

Sexual Needs Among Patients with Cancer: A Systematic Literature Review

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Abstract

Background: Both cancer and its treatments have profound effects on sexuality. Sex, sexuality, and intimacy hold equal importance for cancer patients as they do for individuals without cancer. Discussions surrounding sexuality are often not viewed as urgent or essential and may even be considered taboo in certain cultural contexts. The quality-of-life issues have become secondary to the primary goal of curing cancer, with little emphasis on addressing intimacy-related problems. This study aims to identify the effective interventions for addressing the sexual needs of patients with cancer.

Method: This is a systematic literature review. A thorough literature review in three data bases including PubMed, Science Direct and Sage was conducted.. The article analysis process used the PRISMA method.

Results: 10 articles were reviewed that met the criteria, and the articles used randomized controlled trials, quasi-experimental studies, and cross-sectional methods.

Conclusion: Cancer and its treatment can cause various physical and psychological changes that can significantly impact the patient's sexual function. The interventions that address the sexual needs of cancer patients, such as psychosexual support, sexual psychoeducation, sexual communication, and social support, are an important need for cancer patients to overcome their sexual problems, to adapt, to maintain intimacy, and to improve their quality of life. Sexual needs are an important aspect that must be addressed and managed comprehensively in the management of cancer patient care to improve their quality of life.

Keywords: Cancer Patients; Psychosexual Support; Sexual Communication; Sexual Psychoeducation; Social Support

INTRODUCTION

Cancer is defined as a disease characterized by its unique ability to produce abnormal cell growth that exceeds the capacity of normal cells, and potentially can affect any part of the body. This abnormal growth can invade nearby tissues and metastasize to other organs, which often becomes a major cause of cancer-related mortality (WHO, 2022). Cancer represents one of the most pressing health concerns for humanity, significantly impacting both emotional and physical well-being. It is estimated that by 2028, over 1.7 million individuals will be living with cancer, with more than 600,000 expected to succumb to the disease (Hosseini et al., 2022).

Current management strategies for cancer involve various modalities, including surgery followed by

radiotherapy, and a combination of treatments including surgery, radiation, and chemotherapy. Chemotherapy employs antineoplastic agents aimed at destroying tumor cells by disrupting cellular function and reproduction (Miller et al., 2022). Both cancer and its treatments have profound effects on sexuality. For instance, treatments for gynecological cancers may necessitate the removal of primary reproductive organs or induce premature menopause, thereby eliminating reproductive capabilities. Physical and hormonal changes can lead to body image issues, depression, and anxiety. Men and women alike may experience impacts on intimacy and fertility due to surgery, chemotherapy, and radiation (Anderson et al., 2023; Claes et al., 2024).

Research indicates that over 60% of women and 40% of men diagnosed with cancer experience sexual dysfunction ([Hosseini et al., 2022](#); [Pizzol et al., 2021](#)). Radiation therapy, which utilizes high-energy rays to kill cancer cells, can also damage essential reproductive structures, such as the ovaries, leading to permanent menopause, particularly when administered to the pelvic region. Additionally, radiation may cause scarring in the vagina, resulting in painful intercourse. Chemotherapy can produce acute side effects, including nausea, vomiting, and fatigue, which can adversely affect sexual desire and function. Furthermore, cancer and its treatments may alter body shape and impact aspects of sexual health, such as body image and sensation ([Regeer et al., 2022](#)).

The side effects of cancer treatments can lead to numerous sexual issues, including decreased interest and sexual activity, arousal problems, less attraction, pain, vaginal dryness, and erectile dysfunction, all of which combine to contribute to sexual dysfunction. However, attention to sexual health during and after cancer treatment remains limited in clinical practice. Healthcare providers and patients often prioritize cancer diagnosis over sexual health, and discussions surrounding sexual health can create discomfort for both parties. Implicit biases may also lead to neglect of sexual health concerns, particularly for unmarried or older patients ([Lehmann et al., 2022](#)).

