliance and good prognosis. Many nurses do not address the questions and assessment about sexual dysfunction among "gynecologic cancer survivors" in their care practice, even recognizing that assessment is an intrinsic part of the nursing care. So we need studies highlight the discussion of sexual dysfunctions among these couples in the nursing care intervention because the concept of sexuality cannot be neglected from health, as intimacy-related issues and sexuality are fundamentals to maintain self-esteem and well-being of cancer survivors women to produce a holistic nursing care. So, a great focus on this problem is needed, the experiences and meanings of these women can be valued and considered in nursing care practices [31].

Methodology

Study design

This study was designed as "one group pre-posttest" intervention. Patients with different stages of cervical cancer who had completed chemoradiotherapy for 1 year were recruited from Menoufiya University Hospital of the cancer institute, Shebin Al-Kom, between June 2017 and February 2018 for data collection.

Participants, setting, the sampling

Women with "cervical cancer" who treated by chemoradiotherapy and their husbands agreed to participate in this study. A 6-week nursing care intervention on sexuality was conducted in "three meeting sessions". Women with recurrent cancer and complication, and women refusing to participate in the study were "excluded" from the study. The sample was selected for "convenience", in which the informants were chosen to achieve the objectives of the study.

Measurements

Part 1: The personal information questionnaire was developed by the researchers for collecting demographic data of the respondents. Interviewing questionnaires are done in a private room in the workplace of the nursing professionals.

Part 2: Female Sexual Function Index (FSFI) proposed by Meston and Bradford [32] has been used. FSFI consists of "19 items" that evaluate and classify the types of "sexual dysfunction" into six dimensions, namely sexual arousal and desire, vaginal lubrication and symptom of dyspareunia, orgasm, and satisfaction on sexual activity. The instrument was translated into the Arabic language prior to use. The contents were validated by analyzing the results of a trial conducted in forty respondents by using Correlation Technique of Pearson Product Moment at 5% level of Significance of 0.320.

The calculated R-value for each item was compared with the Standard R-value. The validity of the FSFI questionnaire content was assessed with the calculated R-value within 0.333-0.689. Moreover, the reliability and validity of the FSFI questionnaire was assessed using a Cronbach's alpha of 0.853. The cut-off score of the FSFI is 26.55. A score of less than 26.55 is considered indicative of sexual dysfunction.

Procedures

"The nursing care intervention" on sexuality comprised counseling and education, guidance, and suggestions to perform physical exercise and communication. Instructing women about using K-Y gel as a vaginal lubricant to facilitate lubrication during sexual intercourse and relieve pain. The intervention was given by the researcher at the private room in the workplace of the nursing professionals in the three meeting sessions, every session discussed for two weeks. The researcher collected data using the pretest questionnaires prior to the intervention.

The content for education and counseling was derived from the literature review based on the "women's needs", which was determined through the pretest questionnaire. The educational tool was provided through PowerPoint presentations, booklets, and flip charts. Each session for educating the women and their husbands was conducted for 60 to 90 min. The material conducted in the "first session" contained information on cervical cancer, etiology, and cancer treatment and the side effects that may cause various physical, psychological, sexual, and reproductive problems.

The material in the "second session" contained information and education on reproductive organs and sexual function, including anatomy and physiology of female reproductive organs, explanation in the series of the female sexual response cycle, and discussion of various methods to overcome the side effects of chemoradiotherapy. Numerous relaxation and other exercises for improving sexual fitness (such as Kegel exercise, sensation focus exercise, and exercise of various technical positions during sexual intercourse) were also discussed in the "third session". Every session had been discussed on two meetings. The summary of activities during each session is provided in Table 1. Posttests are done by FSFI after two months of nursing care intervention.

Ethical Considerations

Ethical clearance was obtained from the Ethical Committee of the Faculty of Nursing, University of Menoufiya, prior to the commencement of the study. The researcher provided written information and explained the objectives, procedures, risk, and benefits of the study. Women signed informed consent forms as proof of their willingness to participate in the study.

