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Sexual Activity and Satisfaction in Cervical Cancer Patients

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Abstract— *Sexuality is an important part of daily quality of life for cervical cancer patients, both before, during, and after post-cancer treatment. Diagnosis and treatment of cervical cancer has provided a change in the patient's sexual function, resulting in changes in sexual activity and sexual satisfaction. This study aimed to determine the correlation between sexual activity and sexual satisfaction in cervical cancer patients at Kota Surabaya. This study used a correlational design. The total sample was 76 cervical cancer patients obtained using a purposive sampling technique. The independent variable in this study was sexual activity. The dependent variable in this study was sexual satisfaction measured using the Sexual Satisfaction Scale for Women (SSS-W 30-items). Statistical test analysis used Chi-square (α=0.05). Most of the respondents (90.8%) reported that they were sexually active and satisfied with their current sexual lives (76.32%). Statistical test results showed no different between sexual activity and sexual satisfaction in cervical cancer patients in Surabaya (p=0.346). There was no difference in sexual satisfaction levels between sexually active and inactive cervical cancer patients. The usual forms of sexual activity performed by cervical cancer patients involved holding hands, kissing and hugging. The most prominent parameters of sexual satisfaction were the parameters of communication, compatibility, and personal concern. The involvement of health workers in efforts to prevent and overcome the effects of sexual dysfunction for cervical cancer patients and their partners.*

Keywords: *Sexual Activity; Sexual Satisfaction; Cervical Cancer*

I. INTRODUCTION

Cervical cancer is the fourth most common cancer affecting middle-aged women, particularly in developing and less resourced countries [1]. In 2018, current estimates indicate that every year 569,847 cervical cancer cases are reported around the world and 311,365 die from the disease [2]. By 2018, Indonesian Basic Health Research reported that the prevalence of cervical cancer is 23.4 per 100,000 population with an average death of 13.9 per 100,000 population [3]. The prevalence has increased from 98,692 cases in 2013. East Java has the highest prevalence of cervical cancer cases in Indonesia (1.1%), with an estimated absolute number of 21,313 cases [4]. Visual Inspection of the Cervix After Acetic Acid Application (VIA) was performed for 88,135 women in East Java and 7,013 were found positive. There were 877 women with positive VIA results who lived in Surabaya City [5].

Cervical cancer negatively affects women's quality of life [6]–[8]. Not only the disease itself, but also the treatments can lead to various physical and physiological change, which may result in various problems including sexual disorders [9], [10]. As cervical cancer directly affects the sexual organs, almost 50% women with cervical cancer report sexual dysfunctions [11]. A previous study revealed that sexual dysfunctions are related to body image (such as hair loss, black and wrinkled skin), sexual function, and reproductive ability. This sexual dysfunction can be felt by women only or both women and their partners [12].

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Sexuality is one of the most complex and important aspects of women's lives. It is defined as a central aspect of being human throughout life, encompassing sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy, and reproduction [13]. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, practices, roles, and relationships [14]. Sexual satisfaction has been defined as an effective response arising from one's subjective evaluation of the positive and negative dimensions associated with one's sexual relationship [15]. Sexual activity is closely related with sexual satisfaction, as well as marital and life satisfaction among adults [16]–[18].

The sexual function of women with cervical cancer was found to be lower than for the general population [19], [20]. This problem can occur since one's diagnosed and persist along their lifetime [21]. Previous study revealed that many women with cervical cancer and their partners need psychosexual healthcare, but the provided information and care is generally limited [22]. Moreover, sex is a taboo subject in Indonesia [23]. These problems must be approached within a multilayered structure of biological, sociological, and psychological care [9]. Although many studies have investigated quality of life among cervical cancer patients, little research has been conducted on their sexual lives. To provide an effective intervention for these patients, information about sexual activity, sexual satisfaction, and it's correlation need to be fully understood. This study aimed to determine the correlation between sexual activity and sexual satisfaction in cervical cancer patients.

II. METHODS

This study used a comparative study design with a cross-sectional approach. The population in this study was 192 cervical cancer patients derived from seven primary health care centers in Surabaya. The sampling technique used was purposive sampling. There were 76 respondents who met the sample criteria. The independent variable in this study was sexual activity and the dependent variable was sexual satisfaction. Data collection used questionnaires filled in directly at the respondent's residence. There were questionnaires for respondent's characteristic, sexual activity and the SSS-W: 30-items. Data were analyzed with Chi-Square (α=0.05) using a computer program. This study has passed health research ethics review from KEPK Faculty of Nursing, Universitas Airlangga, with a certificate of ethics number: 1033-KEPK.

