

Evaluating Sexual Nursing Care Intervention for Reducing Sexual Dysfunction in Indonesian Cervical Cancer Survivors

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ABSTRACT

Objective: This study aims to describe the factors affecting successful nursing care intervention on sexuality.

Methods: A one-group pre- and post-test design was used. Fifty-three cervical cancer survivors and their spouses were administered with nursing care intervention on sexuality in three sessions and evaluated after 6 weeks. **Results:** Sexual intervention reduced dyspareunia symptoms, improved vaginal lubrication, improved sexual satisfaction, and enhanced sexual arousal, sexual desire, and orgasm among cancer

survivors and their spouses. The other influencing factors also simultaneously contributed to the success of nursing care intervention. **Conclusions:** Nursing care intervention on sexuality could be a part of supportive nursing care and an important aspect in standard nursing care for cancer patients in Indonesia.

Key words: Cervical cancer, nursing care, sexual dysfunction, sexuality

Introduction

Cancer pathology and its treatment may lead to sexuality problems. Cervical cancer survivors may experience dyspareunia, reduced sexual arousal and orgasm, and other sexual dysfunctions.^[1-3] Psychological issues, such as self-image disturbance, decreased self-esteem, and reduced

marital intimacy, are also common among cervical cancer survivors.^[4-6] These phenomena may lead to divorce and affect the quality of life of cancer survivors and their spouses.^[7,8]

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Sexuality problems cannot be easily addressed by women and their spouses after cervical cancer treatment. Hence, education and information must be provided to solve sexuality problems and restore sexual relationship among patients and their spouses after cervical cancer treatment.^[9-14]

Education and counseling on sexuality are nursing interventions used to assist patients to resolve their sexual problems. In nurse-led counseling, a nurse provides information and assists patients in making and executing a decision; the nurse also guides the survivor to regain self-confidence and adapt to physical and psychological changes to optimize survivor autonomy.^[14-17] Nurse-led psychosexual counseling can significantly improve sexual function in patients with gynecology cancer.^[18] Education and counseling for women after cancer treatment may also reduce sexual problems and improve marital relationship.^[19-21]

Brotto *et al.*^[5] reported that effective counseling performed by a psychologist resumed sexual relationship and increased the frequency of sexual activity among 57% of the subjects. However, this study did not reflect changes in sexual arousal and desire. A 3-h counseling intervention effectively can also improve vaginal dilatation in women with gynecologic cancer after radiation treatment.^[21] Moreover, providing information and education by health care professionals can reduce anxiety and depression and improve the quality of life of patients after gynecologic cancer treatment.^[20,21]

In Indonesia, 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 service has not yet been established in Indonesia to promote sexual health for patients with gynecologic cancers. This study was a part of a larger study for the implementation of sexual nursing care intervention in Indonesia. Sexual nursing care intervention conducted in 53 cervical cancer survivors and their spouses was quantitatively and qualitatively evaluated. Factors influencing the success of intervention were investigated.

Methods

Study design

This study was designed as one group pretest–posttest intervention. Patients with Stage 2 or 3 cervical cancer who had completed chemoradiation therapy for 1 year were recruited from Cipto Mangunkusumo Hospital,

Jakarta, between June 2010 and April 2011 for data collection. Fifty-three patients with cervical cancer and their spouses agreed to participate in this study. A 6-week nursing care intervention on sexuality was conducted in two meeting sessions. Patients with recurrent cancer and complication were excluded from the study.

Measurements

“The format of personal information” sheet was developed by the investigators for collecting demographic data of the respondents.

“Female Sexual Function Index (FSFI)” proposed by Meston and Bradford^[22] was used. FSFI consists of 19 items that evaluate and classify the types of sexual dysfunction into six domains, namely sexual arousal, sexual desire, vaginal lubrication, orgasm, satisfaction on sexual activity, and symptom of dyspareunia. The instrument was translated into Indonesian 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 of the FSFI questionnaire was assessed using a Cronbach’s alpha of 0.853.