Session	Themes	Content
One	Cervical Cancer Information	"Cervical cancer", etiologies, and cancer treatment and its side effects that may cause various psychological, physical, sexual, and reproductive problems.
Two	Sexual Dysfunction Solving	Explanation on the series of "female sexual response cycle", discussion on various methods to overcome side effects of cancer treatment focusing on the side effects on sexuality problems and healthy life style after cancer treatment, and an explanation on the advantage and instruction of how to use the K-Y gel, importance .of position changes, and taking warm bath before intercourse.
Three	Exercises and Practices	"Numerous relaxation exercises" and other exercises that facilitate sexual function were included (including Kegel exercises, sensory focus exercises, and giving suggestions for various technical positions during sexual intercourse). The importance of communication to maintain a harmonious relationship with the husband, such as practices on communication, is discussed. Importance of having intercourse on a regular basis.

Table 1: Sexual Nursing Intervention Sessions.

Statistical analysis

A descriptive analysis was performed to evaluate the characteristics of women. "Kolmogorov–Smirnov test" was used to determine the normality of data distribution. Multivariate analysis of linear regression was conducted for detailed analysis of factors determining the success of nursing care intervention on relieving sexual dysfunctions among participants and development of a final model through maximal model analysis [29]. Statistical package software (SPSS 22, SPSS Inc., Chicago, Illinois, USA) was used for quantitative statistical analysis. Statistical significance was considered at p-value <0.05.

Results

Table 2 presented that the mean age of respondents and their husbands is over 40-year-old, which indicates that the couples are in advanced reproductive age. The mean age of the husbands is 49-year-old, which is 5 years older than their wives (44-year-old). The majority of the respondents have approximately three children. Most of the respondents have a lower level of education than their husbands. The majority of respondents were housewives, and most of the husbands work as workers with unpredictable income.

Figure 1 distributed the stages of cervical cancer among women, which IIB represented 16%, IIIA represented 30%, IIIB represented 32%, and IVA represented 22%.

Figure 2 clarified the completed duration of the chemoradiotherapy among women, which 80% of the cases completed 12 months and 20% of the cases completed 14 months.

Variables		Respondents (N=50)	
		No	%
Age (Years) Mean Age 44	35-40	15	30
	41-60	35	70
Educational Level	Basic	28	56
	Middle	15	30
	High	7	14
Occupation	Housewife	40	80
	Employee	10	20
Number of Children	No Children	3	6
	1-3 Child	15	30
	>3 Child	32	64
Husband's Age (Years) Mean Age 49	35-40	7	14
	41-60	43	86
Husband's Educational Level	Basic	30	60
	Middle	13	26
	High	7	14
Husband's Occupation	Worker	30	60
	Private Sector Employee	20	40

Table 2: Basic Demographic Characteristics of the Studied Sample.

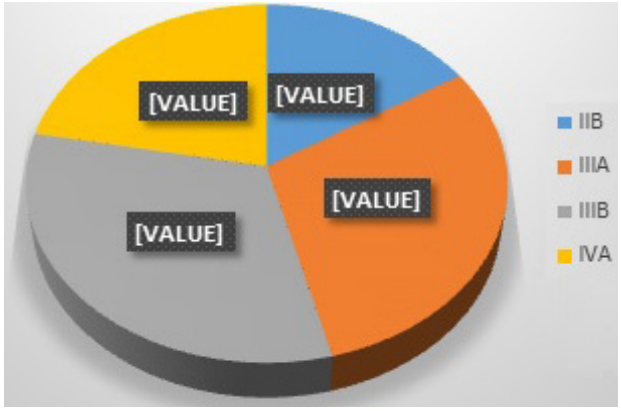

Figure 1: Stages of cervical cancer.

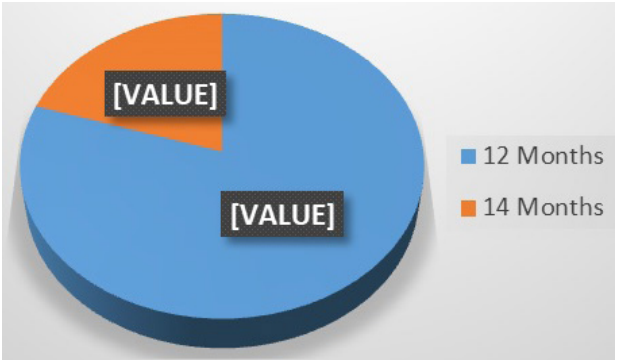

Figure 2: Completed duration of chemoradiotherapy.

Table 3 illustrated that there were highly statistically significant differences between pre and post mean score of Female Sexual Function Index. In which the total score of FSFI = 11. 5 in the pre-intervention and became 27 in the post-intervention. Which clarified the improvement of the sexual health problems and reduction of sexual dysfunctions among cancer survivors' women.

