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Sexual Self-Esteem and Psychosocial Functioning in Military Veterans After Cancer

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Abstract

Little is known about the sexual well-being of male Veteran cancer survivors, or the relationship of sexual concerns to psychosocial adaptation postcancer. This study examined the association between sexual self-esteem and psychosocial concerns in male Veteran cancer survivors. Forty-one male survivors were recruited from a Veterans Affairs (VA) hospital to participate in a pilot study addressing cancer survivorship care for Veterans. Sixty- to 90-minute interviews were conducted, assessing sociodemographic, medical, stress/burden (cancer-related posttraumatic stress disorder [PTSD], depression), and resource (social support, post-traumatic growth) variables. Twenty-one (51.2%) Veteran cancer survivors reported lowered sexual self-esteem as a result of cancer, which corresponded to significantly higher levels of depression and cancer-related PTSD. The lowered sexual self-esteem group also indicated significantly lower social support. Veteran cancer survivors with lowered sexual self-esteem tend to have higher levels of stress and lower levels of resources, putting them at risk for lowered quality of life. This increased risk highlights the importance of addressing sexual well-being in the survivorship care of Veterans.

Keywords

veteran; sexual self-esteem; cancer; survivorship; psychological distress

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INTRODUCTION

There has been a general shift in cancer care toward an emphasis on long-term and late-effects management (Ganz, Casillas, & Hahn, 2008). Most therapeutic modalities for cancer are associated with a range of physical, psychological, and relational complications that present differentially across survivorship, varying by cancer site, treatment, and a myriad of individual characteristics (Aziz, 2007; Stein, Syrjala, & Andrykowski, 2008). Much of the long-term and late-effects literature has focused on breast cancer survivors and frequently examines fatigue, depression, and anxiety symptoms—leaving much to be learned about the prevalence, duration, severity, and impact of other symptoms for survivors across all types of cancers (Harrington, Hansen, Moskowitz, Todd, & Feuerstein, 2010). It is imperative to better understand these symptoms across survivor populations as many continue to struggle with quality-of-life issues, such as fatigue, pain, poor sleep, cognitive decline, depression, anxiety, relationship issues, and sexual functioning (Alfano & Rowland, 2006; Harrington et al., 2010; Monga, 2002).

Sexual Health and Well-Being Among Cancer Survivors

Sexual well-being is increasingly recognized as integral to the quality of life of cancer survivors, with the majority of the studies focusing on breast, prostate, and gynecological cancer populations (Harrington et al., 2010). Much of this literature is concerned with sexual dysfunction, such as dyspareunia, erectile dysfunction, or low desire in men and women (Syrjala et al., 2000). Others have defined a wider range of symptoms including body image, sexual self-esteem, and disruptions in intimate relationships (Andersen, Woods, & Copeland, 1997; Pelusi, 2006; Schover et al., 2002). Numerous interrelated factors can affect sexuality in survivors, including treatment type, cancer site, comorbid physical and mental health conditions, and various intra- and interpersonal factors (for a detailed discussion of the sexual late effects of cancer, see Mercandante, Vitrano, & Catania, 2010; Sadovsky et al., 2010; Tierney, 2008).

Up to 90% of breast cancer patients (Dizon, 2009), 85% of prostate cancer patients (Schover et al., 2002), and 40% to 100% of gynecological cancer patients (Audette & Waterman, 2010) experience adverse sexual effects related to cancer and its treatment. Furthermore, sexual concerns are known to persist in prostate, gynecological, and breast cancers for at least 5 years (Harrington et al., 2010) and up to 27 years (Lindau, Gavrilova, & Anderson, 2007). Although much focus has been on sexual dysfunction as opposed to psychosexual variables (e.g., sexual self-esteem), some researchers have addressed broader sexual concerns such as body image and sexual self-esteem in breast and gynecological cancer survivors (Andersen et al., 1997; Gilbert, Ussher, & Perz, 2011; Henson, 2002; Pelusi, 2006). Unfortunately, the literature on the psychosexual impact of cancer on male survivors continues to lag behind.

