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ASSESSING SEXUAL HEALTH AMONG WOMEN CANCER SURVIVORS AT A TERTIARY CANCER CENTRE: A CROSS-SECTIONAL STUDY

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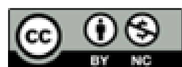

Abstract

Background: Recent advancements in cancer treatment and screening have significantly improved outcomes and survival rates, leading to an increase in the number of cancer survivors. However, these survivors often face psychosocial challenges, including sexual dysfunction, which is particularly under-addressed in female cancer survivors in the Indian context. This study aims to assess the prevalence and extent of sexual health dysfunction among female cancer survivors attending the radiation oncology outpatient department, to inform the design of interventions that can enhance their quality of life. **Materials and Methods:** A prospective study was conducted involving 46 disease-free women aged 18-65 years who had undergone treatment for cervical or breast cancer. Participants completed the EORTC SHQ-22 questionnaire, which measures various aspects of sexual health. Data were analyzed to determine the prevalence and severity of sexual dysfunctions. **Result:** The study population consisted of 54.2% women under 60 years and 45.8% over 60 years. Cervical and breast cancer cases were nearly equal. Key findings included a high incidence of sexual dysfunctions, such as decreased libido (mean score 57.90), sexual dissatisfaction (mean score 43.83), and vaginal dryness (mean score 67.65). Cervical cancer survivors reported higher levels of sexual pain and fatigue compared to breast cancer survivors. Communication with healthcare professionals about sexual health was notably poor. **Conclusion:** The study reveals a high prevalence of sexual dysfunction among female cancer survivors, significantly impacting their quality of life. The findings highlight the urgent need for comprehensive, culturally sensitive interventions and better communication between healthcare providers and patients regarding sexual health. Future research should involve larger, more diverse populations and longitudinal studies to develop effective strategies to address these issues.

INTRODUCTION

Recent advancements in cancer treatment and Screening for common cancers such as cervical, breast, and colon cancers has enabled early detection, leading to curative treatment for many patients that have significantly improved outcomes and overall survival rates. Consequently, there has been a notable increase in the number of cancer survivors. Presently, most patients can expect favorable outcomes following diagnosis. The 5-year observed survival rates of breast cacaner for localized, regional, and distant metastasis in the pooled PBCRs from india were 81.0%, 65.5%, and 18.3%, respectively.[1] The five-year OS% for pooled PBCRs was 65.9%, 53.5%, and 18.0% for localised, regional, and distant metastasis, respectively.[2]

However, cancer survivors encounter a myriad of challenges, including psychosocial distress.[3,4] Throughout their illness, common psychological issues such as depression, anxiety, and an increased risk of suicidal behavior often emerge, leading to intense emotions and troubling thoughts that can profoundly affect their quality of life.[5] One overlooked issue among cancer survivors is sexual health, particularly female sexual function. Health-related events such as cancer significantly impact sexual function, leading to sexual dysfunctions and diminishing overall quality of life.[6] Studies have reported varying incidences of sexual dysfunctions among cancer survivors, ranging from 30% to 80%, with regional differences observed.[7–9] For instance, a study in Mainland China found an incidence of sexual dysfunctions as high as 82.8% among breast cancer survivors. Moreover, among women who survive gynecological malignancies, sexual

dysfunction is a poorly explored morbidity, particularly in the Indian context due to cultural barriers. Despite its significant distressing effects on patients, sexual dysfunction remains largely unaddressed and untreated in the Indian healthcare system.

Due to the under-addressed nature of this issue, our objective is to assess sexual health dysfunction among cancer survivors visiting our outpatient department (OPD). Understanding the extent of this issue through this study will aid in designing interventions for cancer survivors, thereby enhancing their quality of life.