Procedures

The nursing care intervention on sexuality comprised education and counseling, guidance, and suggestions to perform physical exercise and communication. K-Y gel was provided, and the advantage and instruction on how to use the gel were explained to the participants. The intervention was given by the investigator at the outpatient unit and during home visit for 6 weeks in three meeting sessions. An assistant investigator collected data using questionnaires prior to the intervention.

The content for education was derived from the literature and patterned based on the patients’ needs, which was determined through the preliminary study. Educational tool was provided through booklets and flip charts. Each session for educating the participants was conducted for 60–90 min. The material contained information on cervical cancer, etiology, and cancer treatment and its side effects that may cause various physical, psychological, sexual, and reproductive problems. The material was distributed during the first

session. 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 female sexual response cycle, and discussion of various methods to overcome the side effects of cancer treatment. 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. The summary of activities during each session is provided in Table 1.

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

Statistical analysis

A descriptive analysis was performed to evaluate the characteristics of respondents. 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 sexuality and development of a final model through maximal model analysis.^[23] Statistical package software (SPSS 22, SPSS Inc., Chicago, Illinois, USA) was used for quantitative statistical analysis.

Results

Respondent characteristics

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 the respondents (44-year-old). The respondents have approximately three children and are married for 20 years. Most of the respondents have lower level of education than their husbands. The majority of respondents are housewives, and most of the husbands work as laborers with unpredictable income. Further details are presented in Table 2.

Factors determining the success of nursing care intervention on sexuality

The maximal model analysis demonstrated that nursing care intervention on sexuality led to the first reported largest improvement on the complaint of dyspareunia (adjusted

Table 1: Sexual nursing intervention

Session	Themes	Content
1	Information of cervical cancer	Cervical cancer, etiologies, and cancer treatment and its side effect that may cause various physical, psychological, sexual, and reproductive problems
2	Solving of sexual problems	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
3	Practices and exercises	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 spouse, such as practices on communication, is discussed

Table 2: Characteristics of respondents

Variables	Sample (survey) (n=53), n (%)	Sample (interviews) (n= 10), n (%)
Respondents' age (years)		
35-40	15 (28.3)	4 (40.0)
41-60	38 (71.7)	6 (60.0)
Educational level		
Basic	30 (56.6)	5 (50.0)
Middle	18 (34.0)	4 (40.0)
High	5 (9.4)	1 (10.0)
Occupation		
Housewife	43 (81.1)	7 (70.0)
Civil servant	2 (3.8)	0 (0.0)
Private sector employee	1 (1.9)	1 (10.0)
Business woman	7 (13.2)	2 (20.0)
Respondents' age at first marriage (years)		
14-23	44 (83.0)	
24-34	9 (17.0)	
Number of children		
No children	3 (5.7)	
1-3 child/children	30 (56.6)	
>3 children	20 (37.7)	
Husbands' age (years)		
35-40	7 (13.2)	1 (10.0)
41-60	46 (86.8)	9 (90.0)
Husbands' educational level		
Basic	31 (58.5)	2 (20.0)
Middle	14 (28.4)	7 (70.0)
High	8 (15.7)	1 (10.0)
Husbands' occupation		
Laborer	28 (52.8)	
Private sector employee	2 (3.8)	
Businessman	23 (43.4)	

beta = 0.910; adjusted $R = 81.5$), with a determination value of 81.5%. Hence, nursing care intervention on sexuality and husbands' support were statistically significant and alleviated dyspareunia by 81.5%. Nursing care intervention

also improved sexual satisfaction, which covered the second most improved domain, with a determination value of 48%. Thus, sexual nursing care intervention and other determining factors, such as duration of marriage and knowledge, are important to improve the sexual relationship of the patients and their spouses and could explain the symptoms by 48%. Vaginal lubrication was improved with a determination value of 23.5%. Sexual desire of the respondents and their spouses were also improved with a determination value of 20%. These findings indicate that nursing care intervention on sexuality and other determining factors, namely occupation and education level of husbands, are significant to improve sexual desire and could explain the improvement of symptoms by 20%. Furthermore, sexual desire was improved with a determination value of 17%. Hence, the nursing care intervention significantly affected the improvement of sexual desire and could describe the improvement by 17%. Orgasm was also improved with a determination value of 16%, indicating that the intervention influenced the improvement of orgasm and could explain the improvement by 16% [Table 3].