Cancer Survivorship in Military Veterans

Military Veterans represent a substantial and unique subpopulation of cancer survivors. Numbers of survivors in the aging Veteran population are also rising with approximately

35,000 new cases of cancer cited by the Department of Veterans Affairs (VA) yearly—corresponding to more than 500,000 survivors—with higher prevalence of prostate, skin (nonmelanoma), and colorectal cancers (U.S. Department of Veterans Affairs, 2003). Veteran survivors tend to be older, male, and have unique risk factors for particular cancers, such as hematologic, respiratory, and genitourinary cancers due to herbicide (“Agent Orange”) and other military-related noxious exposures (Moye, Schuster, Latini, & Naik, 2010; U.S. Department of Veteran Affairs, 2009).

The current literature on Veteran cancer survivors is limited to a small number of studies on prostate and colorectal cancer patients (Cooperberg et al., 2003; Hynes et al., 2010; Jackson et al., 2010), providing limited knowledge about the experience of Veteran survivors and the services and resources needed to facilitate adaptation to life postcancer. Although Veteran survivors share characteristics and experiences with the general population that likely predispose them to similar posttreatment effects (e.g., fatigue, pain, sexual dysfunction), they also have distinctive characteristics—combat experiences, older age, higher rates of comorbid physical and mental conditions (e.g., posttraumatic stress disorder [PTSD])—that may affect treatment and adjustment to cancer-related effects (Moye et al., 2010). Providers of physical and mental health services in the VA health care system are tasked with caring for these aging Veteran survivors, and a better understanding of how these distinctive issues affect Veteran survivors is needed to better equip clinicians in providing informed survivorship care.

Sexual Health and Well-Being Among Veteran Cancer Survivors

Sexual health and well-being in Veterans—and specifically Veteran cancer survivors—is largely understudied, outside of a small number of studies on erectile dysfunction (ED) in the prostate cancer literature (Knight et al., 2007). Given the predominance of physical and mental health comorbidities and prevalence of cancers that are highly associated with sexual functioning in male Veterans, it is likely that sexual concerns are widespread in this population. Yet we know very little about the psychosocial impact of postcancer sexuality in male Veterans, such as the level of adaptation to sexual concerns or the level of distress that it may engender. As in the general population of male survivors, Veterans likely also experience distress related to sexual changes, which may interact with other psychosocial factors and exacerbate the challenges of adjustment after cancer treatment. For example, Veterans may experience psychosexual concerns—such as changes in masculinity and body image, lowered sexual self-esteem—that often coincide with physical changes in sexual functioning such as ED and low desire. Understanding the impact of sexual changes after cancer may assist Veterans and providers in navigating their posttreatment cancer care. The purpose of this exploratory study was to investigate the relationship between changes in sexual self-esteem and psychosocial adaptation in Veteran cancer survivors.

METHOD

Participants

Participants consisted of 41 male Veterans, 18 of whom reported combat exposure. Mean age was 65.39 years ($SD = 10.09$). The majority of the sample was White (82.9%), Catholic

(43.9%), and had completed some college or higher (68.3%). Thirteen participants (31.7%) were diagnosed with genitourinary (prostate, bladder, kidney) cancers, 9 (21.9%) with digestive (esophageal, gastric, colorectal), 6 (14.6%) with lung, 7 (17%) with blood, and 6 (14.8%) with other cancers. Treatment regimen consisted of surgery ($n = 27$, 65.9%), chemotherapy ($n = 16$, 39%), radiation therapy ($n = 14$, 34.1%), with 14 Veterans (34.1%) reporting more than one treatment. Mean time since treatment was approximately one year ($M = 12.61$ months, $SD = 11.12$, range 0–42 months). For complete sociodemographic and cancer data, see Table 1.

Procedures

Advertising flyers were placed in VA Boston hospital waiting rooms, and letters were sent to Veterans identified through the VA Boston Tumor Registry. Those who expressed interest were contacted by the research coordinator and screened for the following inclusion criteria: cancer diagnosis, completed treatment within the past 36 months, and no evidence of dementia or psychosis.

Following their final cancer treatment, Veterans completed a 60- to 90-minute in-person interview and were compensated for their time. Data gathered included sociodemographic, health care, coping, and cancer-related variables (i.e., cancer type, treatment, and time since treatment). In addition, standard measures were administered for cancer-related PTSD, depression, post-traumatic growth, and health-related quality of life.

Measures

Perceived sexual attractiveness, a measure of sexual self-esteem, consisted of a single item with a *yes* or *no*, response: “Have you been feeling less sexually attractive as a result of cancer?”