Advancements in cancer diagnosis and treatment have resulted in an increasing number of survivors. The trend of oncological approaches now integrates surgery, radiotherapy, and systemic treatments, including chemotherapy and some other emerging alternatives like immunotherapy and targeted therapy. These interventions can impact short and long-term physical changes and psychosocial effects, which may negatively impact patients, including sexual dysfunction, defined as a common and persistent consequence arising from biological, physiological, and psychological dysfunctions related to cancer and its treatments ([Ospina-Serrano et al., 2023](#)).

Sex, sexuality, and intimacy hold equal importance for cancer patients as they do for individuals without cancer. The American Cancer Society notes that

sexuality and intimacy can assist patients in coping with cancer by alleviating feelings of depression during treatment. Sexuality and intimacy are vital components of quality of life and can mitigate some psychosocial stressors associated with a cancer diagnosis ([Pizzol et al., 2021](#)).

A critical yet frequently overlooked aspect of cancer care is the decline in sexual function reported by patients who are diagnosed with various types of cancer. Previous research has often focused on cancers directly affecting sexual organs, such as breast, prostate, and testicular cancers, or other reproductive-related malignancies ([Agochukwu et al., 2019](#); [Regeer et al., 2022](#)). However, patients with other types of cancer, including head and neck, colorectal, and hematological malignancies, also face similar challenges. Chemotherapy and endocrine therapy can adversely affect sexuality by temporarily halting ovarian function in premenopausal women and inducing early menopause, alongside systemic symptoms such as hot flashes, mood changes, insomnia, and fatigue, as well as genitourinary symptoms like vaginal dryness, decreased lubrication, and reduced libido ([Katz et al., 2022](#)).

Healthcare workers should initiate the discussions about sexual health issues from the diagnostic phase and continue throughout the whole sequence. Integrating sexual health into routine assessments is a crucial strategy for addressing these problems. Sexual issues should not solely be the responsibility of primary oncology providers. Given the numerous domains in which cancer and its treatment can affect sexuality, a multidisciplinary team, such as urologists, urogynecologists, gynecologists, pelvic floor physical therapists, mental health providers, and sex therapists, can better meet the needs of women with cancer ([European Cancer Leagues, 2020](#)).

Despite the prevalence of sexual health issues, many healthcare professionals do not inquire about sexual health in cancer patients ([Anderson et al., 2023](#)). A survey of gynecologic oncologists revealed that fewer than half routinely address sexual health, with 80% citing insufficient time to discuss these matters during patient visits. Others reported feeling inadequately trained to address patient concerns

regarding sexuality appropriately ([Ospina-Serrano et al., 2023](#)).

Discussions surrounding sexuality are often not viewed as urgent or essential and may even be considered taboo in certain cultural contexts. The quality-of-life issues have become secondary to the primary goal of curing cancer, with little emphasis on addressing intimacy-related problems. Nonetheless, it is imperative to elevate discussions about sexual health to enhance the quality of life for cancer patients. Holistic cancer care approaches have begun to emerge in scientific discourse, aiming to address the unique challenges and complex impacts of cancer on patients' sexual lives. Consequently, there is a pressing need for comprehensive literature reviews to better understand the effective interventions for addressing the sexual needs of cancer patients. This study will explore the interventions that are effective for addressing the sexual needs of cancer patients through a systematic review methodology.

METHOD

The method used by the researcher for this research is a systematic literature review, which synthesizes the sexual health-related needs of cancer patients. Therefore, the primary research question guiding this study is: "What are the effective interventions for addressing the sexual needs of cancer patients?" In this systematic review, the focus is on how changes in sexuality and needs, as well as their underlying causes, are addressed in cancer patients.

The literature search was conducted across three databases: PubMed, ScienceDirect, and Sage Journals, to identify articles describing the sexuality health-related needs of cancer patients. The keywords used in the search were "Cancer patient" OR "Carcinoma Patients" OR "Oncology Patients" OR "Malignancy Patients" AND "Sexuality Needs" OR "Sexual Well Being" OR "Sexual Activity."