MATERIALS AND METHODS

The is a prospective study conducted in a tertiary cancer hospital after obtaining institute ethics committee approval, enrolling patients who had undergone treatment for cervical cancer and breast cancer and were attending the radiation oncology outpatient department for follow-up. A total of 46 women aged 18-65 years, who were disease-free and attending the OPD for regular follow-up, were included in the study. Non-sexually active women were excluded as certain questions in the questionnaire might be irrelevant to them. Informed consent was obtained from all participants. The EORTC SHQ 22 questionnaire was utilized to gather data on sexual health. Prior permission was obtained from EORTC for the use of the questionnaire. The EORTC SHQ-22 is a multi-dimensional QoL instrument used to measure sexual health in patients with cancer (men or women). This new tool covers both sexual functioning and psychosexual components.[10] It includes 8 items on sexual satisfaction, 3 items on sexual pain, and 11 single items in an integrative approach, leading to 7 functional scales and 4 symptom scales.[11] In these questionnaires, higher scores in the functioning scales indicate a better functional level, whereas higher scores in the symptom scales indicate the severity of problems. EORTC SHQ-22 as a stand-alone, multidimensional QOL instrument to measure sexual health in patients with cancer is clinically applicable, covers relevant SH issues, and shows high acceptability across the heterogeneous target population. All demographic data presented as frequencies and all sexual health scores were presented as means with standard deviation Data were entered onto a computer database and analyzed using SPSS (Statistical Package for Social Sciences) version 19.

RESULTS

The data presented reveals key demographic and medical characteristics of the study population. Over half of the participants (54.2%) are under 60 years old, while 45.8% are over 60. The majority of cases involve cervical cancer (50%) and breast cancer (47.9%), with a small proportion represented by Non-Hodgkin Lymphoma (2.1%). Regarding cancer staging, for breast cancer, the distribution is relatively balanced across stages IIA to IIIB. In contrast, cervical cancer cases are more distributed across stages IIB to IIIC1, with stage IIB being the most prevalent (33.3%).73% of breast cancer patients are on hormonal therapy. Median disease free interval of the study population is 26.8 (IQR 12-38) months. Vaginal stenosis is observed in 40% of cervical cancer patients in this study.

Table 1: Sitewise Distribution of cases

Category	Frequency	Percent
Age		
<60	26	54.2
>60	22	45.8
Site (N=48)		
Breast	23	2.6
Cervix	24	2.7
NHL	1	0.1
Staging - Breast (N=23)		
IIA	5	21.7
IIB	7	30.4
IIIA	6	26.1
IIIB	5	21.7
Staging - Cervix (N=24)		
IIA	4	16.7
IIB	8	33.3
IIIB	6	25.0
IIIC1	5	20.8
IIIC2	1	4.2

Table 2: Mean values of scores of the study population

Parameter	Mean	SD
Sexual activity	35.79	28.64
Decreased Libido	57.90	23.19
Sexual Satisfaction	43.83	14.57
Treatment Effected	47.46	21.33
Communication with doctor	12.38	18.67

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Communication with partner	32.30	21.04
Body Image	40.56	18.19
Sexual Pain	42.94	21.64
Incontinence	20.63	24.02
Fatigue	43.31	22.58
Vaginal dryness	67.65	23.75
Functional Scales	38.51	9.64
Symptom scale	43.63	15.07

Table 3: Site wise scores of the population

Parameter	Breast (Mean)	Std. Deviation (Breast)	Cervix (Mean)	Std. Deviation (Cervix)
Sexual activity	38.83	31.09	31.63	26.61
Decreased Libido	57.57	25.12	57.88	22.54
Sexual Satisfaction	40.78	15.60	45.82	13.11
Treatment Effect	41.61	22.73	52.29	19.36
Communication with doctor	15.78	21.96	9.63	15.32
Communication with partner	25.50	17.44	38.50	23.16
Body Image	37.30	18.09	45.38	16.32
Sexual Pain	32.09	17.92	54.21	19.84
Incontinence	1.43	6.88	39.88	19.41
Fatigue	31.57	23.29	55.00	15.89
Vaginal dryness	60.43	23.95	76.00	21.04
Functional Scales	36.61	9.58	40.16	9.85
Symptom scale	31.38	8.00	56.27	8.41

Table 4: Distribution of Sexual Dysfunction and Related Issues among Cancer Survivors

Parameter	Not at all		A little		Quite a bit		Very much	
	N	%	N	%	N	%	N	%
Sexual activity	14	29.17	18	37.50	14	29.17	2	4.17
Decreased Libido	0	0.00	19	39.58	22	45.83	7	14.58
Incontinence	25	52.08	16	33.33	7	14.58	0	0.00
Fatigue	6	12.50	21	43.75	21	43.75	0	0.00
Treatment	3	6.25	22	45.83	22	45.83	1	2.08
Communication with professionals	32	66.67	14	29.17	2	4.17	0	0.00
Partnership	11	22.92	28	58.33	9	18.75	47	97.92
Body image (female)	3	6.25	31	64.58	14	29.17	0	0.00
Vaginal dryness	0	0.00	11	22.92	24	50.00	13	27.08

Table 5: Sexual satisfaction scores

Sexual Satisfaction	Higher Satisfaction	Lower Satisfaction
N	19	29
%	39.58	60.42

Table 6: Pain related scores

Sexual Pain	Higher Dysfunction	Lower Dysfunction
N	16	32
%	33.33	66.67

DISCUSSION

Our study intended to find out the sexual dysfunction in women cancer survivors of cervix and breast cancers. Median DFI of our population is 26 months. Cervix and breast cancer patients are equal in number.