III. RESULT

Table1. Respondents' characteristics (n=76)

Characteristic	n	%
Respondent's age		
27 – 40 yld*	15	19.7
41 – 54 yld*	51	67.1
55 – 67 yld*	10	13.2
Cancer Stadium		
Stadium 1	25	32.9
Stadium 2	51	67.1
Medical treatment		
Radiotherapy	10	13.1
Chemotherapy	17	22.3
Surgery	23	30.2
Combination therapy	26	34.2
Duration of treatment		
1 – 2 year/s	59	77.6
2 – 4 years	17	22.3
Husband's age		
30 - 42 yld*	13	17.1
43 – 55 yld*	48	63.1
56 - 57 yld*	15	19.7
Husband's occupation		
Civil servant	8	10.5
Private employee	41	53.9
Business owner	27	35.5
Length of marriage		

Characteristic	n	%
1 – 5 tahun year/s	2	2.6
6 – 10 years	6	7.8
10 – 20 years	14	18.4
>20 years	54	71.0
Respondent's education level		
Elementary	4	5.2
Junior high	14	18.4
Senior high	53	69.7
Higher education	5	6.5
Respondent's occupation		
Civil servant	1	1.3
Private employee	17	22.3
Business owner	8	10.5
Homemaker	50	65.7
Average family income per month		
< IDR 3.5 million	68	89.4
IDR 3.5—5 million	6	7.8
> IDR 5 million	2	2.6
Physical complaints		
No complaint	57	75
Abdominal pain	13	17.1
Fatigue	6	7.8
Sexual activity in this past month		
Sexually active	69	90.8
Sexually inactive	7	9.2
Sexual satisfaction		
Satisfied	58	76.32
Dissatisfied	18	23.68
Types of sexual activity *(from 69 sexually active respondents)*		
Dating	15	21.74
Holding hands	60	86.96
Kiss on the cheek	43	62.32
Hugging	60	86.96
Lip kissing	5	7.25
Sexual intercourse	3	4.35

(*) years old

The majority of respondents in this study were homemakers (65.7%), had an age range of 41 to 54 years old (67.1%), experienced second-stage cervical cancer and received a combination of radiotherapy-surgery-chemotherapy treatment (34.2%). Most respondents underwent cancer treatment for one to two years (77.6%). The majority age range of the husbands was less than or equal to 55 years old (80.2%) and most had been married to respondents for more than 10 years (89.4%). Average family income per month was mostly less than IDR 3.5 million. Less than twenty-five percent of respondents stated physical complaints such as abdominal pain and fatigue. Most respondents answered that they were still sexually active (90.8%) and satisfied (76.32%), but the number who had sexual intercourse was less than five percent.

Table 2. Crosstab and chi-square analysis results (*α=0.05)*

Sexual Activity	Sexual Satisfaction			
	Satisfied		Dissatisfied	
	n	%	n	%
Sexually active	54	93.1	15	83.3
Sexually inactive	4	6.9	3	16.7
TOTAL	58	100	18	100
Chi-square α=0.05	*p=0.346*			

Table 2 indicates that for both sexually active and inactive respondents, the majority were satisfied with their sexual lives. The results of the analysis using chi-square showed $p>\alpha>0.05$, meaning that there was no difference in terms of sexual satisfaction in sexually active or inactive cervical cancer patients.

IV. Discussion

Cervical cancer patients in this study were mostly under 55 years old; this supports WHO data showing that cervical cancer ranks second in the number of new cases of cancer in women aged between 15 and 59 years [2]. The

predominant premenopausal age in this study may be the result of Indonesia's long-term national policy regarding early detection of cervical cancer using the visual inspection method which, by 2016, had examined more than five percent of Indonesian women aged 30 to 50 years old [24]. Cervical visual inspection examination in accordance with WHO recommendations can recognize cervical abnormalities to be given immediate treatment, although a positive examination does not always mean cervical cancer [25]. The participants of this study were stage I and stage II cancer patients. In stage I, cancer is still located in the cervix and tends to be asymptomatic. At stage II, cancer affects areas beyond the cervix but it is still limited to the upper part of the vagina and does not affected the pelvic wall [26], [27].