The inclusion criteria were defined using the PICO framework (Population, Intervention, Comparison, Outcomes). Specifically, the criteria were as follows: P: Cancer Patient, I: -, C: -, O: Sexual health needs of cancer patients. The exclusion criteria included patients with chronic diseases other than cancer, qualitative study articles, and articles written in languages other than English. The article selection process was conducted in two stages: the first was initial screening, in which the authors performed an independent screening of abstracts and full articles; the second was a Comprehensive Review, in which the authors conducted a thorough review of the selected articles and then discussed them with the other authors to resolve any discrepancies. Once all criteria were met, the authors proceeded to evaluate the quality of the data.

The approach used in this systematic literature review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, with the results presented in the following scheme:

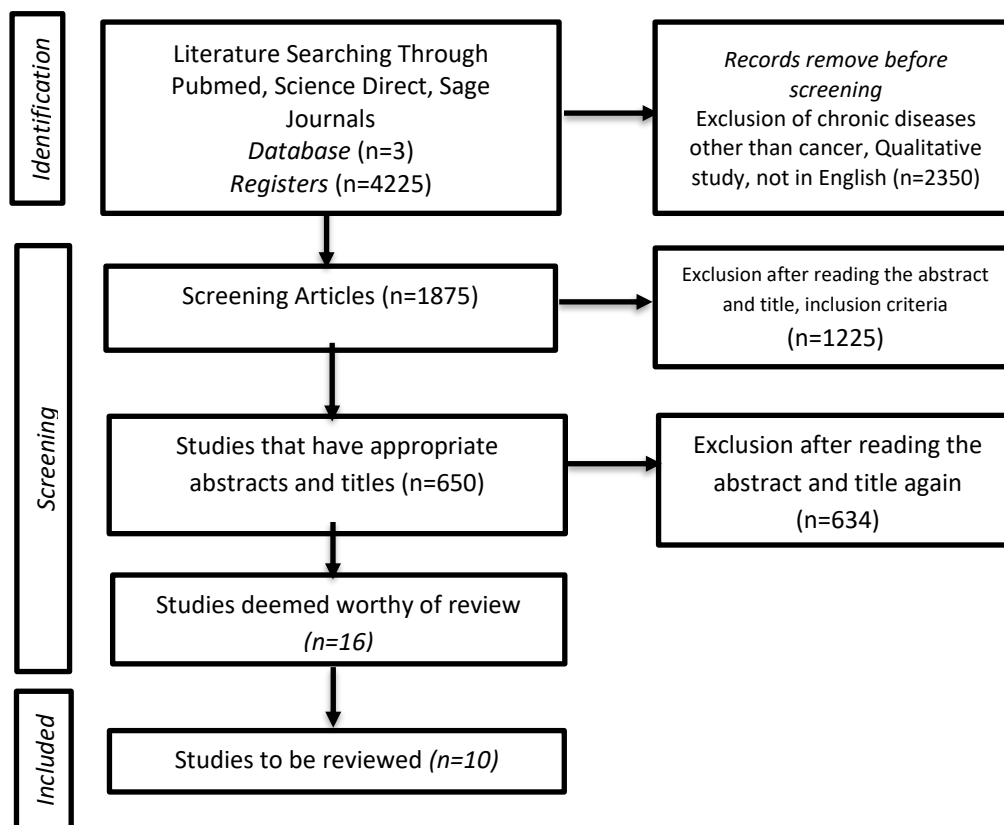


Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020

RESULTS

Table 1. Characteristics of the Included Studies

Author, Year	Title	Aim	Method	Sample	Findings
Suvaal et al. 2021	A sexual rehabilitation intervention for women with gynaecological cancer receiving radiotherapy (SPARC study): design of a multicentre randomized controlled trial	This study aims to evaluate the effectiveness of nurse-led sexual rehabilitation interventions for women with gynecological cancer undergoing radiation therapy.	A parallel group, prospective, randomized controlled trial	Control Group: 64 participants Intervention Group: 64 participants receiving nurse-led sexual rehabilitation intervention	Post-gynecological cancer treatment, psychosexual support should include interventions addressing motivational and sexual function issues. These interventions should involve partners and be designed as concise, practical, and accessible sexual rehabilitation programs. The sexual rehabilitation interventions should ideally consist of