Sexual Activity: The average level of sexual activity among participants is 35.79, with high variability (SD = 28.64). Breast cancer patients report a slightly higher average sexual activity (Mean = 38.83, SD = 31.09) compared to cervical cancer patients (Mean = 31.63, SD = 26.61). Additionally, 29.17% of participants report no sexual activity, while 37.50% report minimal activity. These findings suggest notable variability in sexual activity levels, potentially influenced by cancer type and other factors. Sequin et al. found weak to moderate deterioration in intercourse frequency among cervix and breast cancer survivors, with around 30% experiencing significant deterioration. Patients in the surgery/radiation therapy group reported significantly lower sexual activity rates in studies on cervical cancer patients.[12,13] A decrease in intercourse frequency after radiation treatment for cervical cancer was observed in 16.4% of patients.[14]

Decreased Libido: The average level of decreased libido is 57.90 with a standard deviation of 23.19. The breast cancer group has a mean decreased libido of 57.57 (SD = 25.12), and the cervical cancer group has a mean of 57.88 (SD = 22.54), showing similar levels across groups. Regarding the extent of decreased libido, 45.83% reported "quite a bit," and 14.58% reported "very much." This highlights decreased libido as a common issue, with a majority experiencing it to some extent. A review of literature on sexual desire in breast cancer patients, including 37 studies, showed decreased libido in breast cancer

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survivors. The prevalence of loss of sexual interest in cervical cancer survivors varies between 26% and 85%.[15,16]

Sexual Satisfaction: The overall average sexual satisfaction is 43.83 with a standard deviation of 14.57. For breast cancer patients, the mean sexual satisfaction is 40.78 (SD = 15.60), while for cervical cancer patients, it is 45.82 (SD = 13.11). Additionally, 39.58% of participants report higher sexual satisfaction, whereas 60.42% report lower satisfaction. This suggests that cervical cancer patients generally experience higher sexual satisfaction compared to breast cancer patients, although the majority of the sample reports lower satisfaction. A study by Sertoz et al. indicated that the most prevalent dysfunction among women with cancer is the loss of desire for sex (39%). Another study with 184 participants using a sexual satisfaction questionnaire showed lower levels of sexual satisfaction in breast cancer survivors.[17]

Effect of Treatment: The overall effect of treatment has a mean score of 47.46 with a standard deviation of 21.33. Breast cancer patients report a mean treatment effect of 41.61 (SD = 22.73), while cervical cancer patients report a mean of 52.29 (SD = 19.36). Approximately 90% of participants reported being affected by their treatment. Studies have shown that cancer and its treatment affect sexual function, satisfaction, well-being, and relationships.[18,19] A review by Yashi et al. found that prostate, breast, and cervical cancer patients who received radiation therapy experienced more severe sexual health symptoms compared to non-irradiated patients.[20]

Communication: Communication with partners (Mean = 32.30, SD = 21.04) is generally better than with doctors (Mean = 12.38, SD = 18.67). Breast cancer patients tend to communicate more with their doctors (Mean = 15.78, SD = 21.96) than cervical cancer patients (Mean = 9.63, SD = 15.32). Conversely, communication with partners is higher among cervical cancer patients (Mean = 38.50, SD = 23.16) compared to breast cancer patients (Mean = 25.50, SD = 17.44). Most participants report no communication with professionals (66.67%), while nearly all report extensive communication with partners (97.92%). This underscores the importance of supportive relationships during cancer treatment. A study showed that 62.7% of patients believe providers should regularly inquire about their sexual history, with significant differences in preferences based on education level and a preference for female healthcare providers.[21]

Body Image: The overall effect of treatment on body image has a mean score of 40.56 with a standard deviation of 18.19. Breast cancer patients report a mean decreased body image score of 37.30 (SD = 18.09), while cervical cancer patients report a mean of 45.38 (SD = 16.32). Approximately 95% of participants reported being affected by decreased body image due to their treatment. Most patients (92%) experienced body image disturbances, and breast cancer survivors who completed treatment within 12 months were more likely to experience these disturbances ($p < 0.01$).[22]