Dimensions	N=50		t	p-value
	Before interventions M ± SD	After interventions M ± SD		
Sexual Desire	0.42 ± 0.43	2.15 ± 0.34	26.396	0.001*
Sexual Arousal	1.92 ± 0.60	2.33 ± 0.42	4.573	0.002*
Vaginal Lubrication	0.65 ± 0.75	1.62 ± 0.35	10.892	0.003*
Dyspareunia	0.25 ± 0.42	2.35 ± 0.60	22.512	0.001*
Orgasm	1.50 ± 0.2	2.83 ± 0.53	10.5	0.000*
Sexual Satisfaction	3.85 ± 2.50	12.85 ± 4.02	20.82	0.001*
Total FSFI	11. 5 ± 0.3	27 ± 0.2	2.894	0.000*

Table 3: The mean Pre-Post Score of Female Sexual Function Index (FSFI). * Level of significance at $p \leq 0.05$, highly significant difference at $p \leq 0.01$.

Figure 3 presented the factors of reducing sexual dysfunction among survivors women, which the nursing intervention contributed 60% in reducing sexual dysfunction symptoms among women and their husbands, while husband's support contributed 20% and 10% for each husband's educational level and occupation. So husband's support playing a vital role on reducing sexual dysfunctions among cancer survivors' women.

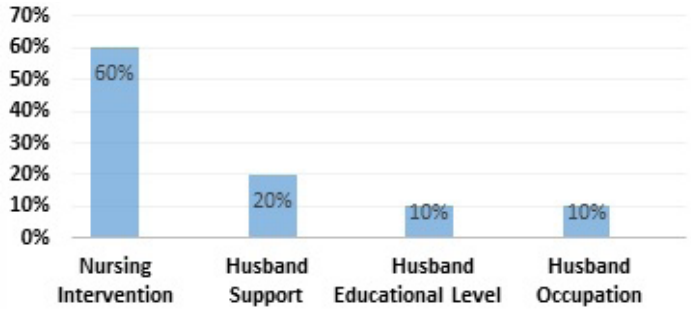

Figure 3: Factors reducing sexual dysfunction among Survivors women.

Figure 4 clarified the effectiveness of the standard oncology nursing care intervention as reported by the women. Which 70% of women reported that the nursing interventions were very effectively for dyspareunia, and the same percentage reported that the nursing care interventions were effectively for vaginal lubrication. While 60% of women reported that the nursing care interventions were very effectively for sexual arousal, 52% for sexual desire, 50% for sexual satisfaction, and 49% for orgasm.

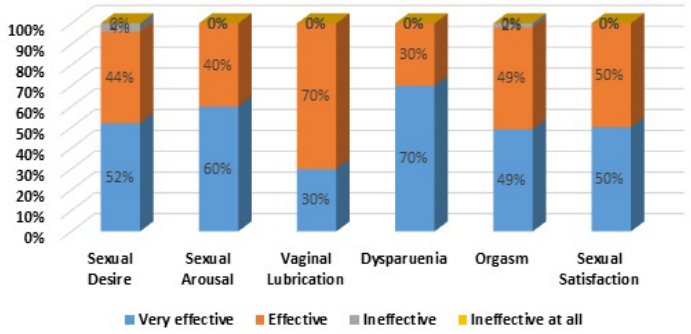

Figure 4: Effectiveness of the Standard Oncology Nursing Care

Interventions as reported by the women (N=50).

Discussion

Survivors of cancer cervix remained at higher risk of sexual dysfunction; this problem was reported by the studied women post-treatment chemoradiotherapy of cervical cancer. "Careful attention" to these women was an important part of survivor holistic standard oncology nursing care intervention, so in this study, we determined the effect of the standard oncology nursing care intervention on reducing sexual dysfunction symptoms among cervical cancer survivors' women.

The study illustrated that the women had severe sexual problems after the chemoradiotherapy, this result congruent with (Daga et al, 2017) which they found that women treated with chemoradiotherapy had more severe sexual dysfunctions symptoms [33]. Chen, 2017 also reported that seventy percent of cases have been experienced sexual dysfunction problems posttreatment of cervical cancer [34].