						psychoeducation combined with cognitive and psychosexual elements. This approach aims to enhance adherence to dilator use and improve patients' sexual function.
Fagerkvist et al. 2024	Efficacy of a web-based psychoeducational intervention, Fex-can sex, for young adult childhood cancer survivors with sexual dysfunction: A randomized controlled trial	This study aims to evaluate the effectiveness of the web-based psychoeducational intervention Fex-Can Sex in reducing sexuality problems among young adults who have received treatment for cancer during childhood.	randomized controlled trial	Intervention Group: 142 individuals Control Group: 136 individuals		No significant effects of the intervention were observed on the primary outcome. However, in several secondary outcomes, the group that received intervention demonstrated improvements compared to those who were in the control group, such as reductions in vaginal dryness and emotional distress. Some members of the intervention group reported an increase in understanding and acceptance of their sexuality issues.
Zhang et al. 2020	The Effect of Different Surgical Methods on Female and Male Sexual Activity and Marital Quality in Patients With Early-Stage Cervical Cancer	This study aims to investigate the effects of four surgical methods on sexual activity and marital quality in male and female patients with early-stage cervical cancer..	Cross-Sectional	Total Participants: 205 patients diagnosed with stage 1a cervical cancer.		Regression analysis revealed that ovary preservation and the extension of the vagina are correlated with both female and male sexual function and the quality of marriage. Furthermore, when the vaginal extension and ovary preservation were substituted with measures of vaginal length, changes in sex psychological, and the hormone level index (Kupperman Index), it was found that male sex function was related to the length of the vagina and sexual psychological changes. In contrast, in female, their sexual function and their marital quality were only correlated with hormone levels and sexual psychological changes.
Cihan et al. 2024	Effect of a telephone-based perioperative nurse-led counselling programme on unmet needs, quality of life and	The purpose of this study is to determine whether nurse-led perioperative counseling has an impact on patients' unmet	Quasi-Experimental Study	Control Group: 45 individuals Intervention Group: 37 individuals		Nurse-led perioperative counseling has been proven to reduce patients' unmet needs

	sexual function in colorectal cancer patients: A non-randomised quasi-experimental study	needs, sexual function, and quality of life in patients with colorectal cancer.			and enhance the overall quality of life by decreasing symptom levels. However, it did not significantly impact sexual health outcomes in patients undergoing surgery for colorectal cancer.
Almont et al. 2019	Sexual Health Problems and Discussion in Colorectal Cancer Patients Two Years After Diagnosis: A National Cross-Sectional Study	This study aims to evaluate the sexual health of colorectal cancer patients two years after diagnosis and discuss the topic of sexuality with healthcare providers.	Cross Sectional	487 patients (258 Male and 229 Female)	The research findings indicate that more than 50% of colorectal cancer patients reported a decrease in sexual desire, frequency of sexual activity, and ability to achieve orgasm two years after their diagnosis. A small percentage of patients (20% of males and 11% of females) reported and discussed their sexual issues with the medical and nursing teams. This study encompasses the lack of sexual discussion with oncology teams and the urgent need for personalized sexual rehabilitation interventions, particularly for rectal cancer patients and fecal incontinence.
Martins et al. 2022	Quality of Life and Sexual Satisfaction in Women with Breast Cancer Undergoing Surgical Treatment and in Their Male Partners	This study aims to assess the sexual health of breast cancer patients who have undergone surgical treatment, along with their partners, two years after diagnosis, and to evaluate discussions about sexuality with healthcare providers.	Cross Sectional	Total Participants: 389 patients underwent surgical treatment, along with their partners.	There is a pressing need for appropriate medical and nursing interventions to enhance the quality of life and sexual satisfaction among women with breast cancer who are undergoing surgical treatment, as well as their partners. Emotion and sex counseling during treatment should involve partners, and healthcare providers must prioritize identified factors such as the time elapsed since surgery, current treatment, relationship satisfaction, anxiety, depression, and body image. It is essential to discuss the changes in their body image and sexuality with the