Discussion

Nursing care intervention on sexuality has improved symptoms of sexual dysfunction. Dyspareunia among the patients was improved by 81.5%. Sexual intercourse, vaginal lubrication, sexual arousal, sexual desire, and orgasm were also improved after the intervention. Other influencing factors also contributed to the success of nursing care intervention. Education and counseling as well as physical exercise may have contributed to reduce dyspareunia and vaginal lubrication. Similarly, previous studies^[5,14,19] reported that educational intervention could improve sexual and physical symptoms. Reduced sexual arousal and desire after cancer treatment are commonly experienced

by respondents in this study. The respondents experienced improved sexual arousal and desire after the nursing care intervention on sexuality. The determination value for the success of nursing care intervention on sexuality with regard to the improvement of sexual arousal and desire was pretty low, i.e. <30%. However, other determining factors, namely, occupation and education of their husbands, contributed to the success of the intervention. These findings could be due to the nature of the sexual arousal and desire, which are emotionally related, thereby prolonging the time to attain improvement.^[24] The same problem is also encountered by survivors of breast cancer; Jun *et al.*^[14] provided a program of sexual reframing. However, improvement in sexual desire and vaginal lubrication was not significantly different between the intervention and nonintervention groups following the 6-week cancer treatment.

Previous studies reported that fear during sexual intercourse is caused by shortened vaginal size and vaginal dryness as well as fear of cancer recurrence.^[25,26] These factors lead to reduced sexual desire after cancer treatment. Fear may also be due to apprehension that the cancer has not been fully recovered, fear of re-bleeding, and fear of disease transmission to their partners. These factors made the patients to be reluctant to start their sexual activity again after cervical cancer treatment. Burke *et al.*^[27] reported a similar finding. In a previous study, cervical cancer patients avoided the resumption of sexual activities because they believed that such activity may disrupt the effectiveness of cancer treatment; they also perceived that their spouses were afraid of having sexual intercourse with them.^[25] Nursing care intervention could reduce the fear in the respondents. Some exercise and suggestions provided in the nursing care intervention could facilitate the emergence of arousal and desire in the respondents. The intervention included communication exercise as well as discussions on the importance of regular sexual intercourse and educating their husbands to assist the patients in increasing sexual arousal and desire.

Limitations

This study has a small sample size and therefore has limited generalizability. As such, constructing a definitive conclusion based on the findings is difficult. The small sample size is due to the difficulty in recruiting respondents who are willing to discuss their sexuality concerns because sexuality remains a taboo in Indonesia. However, regardless of the small sample size, the study results are consistent with those reported in previous studies.^[28-31] Moreover, the results of the present study cannot be generalized in a population with younger age and without because all of the

Table 3: Determining factors of the sexual nursing intervention on sexual symptoms

Complaints	Determining factors	B	β	P	R ²	R ² adjust
Vaginal lubrication	Intervention	0.840	0.500	0.000	0.25	0.23.5
Dyspareunia	Husbands' support	0.083	0.127	0.040	0.82	0.815
	Intervention	0.833	0.910	0.000		
Sexual arousal	Intervention	0.412	0.410	0.002	0.22	0.17
Sexual satisfaction	Knowledge	0.066	0.038	0.083	0.51	0.48
	Duration of marriage	0.018	0.009	0.047		
Sexual desire	Intervention	1.045	0.164	0.000		
	Husbands' occupation	0.306	0.488	0.001	0.25	0.2
	Husbands education	-0.218	-0.270	0.048		
Orgasm	Intervention	0.301	0.330	0.012		
	Intervention	0.829	0.419	0.002	0.17	0.16

respondents were in advanced reproductive age and had children. Furthermore, the respondents were at the period of 1-year posttreatment, but the process of adaptation to their sexual life continues over time. These conditions may lead to different results over the survivorship timeframe.