Treatment options for early-stage cervical cancer include cone biopsy or simple trachelectomy, radical hysterectomy (RH), radiotherapy, and chemotherapy [26], [28], [29]. This is in line with the results of this study that the choice of interventions were surgery, radiotherapy, and chemotherapy. Surgical treatment for early-stage cervical cancer is not without risk of complications. A Dutch study shows that after RH, 35% of patients experience complications such as urinary retention and bleeding more than 1000ml [30]. However, RH is still the first choice in early-stage cervical cancer because the survival rate after RH is better than for simple surgery [31]. Provision of radiotherapy in early stage cervical cancer aims to eliminate and inhibit the growth of cancer cells. Individual doses for radiotherapy are highly recommended, as well as a combination of radiotherapy and chemotherapy prior to surgery since it reduces the level of EGFR and p53 gene, which functions to trigger the growth of cancer cells [32]. Chemotherapy is aimed at suppressing oncogenesis which prevents the development of new cancer cells [33], [34]. For radiotherapy and chemotherapy, in addition to positive effects, there is some toxicity that can occur and should be a concern in its administration. Side effects of radiotherapy can be either an early effect or a late effect. Early effects usually include fatigue, radiodermatitis, cystitis, and abdominal pain. Late effects that occur are stricture of organs, fistulas, necrosis and ulceration, connective tissue fibrosis, enteritis, and secondary malignancies. The effects of chemotherapy toxicity are anemia, neutropenia, febrile neutropenia, thrombocytopenia, fatigue, vomiting, neurotoxicity, diarrhea and stomatitis [33], [35].

Many studies have revealed that the presence of cervical cancer, as well as its treatment might cause dyspareunia, decreased libido, and reduced marital attachment between husband and wife [36]–[39]. The majority of respondents in this study mentioned that they were sexually active. Although very few performed sexual intercourse, they seemed to have found other ways such as going on a date with their husband, holding hands, kissing and hugging to fulfil their sexual needs. Similar results were also revealed by some studies about the effects of cervical cancer and its treatment. Those studies showed that although there were problems in performing sexual intercourse, there were low reports of sexual dysfunction [40], [41]. From the explanation, it is interpreted that cervical cancer patients are very likely to experience sexual dysfunction and changes in marital interactions. However, several different types of sexual activities might work as alternatives.

In this study, the number of sexually satisfied respondents outperformed those who were dissatisfied. The sexual satisfaction questionnaire in this study had parameters for contentment, communication, compatibility, relational concern, and personal concern [42]. In the parameter for contentment, most respondents were largely satisfied with their current sex life but felt something was missing from their sex life; felt that they had problems with arousal and orgasm. A study in South Africa also mentioned the sexual domain that was most affected by cervical cancer and its management was arousal, while the least affected was sexual satisfaction [43]. There were other studies which mention that, after pelvic surgery and gynecological cancer, women have a problem with sexual desire, shortening of the vagina and decreased vaginal lubrication, thus dyspareunia often occurs [37], [40], [44], [45]. In the communication parameters, the majority of respondents stated that they felt comfortable and could discuss sex with their husband. They were also able to express their feelings easily. However, they assumed that their husbands did not

find it easy to express their feelings and were not too sensitive about their wives' sexual desires. This was also revealed in several studies, which stated that the social aspect of the attention of gynecologic cancer survivors was a change in marital relationships and loss of husband's sexual interest [10], [41]. The compatibility parameter shows that respondents felt sexually compatible with their partners, but at the same time felt that between themselves and their husbands there were differences in the need for sexual intimacy. In the relational concern parameter, most respondents were concerned that interpersonal relations with their husbands were disturbed due to sexual problems, afraid that the husband would have an affair and believed that they had disappointed their husband because of their sexual limitations. These results support several previous studies, which revealed that women affected by cervical cancer experience sexual limitations so they can no longer engage in sexual activity as before. This causes high concern among women that their husbands will leave them because they believe that a man will not be able to abstain for a long period of time [46]–[48]. This is not entirely true; a study of the experiences of cervical cancer survivor partners reveals that they tend to avoid sexual intercourse, especially during cancer treatment for fear that it will hurt their wives or they see that their wives are experiencing pain. In addition, partners are also afraid that by engaging in sexual intercourse at that time, they will not be allowed to do it again in the future. [22]. In the personal concern parameter, it was found that most agreed that sexual problems make them feel upset, but did not agree that it is frustrating or sad. This result is in accordance with several studies which mention that the quality of life of cervical cancer patients is not different between those who are sexually active compared to inactive, and sexual life for women is more related to intimacy than sexual intercourse itself [46], [49], [39].