						patient and their partner.
Obora et al. 2022	Determinants of sexual function among survivors of gynecological cancers in a tertiary hospital: A cross-sectional study	This study aims to identify the factors influencing sexual function among survivors of gynecological cancer in Kenya.	Cross Sectional	Total Participants: 108 patients with gynecological cancer		The results indicate that cervical cancer is the most prevalent gynecological cancer among the respondents, accounting for 51%. A significant majority of the respondents (85%) experienced sexual dysfunction. The factors most affecting sexual function include the use of lubricants, age, and cancer stage. Additionally, social support was found to be an independent factor related to sexual dysfunction among the respondents.
Kulkarni et al. 2022	Sexual health and function among patients receiving systemic therapy for primary gynecologic cancers	This study aims to assess the long-term sexuality function of survivors of cervical cancer following therapy, as well as the factors influencing it.	Cross Sectional	97 individuals		The article reports that the Female Sexual Function Index (FSFI) scores in the intervention group showed a significant improvement following the psychological intervention. In contrast, the FSFI scores in the control group did not exhibit significant changes during the same period. It indicates that the psychological intervention successfully enhanced sexual function among female cancer patients.
Fladeboe et al. 2020	Sexual Activity and Substance Use Among Adolescents and Young Adults Receiving Cancer Treatment: A Report from the PRISM Randomized Controlled Trial	To describe the prevalence of sexual activity (including dating, current sexual activity, and contraceptive use) and substance use (such as alcohol, tobacco, illicit drugs, and the influence of family and friends who use drugs).	Randomized Controlled Trial (RCT)	92 AYA Patients	Oncology	Young adults engaged in most behaviors more frequently than adolescents (e.g., 48% versus 12% for alcohol at baseline); males were more likely to be sexually active compared to females (e.g., 20% versus 5% sexually active at baseline); and adolescents and young adults (AYA) with no cancer (NC) exhibited higher engagement in most behaviors compared to those with advanced cancer (AC) (18% versus 0% sexually active at baseline).

Mohamad Muhit et al. 2022	Sexual among Cancer Descriptive Sectional Malaysia	Dysfunction Gynecological Survivors: A Cross- Study in	To identify factors influencing sexual dysfunction among gynecological cancer survivors in Malaysia.	Cross Sectional	116 Participants
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The most dominant sexual dysfunction problem experienced was sexual dissatisfaction, accounting for 68.1%. In this study, sexual dysfunction was most strongly associated with lower levels of education. Combination therapy with surgery and radiotherapy, as well as combination therapy with surgery and chemotherapy, was considered a cause of sexual dysfunction among participants. Gynecological cancer survivors with lower levels of education, non-Malaysian ethnicity, and those receiving combination therapy with surgery-radiotherapy or surgery-chemotherapy have a higher risk of developing sexual dysfunction.

The review analyzed 10 studies comprising 3 randomized controlled trials (RCTs), 1 quasi-experimental study, and 6 cross-sectional studies. Cross-sectional and quasi-experimental studies were evaluated using the Joanna Briggs Institute (JBI) appraisal tool, while RCTs were assessed via the Critical Appraisal Skills Programme (CASP) framework. Collectively, these studies identified effective interventions for addressing sexual health challenges in cancer patients.

Two studies described the necessity of nurse-led interventions for cancer patients experiencing sexual health problems ([Suvaal et al., 2021](#); [Cihan & Vural, 2024](#)). The interventions in question fall under the category of psychosexual support ([Suvaal et al., 2021](#)) indicating that, following gynecological cancer treatment, psychosexual support should include interventions targeting motivational and sexual function issues. These interventions should involve the patient's partner and be structured as concise, practical, and accessible sexual rehabilitation programs. Ideally, such programs would combine psychoeducation with cognitive and psychosexual components to improve adherence to

dilator use and enhance sexual function. Nurse-led perioperative counseling reduced patients' unmet needs and improved overall quality of life by decreasing symptom burden ([Cihan & Vural, 2024](#)).