Implications for nursing care

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

The current study has raised 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 survivors. The paradigm of nurses on sexuality care should be altered. A standard operating procedure of nursing care in providing comprehensive service, including sexuality care, is also necessary. The results in this study could be adopted in such standard according to the context of care. The findings of the present study may also be incorporated into the curriculum of adult nursing care, particularly on reproductive system and human sexuality. Consequently, nurses should have sufficient knowledge and skills to address sexuality problems in cervical cancer survivors.

Conclusion

Nursing care intervention on sexuality through educational counseling can facilitate the improvement of sexual dysfunction symptoms in survivors and their spouses. Improvement is realized when respondents and their spouses show a reaction that they can overcome the symptom they experienced. Moreover, adaptive responses are demonstrated by the respondents by achieving adaptation against sexual changes, such as accomplishment of integration and reduced symptoms of sexual dysfunction, as a result of increased knowledge. Thus, nursing care service through the provision of educational counseling on sexuality can be a part of the standard oncology nursing practice and could be an alternative to overcome symptoms of sexual dysfunction among survivors and their spouses.

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Conflicts of interest

There are no conflicts of interest.

References

- Greenwald HP, McCorkle R. Remedies and life changes among invasive cervical cancer survivors. *Urol Nurs* 2007;27:47-53.
- Klee M, Thranov I, Machin D. Life after radiotherapy: The psychological and social effects experienced by women treated for advanced stages of cervical cancer. *Gynecol Oncol* 2000;76:5-13.
- Burns M, Costello J, Ryan-Woolley B, Davidson S. Assessing the impact of late treatment effects in cervical cancer: An exploratory study of women's sexuality. *Eur J Cancer Care (Engl)* 2007;16:364-72.
- Bergmark K, Avall-Lundqvist E, Dickman PW, Henningsohn L, Steineck G. Patient-rating of distressful symptoms after treatment for early cervical cancer. *Acta Obstet Gynecol Scand* 2002;81:443-50.
- Brotto LA, Heiman JR, Goff B, Greer B, Lentz GM, Swisher E, *et al.* A psychoeducational intervention for sexual dysfunction in women with gynecologic cancer. *Arch Sex Behav* 2008;37:317-29.
- Abbott-Anderson K, Kwekkeboom KL. A systematic review of sexual concerns reported by gynecological cancer survivors. *Gynecol Oncol* 2012;124:477-89.
- Nilakusmawati D, Srinadi I. *Perselingkuhan Dan Perceraian, Suatu Kajian Persepsi Wanita. (Affair and Divorce. A Study on Women's Perspective)*. Unpublished Thesis; 2006.
- Badr H, Taylor CL. Sexual dysfunction and spousal communication in couples coping with prostate cancer. *Psychooncology* 2009;18:735-46.
- Hautamäki K, Miettinen M, Kellokumpu-Lehtinen PL, Aalto P, Lehto J. Opening communication with cancer patients about sexuality-related issues. *Cancer Nurs* 2007;30:399-404.
- Jensen PT, Groenvold M, Klee MC, Thranov I, Petersen MA, Machin D. Early-stage cervical carcinoma, radical hysterectomy, and sexual function. A longitudinal study. *Cancer* 2004;100:97-106.
- Hughes MK. Sexuality and cancer: The final frontier for nurses. *Oncol Nurs Forum* 2009;36:E241-6.
- Hawkins Y, Ussher J, Gilbert E, Perz J, Sandoval M, Sundquist K. 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;32:271-80.
- de Groot JM, Mah K, Fyles A, Winton S, Greenwood S, Depetrillo AD, *et al.* The psychosocial impact of cervical cancer among affected women and their partners. *Int J Gynecol Cancer* 2005;15:918-25.
- Jun EY, Kim S, Chang SB, Oh K, Kang HS, Kang SS. The effect of a sexual life reframing program on marital intimacy, body image, and sexual function among breast cancer survivors. *Cancer Nurs* 2011;34:142-9.
- Chow KM, Chan JC, Choi KK, Chan CW. A review of psychoeducational interventions to improve sexual functioning, quality of life, and psychological outcomes in gynecological cancer patients. *Cancer Nurs* 2016;39:20-31.
- Gamel C, Hengeveld M, Davis, B. Informational needs about