Providing counseling by health workers to cancer patients and their partners is important to help prevent or overcome problems due to sexual dysfunction [29], [39], [50]. The results of data analysis and findings from many other studies provide sufficient explanation that there is no relationship between sexual activity and sexual satisfaction in cervical cancer patients, due to the fact that a woman's sexual life cannot be seen only in relation to the physical aspect. Other aspects such as the quality of marital relations, intimacy, communication, and coping strategies chosen by patients when facing sexual dysfunction due to cervical cancer also contribute to determining sexual satisfaction level.

The limitation of this study is that cervical cancer patients involved in this study were limited to patients who were in stage I and stage II only. Sexual activity was not confirmed by each cervical patient's husband. This study was conducted only on patients who had husbands, so the results of the study cannot be applied to patients without a spouse.

V. CONCLUSION

There was no difference in sexual satisfaction levels between sexually active and inactive cervical cancer patients. The usual forms of sexual activity performed by cervical cancer patients were holding hands, kissing and hugging. The most prominent parameters of sexual satisfaction are the parameters of communication, compatibility, and personal concern. The involvement of health workers is important in efforts to prevent and overcome the effects of sexual dysfunction for cervical cancer patients and their partners.

CONFLICT OF INTEREST

There are no conflicts of interest within the study.

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REFERENCES

[1] M. Arbyn *et al.*, "Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis," *Lancet Glob. Heal.*, vol. 8, no. 2, pp. e191–e203, 2020.
[2] WHO, "Cancer Today," *Cancer Today*, 2018. .
[3] Ministry of Health Indonesia, "Basic Health Research (RISKESDAS) Indonesia 2018," 2018. [Online]. Available: http://www.depkes.go.id/resources/download/info-terkini/hasil-riskesdas-2018.pdf. [Accessed: 10-Jan-2019].
[4] Ministry of Health Indonesia, "Basic Health Research Indonesia 2013," Jakarta, 2013.
[5] Dinas Kesehatan Kota Surabaya, "Profil Kesehatan Kota Surabaya," p. 194, 2016.
[6] A. A. Gorin, J. Wiley, C. M. Ohannessian, D. Hernandez, A. Grant, and M. M. Cloutier, "Steps to Growing Up Healthy: A pediatric primary care based obesity prevention program for young children," *BMC Public Health*, vol. 14, no. 1, 2014.
[7] J. Khalil *et al.*, "Impact of cervical cancer on quality of life: beyond the short term (Results from a single institution)," *Gynecol. Oncol. Res. Pract.*, vol. 2, no. 1, p. 7, 2015.
[8] M. Derks *et al.*, "Long-term morbidity and quality of life in cervical cancer survivors: a multicenter comparison between surgery and radiotherapy as primary treatment," *Int. J. Gynecol. Cancer*, vol. 27, no. 2, pp. 350–356, 2017.