A previous study found that only a small proportion of patients (20% of males and 11% of females) reported and discussed their sexual issues with medical and nursing teams ([Almont et al., 2019](#)). It highlights a lack of sexual health discussions within oncology care and underscores the urgent need for personalized sexual rehabilitation, particularly for rectal cancer patients and those experiencing fecal incontinence. Similarly, a need for appropriate medical and nursing interventions to improve the quality of life and sexual satisfaction among women undergoing surgical treatment for breast cancer and their partners ([Martins et al., 2022](#)). Emotional and sexual counseling during treatment should involve partners, and healthcare providers must prioritize factors such as time since surgery, current treatment, relationship satisfaction, anxiety, depression, and body image. It is essential to address changes in body image and sexuality with both patients and their partners.

Both studies underscore the need for interventions to address sexual health issues in cancer patients. [\(Kulkarni et al., 2022\)](#) reported that Female Sexual Function Index (FSFI) scores in the intervention group improved significantly following psychological intervention, whereas no significant changes were observed in the control group. This finding indicates that psychological interventions can effectively enhance sexual function among female cancer patients.

Additionally, two studies demonstrated that psychoeducational interventions help address sexual problems experienced by cancer patients [\(Muhit et al., 2022; Fagerkvist et al., 2024\)](#). The researchers implemented the web-based psychoeducational intervention Fex-Can Sex among 142 cancer patients and found that the intervention group experienced improvements compared to controls, including reductions in vaginal dryness and

emotional distress [\(Fagerkvist et al., 2024\)](#). Some participants in the intervention group reported increased understanding and acceptance of their sexuality issues. [\(Muhit et al., 2022\)](#) highlighted that sexual dysfunction was most strongly associated with lower levels of education, indicating the need for sexual psychoeducation-based interventions for these patients.

[\(Fladeboe et al., 2020\)](#) described the influence of social environment on the sexuality of cancer patients, including sexual activity (dating, current sexual activity, contraceptive use) and substance use (alcohol, tobacco, illicit drugs, and the influence of family and friends who use drugs). Findings of a study reinforced that social support is an independent factor associated with sexual dysfunction among respondents [\(Obora et al., 2022\)](#)

DISCUSSION

Sexuality is a central aspect of a human being, encompassing sex, gender identity and role, sex orientation, intimacy, eroticism, pleasure, and reproductive function. Sexuality is experienced and also expressed through human thoughts, their fantasies, desires, attitudes, values, beliefs, behaviors, roles, and relationships. Although sexuality can encompass all these dimensions, in reality, it is not always like that. Sexuality is indeed influenced by the interactions of psychological, biological, social, economic, cultural, political, ethical and legal, historical, religious, and spiritual factors. Cancer has a direct impact on sexual function through the nature of the disease and its treatment. Additionally, it can have indirect effects, such as changes in body image or self-perception, and alterations in relationships resulting from the cancer or its treatment. Following a cancer diagnosis, more than 60% of cancer patients experience long-term sexual dysfunction, including sexual function, sexual relationships, and sexual identity. It can be a direct consequence of treatments for certain types of cancer, such as reproductive organ cancers, or indirect consequences of treatments for other types of cancer. Despite the soaring incidence of sexual dysfunction among cancer patients, this issue has received relatively little attention and management

from medical and nursing professionals. This neglect can significantly impact the quality of life for cancer patients.

Cancer patients often experience sexual dysfunction and psychosexual issues as a consequence of their diagnosis and treatment. Challenges such as the change of body image, loss of sexual function, and alterations in relationships with partners represent significant hurdles faced by cancer patients. Therefore, psychosexual support is crucial for helping cancer patients navigate these difficulties. This support may include the provision of psychosexual interventions, as indicated by research [\(Cihan & Vural, 2024; Kulkarni et al., 2022; Suvaal et al., 2021; Zhang et al., 2020\)](#), which has found that psychosexual support effectively enhances the quality of life and sexual function of cancer patients. This support may also involve psycho-education regarding changes in sexual function due to cancer and its treatment, as well as cognitive-based interventions to address body image issues, motivation, and sexual function.

