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Changes in Sexual Functioning and Mood Among Women Treated for Gynecological Cancer Who Receive Group Therapy: A Pilot Study

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This study examined changes in sexual functioning and mood disturbance among women who have been treated for gynecological cancer and who participated in a 12-week group intervention for psychosexual problems. The Changes in Sexual Functioning Questionnaire (CSFQ) assessed the sexual functioning, and the Profile of Mood States (POMS) assessed the mood disturbance of 19 women at baseline who completed follow-ups conducted posttreatment and three-month posttreatment. The results showed that the women improved significantly in their CSFQ total scores after being provided with the group therapy intervention at the posttreatment assessment ($p < .01$), and a statistical trend ($p < .10$) suggested continued improvement in CSFQ total scores at the three months posttreatment follow-up. Women's POMS total mood disturbance scores improved significantly at the posttreatment assessment ($p = .01$), but did not show significant improvement at the 3-month posttreatment follow-up. These results suggest that this group intervention achieved its main goal in treating sexual dysfunction as well as mood disturbance, but these improvements dissipated over time and may require further intervention in order to be maintained.

KEY WORDS: group therapy; gynecological cancer; sexual functioning; arousal; mood.

Medical literature on the psychosocial issues involved in the diagnosis and treatment of gynecological cancer is not extensive. However, since the 1980s, there has been an increased interest in the psychological and sexual problems that commonly follow cancer treatment, as well as the quality-of-life issues faced by gynecological cancer survivors (Andersen, 1985, 1987, 1993, 1994). Unfortunately, gynecological cancer can often exacerbate multiple psychosexual problems (Rieger, Touyz, & Wain, 1998); therefore, sexuality should be considered a critical health issue that has a profound impact on these women's quality of life (Butler, Banfield, Sveinson, & Allen, 1998).

Women who complete medical treatment for gynecological cancer contend with a host of challenges on the "journey" toward psychological and physical recovery (Auchincloss, 1995). Despite the fact that the sexual difficulties of gynecological cancer survivors are no longer a mystery, sexuality is still not considered an important determinant of quality of life for these patients (Butler et al., 1998). Consequently, the sexual outcomes following cancer diagnosis and treatment are often overlooked (Mantel, 1982; Thaler-DeMers, 2002). However, several studies have recently highlighted the presence of significant sexual problems in this patient population (Wenzel et al., 2002), and there is evidence that such problems are often experienced for prolonged periods of time (Molassiotis, Chan, Yam, Chan, & Lam, 2002; Thaler-DeMers, 2002).

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Although sexuality is significantly affected by the diagnosis and treatment of gynecological cancer, treatment procedures and protocol are typically viewed as a higher priority than sexual health. Derogatis (1980) states that the evidence suggests that, for many women, "the issue of sexuality is central rather than subordinate in their appreciation of cancer, and greatly affects fears about disease, the delay in seeking a diagnosis, and the course of response to treatment" (p. 1). Harris, Good, and Pollack (1982) asked recently diagnosed gynecological cancer patients what troubled them most and found that issues associated with their sex life were the most frequently mentioned area of concern.

Several controlled studies—both retrospective and longitudinal—document sexuality as an important life realm that undergoes major change for women with cancer (Andersen, Andersen, & deProsse, 1989; Bransfield, 1985; Schover, Fife, & Gershenson, 1989; Weijmar Schultz, Bransfield, Van de Wiel, & Bouma, 1992). Andersen (1985) found that 30–90% of all women with gynecological cancer experience significant sexual problems. The treatment of gynecological cancer can produce profound psychosexual disruptions including impairment of sexual behavior, sexual arousal, and sexual responsiveness (Lagana', McGarvey, Classen, & Koopman, 2001). Moreover, in a review of 44 posttreatment studies published since 1950, Weijmar Schultz et al. (1992) found consistent reports of women claiming a deterioration in sexual functioning after treatment for gynecological cancer. More recent studies have provided further evidence of the detrimental effect on sexual functioning (Bergmark, Avall-Lundqvist, Dickamn, Henningson, & Steineck, 1999; Cull et al., 1993).