[9] H. Bae and H. Park, "Sexual function, depression, and quality of life in patients with cervical cancer," *Support. Care Cancer*, vol. 24, no. 3, pp. 1277–1283, 2016.
[10] R. M. Bakker *et al.*, "Sexual distress and associated factors among cervical cancer survivors: A cross-sectional multicenter observational study," *Psychooncology.*, vol. 26, no. 10, pp. 1470–1477, Oct. 2017.
[11] Y. Afiyanti and Pratiwi, "Seksualitas dan Kesehatan Reproduksi Perempuan," Jakarta: Raja Grafindo Persada, 2016.
[12] G. Pinar, T. Pinar, A. Akalin, T. Saydam, and A. Ayhan, "Problematic Areas Related to Sexual Life of Individuals with Gynecological Cancer : A qualitative Study in Turkey," *Hematol. Oncol.*, vol. 25, pp. 195–204, 2015.
[13] WHO, "Sexual and reproductive health," *WHO Int*, 2020. .
[14] P. A. Potter and A. G. Perry, *Buku Ajar Fundamental Keperawatan: Konsep, Proses, Praktik*, 4th ed. USA: Elsevier, 2005.
[15] T. Ziaee *et al.*, "The relationship between marital and sexual satisfaction among married women employees at Golestan University of Medical Sciences, Iran," *Iran. J. Psychiatry Behav. Sci.*, vol. 8, no. 2, pp. 44–51, 2014.
[16] H. N. Thomas, R. Hess, and R. C. Thurston, "Correlates of sexual activity and satisfaction in midlife and older women," *Ann. Fam. Med.*, vol. 13, no. 4, pp. 336–342, 2015.
[17] K. R. Stephenson and C. M. Meston, "The conditional importance of sex: exploring the association between sexual well-being and life satisfaction," *J. Sex Marital Ther.*, vol. 41, no. 1, pp. 25–38, 2015.
[18] D. A. Frederick, J. Lever, B. J. Gillespie, and J. R. Garcia, "What keeps passion alive? Sexual satisfaction is associated with sexual communication, mood setting, sexual variety, oral sex, orgasm, and sex frequency in a national US study," *J. Sex Res.*, vol. 54, no. 2, pp. 186–201, 2017.
[19] W. Zhou, X. Yang, Y. Dai, Q. Wu, G. He, and G. Yin, "Survey of cervical cancer survivors regarding quality of life and sexual function," *J. Cancer Res. Ther.*, vol. 12, no. 2, p. 938, 2016.
[20] C. S. L. Corrêa, I. C. G. Leite, A. P. S. Andrade, A. de S. S. Ferreira, S. M. Carvalho, and M. R. Guerra, "Sexual function of women surviving cervical cancer," *Arch. Gynecol. Obstet.*, vol. 293, no. 5, pp. 1053–1063, 2016.
[21] E. Nuryadi and N. Supriadi, "Perubahan Fungsi Seksual dan Vagina pada Pasien Pasca Radiasi," *Indones. Radiat. Oncol. Soc.*, vol. 3, no. 2, pp. 36–72, 2012.
[22] W. M. Vermeer, R. M. Bakker, G. G. Kenter, A. M. Stiggelbout, and M. M. ter Kuile, "Cervical cancer survivors' and partners' experiences with sexual dysfunction and psychosexual support," *Support. Care Cancer*, vol. 24, no. 4, pp. 1679–1687, Apr. 2016.
[23] I. Riyani and L. Parker, "Women exercising sexual agency in Indonesia," *Womens. Stud. Int. Forum*, vol. 69, no. January, pp. 92–99, 2018.
[24] Kementrian Kesehatan RI, "Profil Kesehatan Indonesia Tahun 2016," Jakarta, 2017.
[25] F. Ali, R. Kuelker, and B. Wassie, "Understanding cervical cancer in the context of developing

