IDENTIFYING THE PHYSICAL, SOCIAL AND PSYCHOLOGICAL EFFECTS OF BREAST CANCER ON THE QUALITY OF LIFE OF YOUNGER WOMEN: A CRITICAL REVIEW OF THE LITERATURE

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The aim of this review was to examine the unique impact of breast cancer on the quality of life of young breast cancer survivors, under the age of 50, with a particular focus on sexual functioning.

INTRODUCTION

- Young breast cancer survivors (YBCS) face numerous age-specific challenges including increased likelihood of advanced disease, intense treatments and increased symptoms which negatively influences sexual functioning and subsequent quality of life (QOL).
- Sexual functioning is a recognised, long-term problem for YBCS and the prevalence and severity of dysfunctions depends on physical, psychological and social factors (1, 2, 3, 4, 5).

SEXUAL FUNCTION AND THE PHYSICAL EFFECTS

- 52% of sexually active women reported having problems with sexual functioning (2).
- Scars; breast disfiguration; treatment-induced menopause; hair loss; weight gain/ loss; vaginal dryness; fatigue and reduced nipple sensitivity are common physical effects from treatments, which impact on sexual functioning and QOL (1, 2, 6, 7).
- Menopause was identified as a problem with 66.6% of YBCS, 36.5% of age controls and 99.5% of older survivors (8). This confirms that menopause is treatment-related, particularly in YBCS after chemotherapy and/or hormone therapy (4, 6). YBCS experience high levels of stress due to the abrupt effects of menopause which negatively impacts on their QOL (9, 10, 6, 3).
- In one study out of nearly two-thirds of YBCS who had stopped menstruating post-treatment, 76% had received chemotherapy (2). YBCS who were sexually inactive were also more likely to have stopped menstruating (4).
- Symptoms of natural menopause were less severe resulting in a gradual decline of sexual activity over 5-10 years with minimal sexual problems in comparison to treatment-related menopause which had a profound effect on sexual and psychosocial functioning in sufferers (6, 7, 10).
- A definitive link between surgery and reduced sexual functioning was not found, however, an intrinsic link between surgery, negative body image and sexual problems for YBCS was noted.
- Menopause and vaginal dryness was identified as a common side effect of hormone therapy which were indirectly linked to lower sexual activity (6, 8).
- Radiotherapy had a less detrimental effect on YBCS's sexual activity and QOL with mainly short-term effects (6).
- In practice clinicians recommend multi-modality treatments, therefore, it is important to understand the effects these treatment combinations have on sexual functioning (11). Table 1 illustrates the negative effect radiotherapy, hormone therapy, chemotherapy and lumpectomy has on sexual satisfaction and sexual functioning (12).

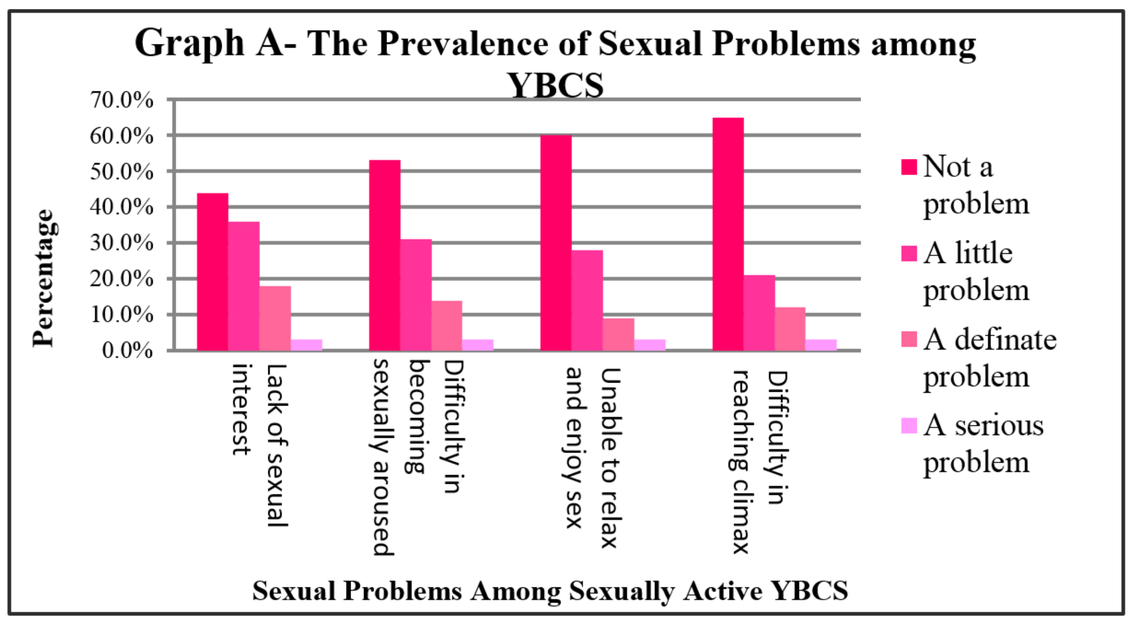
Table 1 Prevalence of Female Sexual Dysfunction Index Domains, Overall FSD and Patients' Satisfaction with their Sex Lives for Three Different Treatment Regimes
(Data extracted from Table 3 in Safarinejad et al, 2013 (12)