Posttraumatic Checklist–Civilian–Cancer-Related (PLC-C-CR) (Andryk-owski, Cordova, Studts, & Miller, 1998) is a 17-item measure of cancer-related PTSD adapted from the PTSD Checklist–Civilian (Weathers, Litz, Huska, & Keane, 1994). Each item was amended, referring to cancer as the traumatic event. For example, a reexperiencing item reads, “Repeated, disturbing memories, thoughts, or images of cancer, your diagnosis, or treatment?” Participants indicate how much they have been bothered by each symptom over the past 4 weeks using a 5-point Likert-type scale ranging from 1 (*not at all*) to 5 (*extremely*). A cutoff score of 50 signified cancer-related PTSD, with a diagnostic sensitivity and specificity of .60 and .99 in a sample of breast cancer survivors.

Beck Depression Inventory–Primary Care (BDI-PC) (Beck, Guth, Steer, & Ball, 1997) is a seven-item rapid screening instrument for depression designed for use with medical patients. Items ask about sadness, pessimism, past failure, anhedonia, self-dislike, self-criticalness, and suicidal thoughts or wishes experienced in the “past 2 weeks, including today.” Each item is rated on a 4-point scale ranging from 0 to 3 with a cutoff score of 4 having the highest sensitivity and specificity in various medical populations.

Fatigue was measured by asking “On a scale of 0–10, with 0 being no fatigue, and 10 being as bad as you can imagine, what is your level of fatigue now?”

Perceived social support is a composite score that consisted of two items concerning emotional support received from (1) the patient's family and friends and (2) the VA Medical Center where the patient received care. Both items were scored on scale from 0 to 4, with 0 (*the worst care possible*) and 4 (*the best care possible*).

Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996) is a 21-item measure of the degree of positive changes experienced after a traumatic event. For this study, the orienting statement read, "For each, tell me how much you changed because of cancer." Responses are on a 5-point Likert-type scale, that ranged from 0 (*not at all*) to 5 (*very much*), with higher scores corresponding to greater change as a result of the trauma. Satisfactory psychometric properties have been reported, with Cronbach's alpha ranging from .90 to .96 for the total scale.

Statistical Analysis

Descriptive statistics were calculated for sociodemographic, cancer, risk, and resilience variables. Chi-squares were used when examining differences in sexual attractiveness among categorical variables with odds ratios for effect size, and *t* tests were used when examining differences for continuous variables with effect sizes computed using eta squared.

RESULTS

Sexual Self-Esteem—Sociodemographic and Cancer-Related Variables

Descriptive statistics for relevant sociodemographic and cancer-related variables are provided in Table 1. Consistent with what is known about sexual changes and cancer, respondents with lower sexual self-esteem since cancer ($n = 23$, 50%) were younger, $t(45) = 3.83$, $p < .001$, $\eta^2 = .25$, and reported significantly higher levels of fatigue than those who did not perceive a change in sexual self-esteem, $t(30) = -3.59$, $p < .01$, $\eta^2 = .22$. Further analysis of the effect of sociodemographic and cancer variables on sexual self-esteem were not conducted at this time due to limited sample size and statistical power.

Sexual Self-Esteem—Stress/Burden and Resource Variables

Veterans with lowered sexual attractiveness—lowered sexual self-esteem—after cancer had significantly more psychological stress and burden overall, when compared with their counterparts (see Table 2). For example, they had significantly higher levels of cancer-related PTSD, $t(39) = -3.22$, $p < .01$, $\eta^2 = .21$, with 21% of the variance in cancer-related PTSD being explained by lowered sexual attractiveness. Of note, this difference was clinically significant as well with lowered sexual attractiveness signifying more cases of cancer-related PTSD in male Veterans, $\chi^2(1) = 7.52$, $p < .01$, odds ratio (OR) = 13.5, 95% confidence interval (CI) [1.51, 120.78]. Additionally, Veterans in the lowered sexual attractiveness group had significantly higher levels of depression, $t(39) = -2.32$, $p = .03$, $\eta^2 = .12$, with 12% of the variance in depression explained by lowered sexual attractiveness. In addition, the mean score for the lowered sexual attractiveness group ($M = 5.43$) was above the clinical cutoff for depression (cutoff = 4.0), signifying a clinically significant difference as well. Taken together, these results illustrate the additional psychological stress and

burden associated with lowered sexual self-esteem in this sample of male Veteran cancer survivors.