countries," *Ann. Trop. Med. Public Heal.*, vol. 5, no. 1, p. 3, 2012.
[26] R. Dunleavey, *Cervical cancer : a guide for nurses*. Chichester: John Wiley & Sons Ltd, 2009.
[27] N. Bhatla *et al.*, "Revised FIGO staging for carcinoma of the cervix uteri," *Int. J. Gynecol. Obstet.*, vol. 145, no. 1, pp. 129–135, Apr. 2019.
[28] P. T. Jensen, M. Groenvold, M. C. Klee, I. Thranov, M. A. Petersen, and D. Machin, "Early-Stage Cervical Carcinoma, Radical Hysterectomy, and Sexual Function: A Longitudinal Study," *Cancer*, vol. 100, no. 1, pp. 97–106, Jan. 2004.
[29] A. de Juan *et al.*, "SEOM clinical guidelines for cervical cancer (2019)," *Clin. Transl. Oncol.*, vol. 22, no. 2, pp. 270–278, Feb. 2020.
[30] H. H. B. Wenzel *et al.*, "Short-term surgical complications after radical hysterectomy—A nationwide cohort study," *Acta Obstet. Gynecol. Scand.*, p. aogs.13812, Feb. 2020.
[31] T. Y. Sia *et al.*, "Trends in Use and Effect on Survival of Simple Hysterectomy for Early-Stage Cervical Cancer," *Obstet. Gynecol.*, vol. 134, no. 6, pp. 1132–1143, Dec. 2019.
[32] Y. Cheng, K. Lan, X. Yang, D. Liang, L. Xia, and J. Cui, "Role of Cervical Cancer Radiotherapy in the Expression of EGFR and p53 Gene," *Curr. Proteomics*, vol. 17, no. 1, pp. 23–29, Feb. 2019.
[33] R. Airley, *Cancer Chemotherapy*. Oxford: John Wiley & Sons Ltd, 2009.
[34] V. H. de Almeida *et al.*, "Radiotherapy modulates expression of EGFR, ERCC1 and p53 in cervical cancer," *Brazilian J. Med. Biol. Res.*, vol. 51, no. 1, 2018.
[35] R. Angioli *et al.*, "Neoadjuvant chemotherapy plus radical surgery followed by chemotherapy in locally advanced cervical cancer," *Gynecol. Oncol.*, vol. 127, no. 2, pp. 290–296, Nov. 2012.
[36] N. Reis, N. K. Beji, and A. Coskun, "Quality of life and sexual functioning in gynecological cancer patients: Results from quantitative and qualitative data," *Eur. J. Oncol. Nurs.*, vol. 14, no. 2, pp. 137–146, Apr. 2010.
[37] L. Aerts, P. Enzlin, J. Verhaeghe, I. Vergote, and F. Amant, "Sexual and psychological functioning in women after pelvic surgery for gynaecological cancer," *Eur. J. Gynaecol. Oncol.*, vol. 30, no. 6, pp. 652–656, 2009.
[38] P. Vrzackova, P. Weiss, and D. Cibula, "Sexual morbidity following radical hysterectomy for cervical cancer," *Expert Rev. Anticancer Ther.*, vol. 10, no. 7, pp. 1037–1042, 2010.
[39] R. J. T. Sekse, K. O. Hufthammer, and M. E. Vika, "Sexual activity and functioning in women treated for gynaecological cancers," *J. Clin. Nurs.*, vol. 26, no. 3–4, pp. 400–410, Feb. 2017.
[40] Q. D. Pieterse *et al.*, "An observational longitudinal study to evaluate miction, defecation, and sexual function after radical hysterectomy with pelvic lymphadenectomy for early-stage cervical cancer," *Int. J. Gynecol. Cancer*, vol. 16, no. 3, pp. 1119–1129, May 2006.
[41] K. Abbott-Anderson and K. L. Kwekkeboom, "A systematic review of sexual concerns reported by gynecological cancer survivors," *Gynecologic Oncology*, vol. 124, no. 3. pp. 477–489, Mar-2012.
[42] C. Meston and P. Trapnell, "Development and validation of a five-factor sexual satisfaction and distress scale for women: The Sexual Satisfaction Scale for Women (SSS-W)," *J. Sex. Med.*, vol. 2, no. 1, pp. 66–81, 2005.
[43] I. E. Fakunle and J. E. Maree, "Sexual function in South African women treated for cervical cancer," *Int. J. Africa Nurs. Sci.*, vol. 10, pp. 124–130, Jan. 2019.
[44] C. Pallí, J. Lluch, and S. Valero, "Sexualidad, comunicación y emociones: Estudio situacional con mujeres afectadas de cáncer ginecológico," *Psicooncologia*, vol. 7, no. 1, pp. 153–173, 2010.
[45] J. L. Conway *et al.*, "Patient-reported sexual adjustment after definitive chemoradiation and MR-guided brachytherapy for cervical cancer," *Brachytherapy*, vol. 18, no. 2, pp. 133–140, Mar. 2019.
[46] D. Izycki, K. Woźniak, and N. Izycka, "Consequences of gynecological cancer in patients and their partners from the sexual and psychological perspective," *Przeglad Menopauzalny*, vol. 15, no. 2. Termedia Publishing House Ltd., pp. 112–116, 2016.
[47] E. O. Amoo *et al.*, "Spousal desertion and coping strategies among women with cervical in Nigeria: A schematic framework for wellbeing," *Etude la Popul. Africaine*, vol. 32, no. 1, pp. 4012–4021, Aug. 2018.
[48] Y. Afiyanti and A. Milanti, "Physical sexual and intimate relationship concerns among Indonesian cervical cancer survivors: A phenomenological study," *Nurs. Health Sci.*, vol. 15, no. 2, pp. 151–156, Jun. 2013.
[49] I. Juraskova, C. Bonner, M. L. Bell, L. Sharpe, R. Robertson, and P. Butow, "Quantity vs. Quality: An Exploration of the Predictors of Posttreatment Sexual Adjustment for Women Affected by Early Stage Cervical and Endometrial Cancer," *J. Sex. Med.*, vol. 9, no. 11, pp. 2952–2960, 2012.
[50] O. J. Fischer, M. Marguerie, and L. A. Brotto, "Sexual Function, Quality of Life, and Experiences of Women with Ovarian Cancer: A Mixed-Methods Study," *Sex. Med.*, vol. 7, no. 4, pp. 530–539, Dec. 2019.