Most women with gynecological cancer struggle with enormous changes in their bodies, such as the surgical removal of their ovaries, vagina, clitoris, and/or uterus; loss of sexual function or sensation; and/or disfigurement and scarring. Radiation and chemotherapy can lead to a hairless body, disruption of the menstrual cycle, and sterility (MacElveen-Hoehn & McCorkle, 1985). Given the profound changes to areas of the body that define sexuality, assessment of self-identity and sexual self-concept is important (Andersen & Hacker, 1983). As documented by Auchincloss (1995),

> "Women who have been treated for gynecological cancer often struggle with feelings of being flawed or defective for years after treatment. The losses are many and full of meaning for years after treatment. The grief is intense. The effort to rediscover a sense of self is difficult and takes a long time (p. 2119)."

Andersen, Woods, and Copeland (1997) explored the idea of sexual self-schema as a component of sexual self-concept that may be a determinant of sexual activity following onset and treatment of gynecological cancer. This study compared the sexual morbidity of gynecological cancer survivors and that of gynecologically healthy women. Andersen et al. found that a woman with a negative self-schema not only experienced lower levels of arousability and ultimate sexual activity, but also was also less likely to resume any level of sexual activity following treatment for gynecological cancer. Moreover, these researchers found that a woman's precancer sexual self-schema was one of the most important factors in her sexual adjustment after cancer diagnosis and treatment. This research suggests that preventive and rehabilitative interventions that allow health-professionals an opportunity to help female cancer survivors explore these issues are particularly important for women who held less positive views of their sexuality prior to diagnosis.

The possibility that psychosocial intervention can improve sexual functioning among women who have had gynecological cancer is suggested by evidence that the motivation to resume sexual functioning is evidently more important than the kind of physical impairment caused by cancer and/or its treatment (Weijmar Schultz, Van de Wiel, Hahn, & Wouda, 1995). A few treatment outcome studies have targeted the sexual needs of gynecological cancer survivors. Capone, Good, Westie, and Jacobson (1980) found that a brief (four sessions minimum) crisis intervention accelerated patients' return to normal sexual activity. Additionally, coping strategies improved among gynecological cancer survivors undergoing peer counseling with former patients (Houts, Whitney, Mortel, & Bartholomew, 1986). Cain et al., (1983) investigated the effectiveness of an eight-session intervention (administered individually or in a group format) with moderate-risk gynecological cancer patients. Their findings showed that, after 6 months, both interventions were related to lower anxiety and depression, as well as better psychosexual adjustment. Furthermore, individual sex therapy (administered between 2 and 10 or more times) has been found to enhance the maintenance of stable sexual functioning (Schover, Evans, & von Eschenbach, 1987). Moreover, gynecological cancer survivors treated with radiotherapy have benefited

from psychoeducational programs designed to increase compliance for regular use of vaginal dilation by emphasizing sexual information and behavioral skills training (Robinson, Faris, and Scott, 1999). Specifically, the authors found less fear about sex after radiotherapy among these patients. Halford, Scott, and Smythe (2000) tested a six-session individual and conjoint cognitive–behavioral intervention for couples living with breast cancer or gynecological cancer. The authors reported positive effects of the program on mutual support between partners.

As evidenced earlier, there are few treatment outcome studies that have focused on sexual functioning. Given the importance of interventions specifically focused on helping survivors of gynecological cancer to regain their sexual functioning, we conducted a preliminary study of a group therapy intervention targeting sexual functioning among gynecological cancer survivors. The aim of the intervention was to improve sexual functioning and reduce mood disturbance. To our knowledge, this is the first study specifically designed to investigate the possible benefits of sex therapy administered in a group format to women who have been treated for gynecological cancer.