- the effects of gynaecological cancer on sexuality: A review of the literature. *J Clin Nurs* 2000;9:678-88.
17. Maughan K, Clarke C. The effect of a clinical nurse specialist in gynaecological oncology on quality of life and sexuality. *J Clin Nurs* 2001;10:221-9.
 18. Jeffries SA, Robinson JW, Craighead PS, Keats MR. An effective group psychoeducational intervention for improving compliance with vaginal dilation: A randomized controlled trial. *Int J Radiat Oncol Biol Phys* 2006;65:404-11.
 19. Faithfull S. Fatigue and radiotherapy. In: Faithfull S, Wells M, editors. *Supportive Care in Radiotherapy*. UK: Churchill Livingstone; 2003.
 20. Powell CB, Kneier A, Chen LM, Rubin M, Kronewetter C, Levine E. A randomized study of the effectiveness of a brief psychosocial intervention for women attending a gynecologic cancer clinic. *Gynecol Oncol* 2008;111:137-43.
 21. Meston CM, Bradford A. A brief review of the factors influencing sexuality after hysterectomy. *Sex Relatsh Ther* 2004;19:5-12.
 22. Kleinbaum DG, Kupper LL, Muller KE. *Applied Regression Analysis and Other Multivariable Methods*. USA: PWS-Kent; 1988.
 23. Hughes MK. Alterations of sexual function in women with cancer. *Semin Oncol Nurs* 2008;24:91-101.
 24. Chow KM, Wong CY, Shek LL. Sexual functioning of gynecological cancer patients: A literature review. *World J Oncol Res* 2014;1:5-12.
 25. Derzko C, Elliott S, Lam W. Management of sexual dysfunction in postmenopausal breast cancer patients taking adjuvant aromatase inhibitor therapy. *Curr Oncol* 2007;14 Suppl 1:S20-40.
 26. Audette C, Waterman J. The sexual health of women after gynecologic malignancy. *J Midwifery Womens Health* 2010;55:357-62.
 27. Burke LM. Sexual dysfunction following radiotherapy for cervical cancer. *Gynecol Oncol* 1996;5(4):239-44.
 28. Wenzel L, DeAlba I, Habbal R, Kluhsman BC, Fairclough D, Krebs LU, *et al.* Quality of life in long-term cervical cancer survivors. *Gynecol Oncol* 2005;97:310-7.
 29. Frumovitz M, Sun CC, Schover LR, Munsell MF, Jhingran A, Wharton JT, *et al.* Quality of life and sexual functioning in cervical cancer survivors. *J Clin Oncol* 2005;23:7428-36.
 30. Becker M, Malafy T, Bossart M, Henne K, Gitsch G, Denschlag D. Quality of life and sexual functioning in endometrial cancer survivors. *Gynecol Oncol* 2011;121:169-173.
 31. Donovan KA, Taliaferro LA, Alvarez EM, Jacobsen PB, Roetzheim RG, Wenham RM. Sexual health in women treated for cervical cancer: Characteristics and correlates. *Gynecol Oncol* 2007;104:428-34.