Chemoradiotherapy can affect sexual relations and causes pain and psychological distress which often affects women's sexual relationships with their husbands. Husbands need to know and understand these changes to give support to their wives.

Nursing care management on sexuality has improved symptoms of "sexual problems". Nursing care interventions contributed 60% to the success of reducing sexual dysfunction symptoms. Dyspareunia among the patients was relieved after the nursing care intervention, 70% of women reported that sexual nursing intervention was very effective for dyspareunia. Sexual arousal, sexual satisfaction, and orgasm were also improved after the nursing management. Other influencing factors also contributed to achieve the success of the nursing care intervention. Counseling, education, and husband support, as well as physical exercise, have contributed to reduce dyspareunia and improved vaginal lubrication. Similarly, previous studies [8,18,23] reported that educational nursing care intervention improved sexual symptoms among cervical cancer survivors women.

The women and their husbands experienced improved sexual desire and arousal after the nursing care intervention on sexuality. The determination value for the success of nursing care intervention on sexuality with related to the improvement of sexual arousal and desire. Husband support played a vital role in nursing intervention in reducing sexual dysfunction symptoms. However, other determining factors, namely, education and occupation of their husbands, contributed to the success of the nursing intervention. These findings could be due to the nature of the sexual desire and arousal, which are emotionally related, thereby prolonging the duration to attain improvement in sexual satisfaction [29]. The same problem is also encountered by survivors of breast cancer; in contrast, Jun et al. [19] provided a program of sexual dysfunction. However, enhancement in vaginal lubrication and sexual desire was not significantly different between the intervention and control groups following the 6-week cervical cancer treatment by radiotherapy.

The "ethical responsibilities" of nursing care are to prevent illness, promote health, restore health, and alleviate suffering. The nursing role focuses not only on the sickness but on improving health for all ages and settings and consists of individuals, families, and even the whole communities.

Previous studies reported that fear during sexual relations is caused by vaginal dryness and shortened vaginal size as well as fear of cancer recurrence [32,35]. These factors resulted in reduced sexual desire in post-treatment of cervical cancer. Fear may also be due to apprehension that cancer has not been fully treated, fear of vaginal bleeding, and fear of disease transmission to their husbands. These factors made the women are reluctant to start their sexual activity again after cervical cancer treatment. Burke [36] reported "a similar finding". In a previous study, cervical cancer women avoided the resumption of sexual relations because they believed that such activity may disrupt the effectiveness of cancer recovery; they also perceived that their husbands were afraid of having sexual intercourse with them [37-41] "Nursing care intervention" reduced the fear and anxiety among the women. The sexual dysfunction symptoms were relieved after nursing intervention as reported by women. Some exercise and suggestions provided in the nursing care intervention could facilitate the emergence of desire and arousal in the women and their husbands. The intervention included communication exercise as well as discussions on the importance of regular sexual relations and educating their husbands to assist the women in increasing sexual desire and arousal.

There were great challenges reported by the cervical cancer survivors' women. Nurses are the facilitators of the healing process and honor the cancer cervix survivor's subjective experiences and beliefs about their health and values.

Implications for nursing care intervention

This study highlights the importance of "building nurses' competence" to provide education and counseling on sexuality to enhance the quality life of cervical cancer survivors women. A holistic intervention with sexologists, gynecologists, and radiotherapists would be beneficial to optimize the sexual wellness of cancer survivors and their husbands.

The current study has increased the sexuality issues that have been "overlooked" by the majority of nurses. This study revealed the potential of nurses' actions on sexuality care in cancer cervix survivors' women. The paradigm of nurses on sexuality care should be removed. A gold standard operating procedure of nursing care intervention in providing "comprehensive nursing care", including sexuality care, is also necessary. The findings in this study could be adopted in such gold standard according to the context of "a holistic nursing care". The results of the present study may also be incorporated into the curriculum of gynecology nursing care, particularly on human sexuality and reproductive system. Consequently, nurses should have sufficient information and skills to address sexuality problems in "cervical cancer survivors' women".