METHODS

Research Participants

Twenty-one women who had received medical treatment for gynecological cancer were recruited over a 2-year period in 1999–2001 to participate in a pilot study of psychosexual group therapy. Recruitment occurred through physician referrals. Each female participant was 18 years of age or older, English speaking, and able to document that she received surgical and/or radiation treatment for gynecological cancer (i.e., endometrial, ovarian, uterine, vaginal, fallopian tube, or cervical cancer). Self-report instruments were used to assess demographic information, changes in sexual functioning, and mood disturbance. Participants were assessed at baseline, posttreatment, and 3-month posttreatment. Of the 21 participants, 19 completed at least one of the follow-up assessments, with 18 completing the posttreatment assessment, and 16 completing the 3-month posttreatment follow-up assessment.

This study was conducted in the Bay Area of California at sites within and near Stanford University (SU) and also at the University of Virginia (UVA) in Charlottesville, Virginia. Participants included adult female patients at all stages of gynecological cancer and all stages of treatment. The broad inclusion criteria favored generalizability over specificity in selecting women eligible to participate in this treatment study. Participants were initially referred to the study in the first phase of the proposed research through their primary physicians (SU, UVA) or through a nonprofit organization that offers free psychosocial support and educational services to people who have cancer in Walnut Creek, California (SU). A flier and a brochure were designed for this study and provided to interested women (UVA). Letters were sent to other physicians in communities surrounding one of the study sites to notify them of the planned research and to ask for referrals (SU).

In the recruitment phase of this study, potential participants were contacted by mail via a letter inviting them to participate (SU) or were provided informational brochures in person (UVA). As appropriate, a follow-up phone call was then placed to answer any questions the women had regarding the study and to ensure that each woman met the inclusion criteria before being recruited into the 12-week intervention group. The demographic characteristics of the 19 participants for whom we have at least one follow-up assessment are summarized in Table I.

Intervention

Each woman participated in one of five therapy groups. The group therapy intervention focused on issues of body image and sexuality. Each of the intervention groups had between three and five members and was conducted for weekly sessions of 90 min over 12 weeks. A clinical psychologist with expertise and experience in treating psychosexual issues facilitated each group. The group at the University of Virginia included a second coleader, a master's level sex therapist.

A syllabus created for the group leader(s) of the intervention (available from the authors) outlined the broad guidelines for each of the 12 sessions. These guidelines indicate the suggested general principle or theme, intended content for discussion, goal and homework assignment for each weekly session.

The intention of the group intervention was to provide these women with an opportunity to voice their sexual issues within a compassionate and supportive environment. Issues that were discussed included: (1) communication with sexual partners; and (2) coping with the loss of the ability to have children;

Table I. Descriptive Statistics for Demographic Characteristics, Medical Status, and Psychosocial Functioning of Women With Gynecological Cancer ($N = 19$)

Variable	Percentage(%)	Mean	*SD*	Range
Age		47.1	11.6	25–68
Married	63			
Ethnic background				
Asian American	11			
Mexican American	6			
White, non-Latina/nonhispanic	83			
Years of education				
Some college	11			
Bachelor's degree	28			
Some graduate school	17			
Master's degree	44			
Employment status				
Unemployed	33			
Full-time	67			
Type of cancer				
Cervical	21			
Ovarian	68			
Uterine	5			
Other	5			
Had a hysterectomy	37			
Had radiation treatment	11			
Had chemotherapy	63			
Use pain medication	63			

with the loss and mutation of areas of the body associated with sexuality; and with the residual effects of chemotherapy and radiation on desire and ability to have sexual relations. The groups provided a forum in which the women could reidentify with their sexuality after experiencing traumatic stresses associated with having had cancer. The groups provided women with opportunities to mourn their old sexual identities and to create new ones.

The process included four components: (1) helping the group members to trust and support one another; (2) expression of emotions; (3) encouraging the experience outside the group of a variety of pleasurable activities; and (4) identifying, questioning, and reformulating sexual scripts. The first two intervention components are strongly anchored within the well researched, empirically based supportive-expressive intervention model (Spiegel & Classen, 2000).