With regard to the impact on resources, male Veterans with lowered sexual attractiveness also reported less satisfaction with the emotional support received from the VA and their friends and family, $t(27) = 4.31, p < .001, \eta^2 = .41$, with 41% of the variance in perceived social support being explained by lowered sexual attractiveness. Contrary to expectations, there were no significant differences between groups concerning posttraumatic growth (see Table 2). Therefore, lowered sexual self-esteem in male Veteran survivors was related to changes in interpersonal resources (less satisfaction with social support) and did not appear to impact intrapersonal resources (psychological growth).

DISCUSSION

The majority of the literature on psychosocial and psychosexual adaptation to cancer has focused on women, primarily breast and gynecological cancers. Of the few studies on the psychosexual impact of cancer on males, there has been a notable lack of information about male Veterans, who arguably have unique experiences that may set them apart from the general population of male survivors. As a preliminary study, the overall aims were to establish if sexual self-esteem concerns are a common experience for a sample of male Veteran survivors and if these concerns are related to their psychosocial adaptation post-cancer. In this sample, approximately one of every two male Veterans reported having lowered sexual self-esteem (sexual attractiveness), suggesting it is a frequent postcancer experience for this sample. It is unclear whether this is comparable to rates of lower sexual self-esteem in the general Veteran population, as there are no studies available that document the psychosexual experiences of Veterans. To illustrate, a PubMed search of title and abstract with the search terms *Veteran* and *sexual self esteem* or *sexual well-being* or *sexual quality of life* or *psychosexual* produced no results.

Additionally, in this study, psychosexual change postcancer was reported more often in younger aging male Veterans (i.e., in their early sixties) than their older counterparts, which may seem to contradict the positive relationship between aging and sexual dysfunction. However, this finding is consistent with research on adult female breast cancer survivors who reported greater distress as a result of sexual and reproductive dysfunction than older adult female breast cancer survivors (Ganz, Greendale, Peterson, Kahn, & Bower, 2003). Thus illustrating that sexual dysfunction may be more impactful for younger cohorts of adult survivors.

This study also demonstrated that psychosexual changes after cancer were associated with poorer psychosocial adaptation, resulting in significantly more psychological stress and burden and lowered emotionally supportive resources. These findings are consistent with the model of psychological health in cancer survivors put forth by Andrykowski, Lykins, and Floyd (2008) in which the psychological response to cancer is a result of the ability to balance two components: (1) stress and burden and (2) resources. According to this model, to have an adaptive response—one that sustains psychological health—the survivor's stress and burden needs to be equalized by actualizing the intrapersonal, interpersonal, tangible,

and informational resources in his life (e.g., inner strength, social support, etc.). For our sample of male Veterans, the stress and burden factors were psychological (depression, cancer-related PTSD), and some with the added burden of lowered sexual self-esteem. Resources that were impactful were interpersonal in nature and included social support from their friends, family, and health care system, which appeared to be less effective for those Veteran survivors with lowered sexual self-esteem. Overall, lowered sexual self-esteem may have “tipped the scales” toward stress and burden, and this imbalance may have resulted in psychologically maladaptive responses to cancer, as opposed to psychological growth and adaptation.

IMPLICATIONS AND PRACTICAL APPLICATIONS

The results of this study suggest that male Veteran cancer survivors who experience psychosexual concerns also have difficulties with psychosocial adaptation to cancer. However, given the preliminary nature of this study and the small sample of Veterans that were assessed, this area needs to be further studied. If further evidence confirms our findings, addressing potential and established sexual concerns with Veteran patients as a part of their survivorship care may be warranted. These findings may be particularly relevant for professionals who also address mental health concerns, given the accumulating evidence that sexual and mental health symptoms frequently co-occur and are associated with overall adjustment (Andrykowski et al., 2008; Carpenter, Andersen, Fowler, & Maxwell, 2009; Dizon, 2009; Stein et al., 2008).

For providers who serve aging cancer survivors in the VA system, it may be useful to inquire about their sexual functioning. Given that sexuality is a sensitive topic the provider may wish to normalize the issue prior to asking about sexual concerns. For example, stating “Many of the patients I see with cancer experience changes in their sexual and intimate lives. Have you noticed any changes?” may be a useful way to begin a dialogue about survivors’ potential concerns. Continued monitoring and care for psychosexual issues may also be needed, as it is unclear when they may develop in the survivorship trajectory and how long they persist.