Sexuality psycho-education is an essential need for cancer patients, as they often possess limited knowledge about how cancer and its treatments can affect sexual function. Many patients experience

confusion and uncertainty regarding how to address emerging sexual issues. Furthermore, cancer and its therapeutic interventions can lead to various physical changes, such as hormonal problems, sexual dysfunction, and alterations in appearance. These changes can also impact patients' body image, self-esteem, and sexual function on a psychological level. Consequently, coping strategies are necessary; cancer patients require psycho-education to learn effective coping and adaptation strategies to confront the sexual challenges posed by their illness and its treatment. Research findings indicate that psychoeducation is effective in assisting cancer patients in maintaining or restoring sexual function ([Fagerkvist et al., 2024](#); [Kulkarni et al., 2022](#); [Suvaal et al., 2021](#)), and individuals with a lower level of education have a higher risk of developing sexual dysfunction ([Muhit et al., 2022](#)). Additionally, findings from Fagerkvist et al. (2024) suggest that the utilization of technology can significantly enhance the delivery of web-based psychoeducation, making psychosexual interventions more effective and efficient for cancer patients.

Open communication about sexuality can assist patients in accepting and adapting to the changes they experience. It is crucial for enabling patients to seek solutions to maintain intimacy with their partners. Many cancer patients report feelings of anxiety and stress related to changes in their sexual function. Studies indicate that sexual communication can help alleviate anxiety and stress among cancer patients by providing appropriate information, support, and coping strategies. ([Almont et al., 2019](#)) and [Martins et al., 2022](#)). Open sexual communication can enhance patient

adherence to treatment and rehabilitation concerning sexual issues, thereby maximizing the effectiveness of therapy. Sexual problems can have serious repercussions on patients' relationships with their partners. Effective sexual communication can facilitate mutual understanding, adaptation, and the maintenance of intimacy within relationships ([Martins et al., 2022](#)). Thus, open and effective sexual communication is a vital necessity for cancer patients to address sexual issues, adapt to changes, preserve intimacy, and improve their quality of life.

Social support plays a significant role in the sexual aspects of cancer patients' lives. For example, previous studies found that social support is essential for cancer patients to cope with feelings of isolation and loneliness ([Kulkarni et al., 2022](#); [Martins et al., 2022](#); and [Obora et al., 2022](#)). Cancer patients often experience isolation and loneliness due to changes in sexual function and body image. Social support can help mitigate these feelings and enable patients to remain connected with those around them. A study confirms that in the group of adolescents and young adults (AYAs) with cancer, they continue to engage in developmentally normative behaviors, such as exploring their sexuality and experimenting with substance use ([Fladeboe et al., 2020](#)). It suggests that healthcare providers must be consistently prepared to address and discuss these needs with their patients. Furthermore, social support can facilitate self-acceptance, as support from family, friends, and peer support groups can assist cancer patients in coming to terms with the changes they experience, including sexual issues. This support is crucial for restoring self-confidence and improving body image.

CONCLUSION

Cancer and its treatments can induce a variety of psychological and physical changes that have a significant impact on the sexual function of cancer patients. The sexual health-related needs of cancer patient, including psychosexual support, sexuality psycho-education, sexual communication, and social support, are essential for addressing sexual issues, adapting to changes, maintaining intimacy, and enhancing their quality of life. These needs represent critical aspects that must be

comprehensively addressed in the management of cancer patients to improve their quality of life. Several recommendations from the authors regarding this research are that future studies should utilize a larger sample size to explore the specific sexual health-related needs of cancer patients more comprehensively. The implementation of a holistic approach to managing cancer patients' issues should involve a multidisciplinary team (including oncologists,

nurses, sex therapists, and counselors) to provide comprehensive support for the sexual health concerns of cancer patients.

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