Conclusions and Recommendations

Nursing care intervention on "sexuality" through education and counseling can solve the problems of "sexual dysfunction" in cervical cancer survivors' women and their husbands. The nursing role gave support and help women to deal with their challenges and difficulties. Improvement is realized when women and their husbands show a reaction that they can overcome the symptom they experienced. Moreover, adaptive responses are demonstrated by the women by achieving adaptation against sexual changes, such as accomplishment of integration and decreased symptoms of sexual dysfunction, as a result of increased knowledge. Thus, nursing care intervention through the provision of "educational counseling" on sexuality can be an important part of the standard "oncology nursing practice" and could be an alternative to overcome symptoms of sexual problems among cancer survivors' women and their husbands. There should be formal sexual counseling services in the hospital and health institutions to produce education and counseling for cancer survivors' women and their husbands. Training program for oncology nursing is very important for the nurses for education and counseling of the cases to provide a holistic nursing care intervention.

Strengths and limitations

The strong points of the present study had completed the questionnaires by face-to-face interviews, which minimize the problems related to completion of the questionnaires. The second point was the use of Female Sexual Function Index, as an international and valid scale to assess the sexual dysfunction among cervical cancer survivors' women. The third was the couples were not aware of the effect of chemoradiotherapy on sexual function, but after the nursing care interventions, they became aware of these effects and how to deal with all these changes. The forth was the early nursing management of these cases because most of the cases has completed one year for chemoradiotherapy. The limitation of this study was the recall bias related to reminding the questions because the women were required to express their sexual problems because of sexuality still a taboo in the rural areas of Egypt. The same reason reflects on the small sample size also.

References

1. Greenwald HP, McCorkle R. Remedies and life changes among invasive cervical cancer survivors. Urology Nursing. 2007; 27: 47-53.
2. Torre LA, Bray F, Siegel RL. Global cancer statistics, CA Cancer J Clin. 2015; 65: 87-108.
3. Li Y, Xu C. Human Papilloma Virus and Related Cancers Fact Sheet, Human Papilloma Virus Information Center. Adv Exp Med Biol. 2017; 1018: 23-34.
4. Wenzel L, Vergot I, Gella D. Quality of Life in Patients Receiving Treatment of Gynecologic Malignancies Special Considerations for Patient Care. Int J Gynaecol Obstet. 2003; 1: 211-229.
5. Klee M, Thranov I, Machin D. Life after radiotherapy: The psychological and social effects experienced by women treated for advanced stages of cervical cancer. Gynecology Oncology. 2000; 76: 5-13.
6. Burns M, Costello J, Ryan-Woolley B, et al. Assessing the impact of late treatment effects in cervical cancer An exploratory study of women's sexuality. Eur J Cancer Care Engl. 2007; 16: 364-372.
7. Bergmark K, Avall-Lundqvist E, Dickman PW, et al. Patient-rating of distressful symptoms after treatment for early cervical cancer. Acta Obstet Gynecol Scand. 2002; 81: 443-450.
8. Basson R, Berman J, Burnett A. Report of the international consensus development conference on female sexual dysfunction Definitions and classifications. J Urol. 2000; 163: 888-893.
9. Brotto LA, Heiman JR, Goff B, et al. A Psychoeducational intervention for sexual dysfunction in women with gynecologic cancer. Arch Sex Behav. 2008; 37: 317-329.
10. Abbott-Anderson K, Kwekkeboom KL. A systematic review of sexual concerns reported by gynecological cancer survivors. Gynecology Oncology. 2012; 124: 477-489.
11. Nilakusmawati D, Srinadi I, Perselingkuhan Dan Perceraian, et al. Affair and Divorce. A Study on Women's Perspective. 2006.
12. Badr H, Taylor CL. Sexual dysfunction and spousal communication in couples coping with prostate cancer. Psycho-oncology. 2009; 18: 735-746.
13. Hautamäki K, Miettinen M, Kellokumpu-Lehtinen PL, et al. Opening communication with cancer patients about sexuality-related issues. Cancer Nurs. 2007; 30: 399-404.
14. Ferreira SM, Gozzo Tde O, Panobianco MS, et al. Barriers for the inclusion of sexuality in nursing care for women with gynecological and breast cancer: perspective of professionals. Rev Lat Am Enfermagem. 2015; 23: 82-89.
15. Jensen PT, Groenvold M, Klee MC, et al. Early-stage cervical carcinoma, radical hysterectomy, and sexual function. A longitudinal study. Cancer. 2004; 100: 97-106.
16. Hughes MK. Sexuality and cancer The final frontier for nurses. Oncology Nurs Forum. 2009; 36: E241-E246.
17. Hawkins Y, Ussher J, Gilbert E, et al. Changes in sexuality and intimacy after the diagnosis and treatment of cancer The experience of partners in a sexual relationship with a person with cancer. Cancer Nurs. 2009; 32: 271-280.
18. de Groot JM, Mah K, Fyles A, et al. The psychosocial impact of cervical cancer among affected women and their partners. International J Gynecology Cancer. 2005; 15: 918-925.
19. Jun EY, Kim S, Chang SB, et al. The effect of a sexual life reframing program on marital intimacy, body image, and sexual function among breast cancer survivors. Cancer Nurs. 2011; 34: 142-149.
20. Chow KM, Chan JC, Choi KK, et al. A review of psycho-educational interventions to improve sexual functioning, quality of life, and psychological outcomes in gynecological cancer patients. Cancer Nurs. 2016; 39: 20-31.
21. Gamel C, Hengeveld M, Davis B. Informational needs about the effects of gynecological cancer on sexuality A review of the literature. J Clin Nurs. 2000; 9: 678-888.
22. Maughan K, Clarke C. The effect of a clinical nurse specialist in gynecological oncology on quality of life and sexuality. J