Incontinence: The overall effect of incontinence on sexual activity has a mean score of 20.63 with a standard deviation of 24.02, indicating a minimal effect. Breast cancer patients report a mean of 1.43 (SD = 6.09), while cervical cancer patients report a mean of 39.88 (SD = 19.41). Approximately 85% of participants reported minimal effect of incontinence on sexual activity. Pelvic floor dysfunction was bothersome in 75% of gynecological cancer survivors.[23]

Fatigue: The overall effect of fatigue on sexual activity has a mean score of 43.31 with a standard deviation of 22.58, indicating a moderate effect. Breast cancer patients report a mean of 31.57 (SD = 6.09), while cervical cancer patients report a mean of 55.00 (SD = 15.89). Around 90% of participants reported a moderate effect of fatigue on sexual activity. A cross-sectional study showed that one in four breast cancer survivors experience multidimensional fatigue.[24]

Vaginal Dryness: The overall effect of vaginal dryness on sexual activity has a mean score of 67.65 with a standard deviation of 23.75, indicating a moderate effect. Breast cancer patients report a mean of 60.43 (SD = 23.95), while cervical cancer patients report a mean of 76.00 (SD = 21.04). Around 90% of participants reported a moderate to high effect of vaginal dryness on sexual activity.[25]

Sexual Pain: The overall effect of sexual pain on sexual activity has a mean score of 42.94 with a standard deviation of 21.64, indicating a moderate effect. Breast cancer patients report a mean of 32.09 (SD = 17.92), while cervical cancer patients report a mean of 54.21 (SD = 19.84). Approximately 32% of participants reported a high effect of sexual pain on sexual activity.[25]

Overall Sexual Satisfaction: Overall sexual satisfaction has a mean score of 43.83 with a standard deviation of 14.57, indicating generally low levels in the study population irrespective of cancer type. This suggests that survivors experience lower sexual satisfaction, potentially due to multifactorial physical and emotional reasons. Breast cancer patients report a mean of 40.78 (SD = 15.60), while cervical cancer patients report a mean of 45.82 (SD = 13.11). Approximately 90% of participants reported lower sexual satisfaction rates.

Functional and Symptom Scales: The functional scales, which include seven items (sexual satisfaction, importance of sexual activity, libido, impact of treatment on sexual life, communication with professionals, femininity, and security with partner), have a mean score of 38.51 with an SD of 9.64. The breast cancer group has a mean of 36.61 (SD = 9.58), while the cervical cancer group has a mean of 40.16 (SD = 9.85). Both groups exhibit negatively affected functional scores. The symptom scales, which include four items (sexual pain, worrying about incontinence, fatigue, and vaginal dryness), have a mean score of 43.63 with an SD of

15.07. The breast cancer group has a mean of 31.38 (SD = 8.00), while the cervical cancer group has a mean of 56.27 (SD = 8.41). Although symptom scales are moderately affected, cervical cancer patients have the highest symptom scale scores, indicating they are more affected.[26]

Limitations

This study has several limitations, including a small sample size of 46 women, which restricts the generalizability of the findings. It was conducted at a single outpatient department, potentially limiting its applicability to other settings. The exclusion of non-sexually active women may have overlooked the full range of sexual health issues among cancer survivors. Reliance on self-reported data introduces the possibility of bias, and the cross-sectional design does not capture changes over time. Additionally, cultural sensitivities may affect the accuracy of participants' responses, and the focus on breast and cervical cancer survivors may not reflect the experiences of those with other cancer types.

CONCLUSION

This study highlights the significant impact of cancer and its treatment on the sexual health of female survivors, particularly those with breast and cervical cancer. The findings reveal a high prevalence of sexual dysfunction, including decreased libido, sexual dissatisfaction, and issues such as vaginal dryness and sexual pain, which are more pronounced in cervical cancer survivors. These dysfunctions contribute to a lower quality of life and underscore the importance of addressing sexual health as a critical aspect of survivorship care.

Despite its limitations, this study provides valuable insights into the sexual health challenges faced by cancer survivors and underscores the need for comprehensive, culturally sensitive interventions. Future research should aim to include larger, more diverse populations, and employ longitudinal designs to better understand the trajectory of sexual health issues over time. Integrating sexual health assessments into routine follow-up care and providing targeted interventions can help improve the overall well-being and quality of life for cancer survivors.

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