	FSFI Domains													
	Desire Domains		Arousal Domains		Orgasm Domains		Pain Domains		Lubrication Domains		Satisfaction Domains			
Variables	N	%	N	%	N	%	N	%	N	%	N	%	**FSD (%)**	**Satisfaction with Sex Life (%)**
RT+CT *	57	28	51	25	60	29	62	30	63	31	59	29	44.6	50
CT+HT *	49	42	35	30	47	41	42	36	64	55	62	53	46.2	47
RT+CT+HT *	18	53	17	50	19	56	20	59	22	61	20	59	66.7	41

Percentages in red highlight poorer sexual functioning.
*** Including lumpectomy surgery.**

SEXUAL FUNCTIONING AND THE PSYCHOLOGICAL EFFECTS

- A positive correlation has been identified between body image issues and sexual dysfunction, with as many as 31-67% of YBCS experienced body image problems post-treatment (7).
- These problems often occurred as a result of loss or deformities of the breast, hair loss and weight gain or loss (6, 10, 3).
- Higher body image and QOL was linked to less extensive surgical procedure used.
- Younger women's psychological wellbeing was more negatively affected by loss of or deformities to the breast post-operatively (6). Younger women are at a key developmental stage in their lives where these scars and disfigurements result in feelings of self-consciousness and low body image. In turn this reduces sexual activity and disrupts YBCS's psychosocial development, such as finding a partner, marital satisfaction or having children (10).
- YBCS are more susceptible to the damaging effects of low body image due to today's social and cultural norm for perfection in physical appearance (13).
- Reduced body image was linked with women feeling less feminine, embarrassed about their bodies and concerned about sexual attractiveness (2). This resulted in a reluctance to participate in sexual activity, inability to relax during sex, poor arousal and reduced occurrence of orgasms (Graph A).
- Chemotherapy-related body image issues were challenging for YBCS, with over one-third distressed by weight loss/gain and half experiencing hair loss (2).
- These side-effects increased anxiety and negatively affected YBCS's sense of sexual attractiveness (3, 10, 2).



SEXUAL FUNCTIONING AND THE SOCIAL EFFCTS

- For younger women, sexual functioning and social wellbeing during the cancer journey can be impacted by the quality of their relationships (9, 10, 8, 6, 7, 2).
- Intimate relationships can become vulnerable after diagnosis, with survivors reporting poorer marital and family functioning compared to healthy women (7, 8, 9).
- 41% of YBCS reported their sexual relationship changed for the worse and 40% indicated a reduction in sexual enjoyment with their partner after diagnosis (8).
- Among other factors, relationship issues contributed to decreased libido and many couples found that their anticipation of pain lead to poor arousal and feelings of failure which discouraged them from further sexual activity (6, 5, 7).
- The perceptions YBCS have of their spouses' reactions to their disfigured body, post-treatment, is influential on their relationship, sexual functioning and psychosocial wellbeing (4). YBCS worry about rejection, loss of their partner and inability to partake in intercourse (10, 6).
- Sexual functioning plays a crucial role in relationships during this period of development, where life partners are chosen and families established (6, 7).
- On the contrary, one study found 49% of relationships improved post-diagnosis (8). YBCS with strong relationships often found that breast cancer brought them closer together and aided the recovery of sexual functioning with increased emotional intimacy and effective communication. (10).
- Breast cancer also has a social impact in young, single women and effects sexual functioning making finding a partner was difficult, especially where disfigurement from treatment resulted in low self-esteem and feeling less desirable, feminine and attractive (10, 9, 2,6).

SUMMARY AND CONCLUSIONS

- When compared with the general population, breast cancer survivors have poorer QOL in physical, psychological, and social domains and sexual functioning has been identified as a long-term problem for YBCS influenced by these QOL domains.
- YBCS are more likely to experience reduced QOL, than older survivor, due to their age, developmental life stage and the increased likelihood of aggressive tumours coupled with the frequent need for intense treatment regimes.
- Around half of sexually active YBCS experience sexual problems as a result of adjuvant treatments and their physical side effects.
- Early menopause is a common side effect which has a greater detrimental impact on younger women and negatively influences sexuality.
- Symptoms of treatment-related menopause are more severe than those of natural menopause, resulting in greater psychological distress, an abrupt decline in sexual activity and reduced QOL in YBCS.
- Multi-modality treatments have the greatest detrimental impact on sexual function, sexual satisfaction and consequent QOL in YBCS due to the combined side effects.
- Post-treatment body image problems presented as psychological issues in 31-67% of YBCS as a result of the physical changed to their bodies post-treatment causing them to feel less feminine, embarrassed about their bodies and concerned about sexual attractiveness; often resulting in sexual problems and reduced sexual activity.
- YBCS are more susceptible to the harmful effects of low body image due to increased pressure on their generation to conform to social and cultural norms of perfection.
- Many YBCS identified that their sexual relationship changed for the worse post-diagnosis due to being less resilient to the damaging effects of the cancer journey.
- Sexual activity is an integral part of relationships at this age and disruptions to their sexual functioning during treatment can damage relationships.
- Some YBCS, with stronger relationships pre-diagnosis, found that breast cancer brought them closer together and supported the recovery of sexual functioning.
- For YBCS who are single finding a partner is made difficult with reduced body image resulting from disfigurement and scars.

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