LIMITATIONS

This was a cross-sectional study conducted with a small convenience sample. The results have limited generalizability due to small sample size and overrepresentation of White, middle-class, educated males in the sample. Also, the ability to address additional variables of interest in the analyses was limited due to low power. Studies with larger sample sizes would allow for consideration of key covariate and moderating variables such as cancer type, treatment type, self-rated health, and others. Measurement limitations were also present with sexual self-esteem represented by a single, dichotomous question whereas a multidimensional measure of sexual self-esteem is likely a more valid method of demonstrating psychosexual concerns.

FUTURE DIRECTIONS

Examining Veteran survivor sexual health and well-being is a burgeoning field of study, and it should incorporate the effects of cancer and other physical health variables that have been known to affect sexuality in the general population of survivors, such as cancer type and physical comorbidities. Although this study provides preliminary evidence that male Veteran cancer survivors who experience psychosexual concerns also have difficulties with psychosocial adaptation to cancer, replicating these findings with a larger sample size that is more representative of the diverse military Veteran population (e.g., race/ethnicity, socioeconomic status, disability status) is warranted. Additional recommendations include conducting a longitudinal study across the survivorship trajectory to establish a temporal association between distress, support, and sexual self-esteem factors as well as examining a wider spectrum of sexual variables, such as physical functioning (e.g., erectile dysfunction), sexual well-being (e.g., satisfaction, valued intimacy), and relationship factors (e.g., premorbid sexual and intimate experiences). This area of research is particularly relevant for mental health providers working within the VA health care system, who provide care to and facilitate resources for aging Veterans, for whom cancer is a common experience. A better understanding of the intersection between sexuality and psychosocial functioning in Veteran cancer survivors will help to facilitate comprehensive care postcancer.

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TABLE 1

Sociodemographic and Cancer-Related Variables by Sexual Self-Esteem

	Feeling Less Sexually Attractive ^a (<i>n</i> = 21)	No Less Sexually Attractive ^a (<i>n</i> = 19)
Age (<i>M</i> , <i>SD</i>)	60.62 (7.49)	70.89 (10.23)
Spouse/Partner (<i>f</i> , %)		
Yes	7 (46.7%)	8 (53.3%)
No	9 (64.3%)	5 (35.7%)
Combat status		
Yes	10 (58.8%)	7 (41.2%)
No	11 (47.8%)	12 (52.2%)
Cancer type		
Blood	4 (57.1%)	3 (49.9%)
Gastrointestinal	9 (75%)	3 (25%)
Genitourinary	2 (22.2%)	7 (77.8%)
Lung	2 (33.3%)	4 (66.7%)
Other	5 (83.3%)	1 (16.7%)
Surgery	15 (57.8%)	11 (42.2%)
Received chemotherapy	8 (50%)	8 (50%)
Received radiation	9 (69.2%)	4 (30.8%)
Received more than one treatment	8 (61.5%)	5 (38.5%)
Time/months since treatment (<i>M</i> , <i>SD</i>)	13.48 (10.52)	10.42 (10.75)
Fatigue levels (<i>M</i> , <i>SD</i>)	6.09 (2.85)	2.54 (2.85)

^aSome percentages calculated using denominator less than stated total due to missing data.

TABLE 2

Mean Stress/Burden and Resource Variables by Sexual Self-Esteem

	Mean (SD)		<i>t</i> Value
	Feeling Less Sexually Attractive	No Less Sexually Attractive	
Stress/burden			
Cancer-related PTSD (PCL-C-CR)	41.19 (18.34)	25.58 (11.00)	-3.22**
Depression (BDI-PC)	5.42 (5.02)	2.32 (3.18)	-2.32*
Resources			
Posttraumatic growth (PTGI)	39.24 (19.39)	35.32 (17.47)	-.67
Emotional support	5.19 (1.94)	7.62 (0.65)	4.31***

PTSD = posttraumatic stress disorder; PCL-C-CR = Posttraumatic Checklist–Civilian–Cancer-Related; BDI-PC = Beck Depression Inventory–Primary Care; PTGI = Posttraumatic Growth Inventory.

*
 $p < 0.05$,

**
 $p < 0.01$,

 $p < 0.001$.