Clin Nurs. 2001; 10: 221-229.
23. Jeffries SA, Robinson JW, Craighead PS, et al. An effective group Psychoeducational intervention for improving compliance with vaginal dilation A randomized controlled trial. Int J Radiat Oncol Biol Phys. 2006; 65: 404-411.
24. National Cancer Institute: Definition of survivorship. Retrieved from http www. Cancer .gov/ dictionary?. 2013.
25. Faithfull S.: Fatigue and radiotherapy. Supportive Care in Radiotherapy. Faithfull S, Wells M, editors. UK: Churchill Livingstone. 2003.
26. Powell CB, Kneier A, Chen LM, et al. A randomized study of the effectiveness of a brief psychosocial intervention for women attending a gynecologic cancer clinic. Gynecology Oncology. 2008; 111: 137-143.
27. Kleinbaum DG, Kupper LL, Muller KE. Applied Regression Analysis and Other Multivariable Methods. USA: PWS-Kent. 1988.
28. Simone M, Thais O, Marislei S. Barriers for the inclusion of sexuality in nursing care for women with gynecological and breast cancer Perspective of professionals. 2015; 23: 82-89.
29. Hughes MK. Alterations of sexual function in women with cancer. Seminar Oncology Nurs. 2008; 24: 91-101.
30. Simone B. Cervical cancer. Physiology, Risk factors, Vaccination and treatment. British Journal of Nursing. 2009; 18: 80-84.
31. Chow KM, Wong CY, Shek LL. Sexual functioning of gynecological cancer patients A literature review. World J Oncology Res. 2014; 1: 5-12.
32. Meston CM, Bradford A. A brief review of the factors influencing sexuality after hysterectomy Sex Relatsh Ther. 2004; 19: 5-12.
33. Daga D, Dana R, Gaur P. Sexual function in cervical cancer survivors after concurrent Chemoradiotherapy, Middle East Journal of Cancer. 2017; 8: 151-154.
34. Chen Y. Hunan Cancer Hospital The Affiliated Cancer Hospital of Xiangya School of Medicine Central South University, PR China. 2017.
35. Derzko C, Elliott S, Lam W. Management of sexual dysfunction in postmenopausal breast cancer patients taking adjuvant aromatase inhibitor therapy. Curr Oncology. 2007; 14: S20-S40.
36. Burke LM. Sexual dysfunction following radiotherapy for cervical cancer. Gynecology Oncology. 1996; 5: 239-244.
37. Audette C, Waterman J. The sexual health of women after gynecologic malignancy. J Midwifery Women's Health. 2010; 55: 357-362.
38. Wenzel L, DeAlba I, Habbal R, et al. Quality of life in long-term cervical cancer survivors. Gynecology Oncology. 2005; 97: 310-317.
39. Frumovitz M, Sun CC, Schover LR, et al. Quality of life and sexual functioning in cervical cancer survivors. J Clin Oncology. 2005; 23: 7428-7436.
40. Becker M, Malafy T, Bossart M, et al. Quality of life and sexual functioning in endometrial cancer survivors. Gynecology Oncology. 2011; 121: 169-173.
41. Donovan KA, Taliaferro LA, Alvarez EM, et al. Sexual health in women treated for cervical cancer Characteristics and correlates. Gynecology Oncology. 2007; 104: 428-434.