The premise of the third element was based on the philosophy articulated by Masters and Johnson (1966) that an essential prerequisite for sexual activity is an ability to seek and tolerate pleasure. The women in the group were asked to pursue activities that they find enjoyable. The choices of pleasurable activities included such activities as attending music concerts and taking bubble baths. Women were encouraged to note any resistance to doing something pleasurable for themselves and how they felt after experiencing the pleasurable activity. This was a difficult exercise for most of the women and yet, several described it as empowering. The purpose of this exercise was to guide the women away from perceiving themselves as unable to experience sensual and sexual pleasure by their cancer and its effects, and toward perceiving themselves as capable of experiencing full, active, and pleasurable lives.

A fourth component of the group therapy intervention was to explore the women's sexual scripts learned from their cultural backgrounds and from their personal childhood experiences in their family of origin. They were asked to consider how they conceptualized sexuality and themselves as women. This gave women opportunities to identify and reconsider psychological barriers to experiencing their sexuality more fully. The group intervention encouraged women to share old sexual beliefs, prejudices, and fears that had ascended with such power in response to their cancer diagnosis and treatment. By exploring these historical influences as a group, women found opportunities to help one another by questioning these scripts and reformulating new ones. For example, one woman's story of an early abortion helped another participant to process the grief and guilt of her own experience of childlessness, and to consider the possibility of adoption. These four components were

designed to create an opportunity for the women to rebuild a new sexual identity that was inclusive of their experience of gynecological cancer.

The norms of the group intervention encouraged women to openly discuss their pain and suffering associated with their recent experiences with cancer and sexuality. The efforts to help women to feel comfortable expressing feelings about their physical losses and sexual functioning were accompanied by discussions of mortality and life priorities, as well. The expression of anger and negative emotions appeared to be helpful to women in creating new perspectives and skills that supported their sexual functioning.

Measures

Self-report instruments were used to assess demographic information, changes in sexual functioning, and mood disturbance. Participants were assessed at baseline, posttreatment, and 3-months posttreatment.

Changes in Sexual Functioning Questionnaire (CSFQ)

The CSFQ is a 36-item questionnaire that evaluates changes in sexual desire, sexual activity, and sexual satisfaction because of illness and medication (Clayton, McGarvey, & Clavet, 1996; Clayton, Owens, & McGarvey, 1995). Most CSFQ items use a 5-point rating scale. These 5-point scales include those that assess frequency of experiences, ranging from (1) *never* to (5) *everyday* (e.g., How often do you engage in sexual activity?) or degree of enjoyment/pleasure, ranging from (1) *not enjoyment or pleasure* to (5) *great enjoyment or pleasure* (e.g., Compared with the most enjoyable it has ever been, how enjoyable or pleasurable is your sexual life right now?). The CSFQ, long version, includes a total score as well as a score for each of five subscales—desire/frequency, desire/interest, pleasure/enjoyment, arousal/excitement, and orgasm. This instrument has been shown to have good internal consistency, test–retest reliability, and concurrent validity (Clayton, McGarvey, & Clavet, 1997; Clayton, McGarvey, Clavet, & Piazza, 1997).

Profile of Mood States (POMS)

The POMS (McNair, Lorr, & Droppleman, 1992) evaluates affective states using a 65-item adjective rating scale on a 5-point rating scale ranged from *not at all* (0) to *extremely* (4). It provides a score for total mood disturbance, as well as a score for each of six subscales—tension-anxiety, depression-dejection, anger-hostility, vigor, fatigue-inertia, and confusion-bewilderment. The POMS has been widely used as a primary outcome measure in cancer intervention studies (e.g., Classen et al., 2001). Spiegel, Bloom, and Yalom (1981) found that patients with metastatic breast cancer who participated in their treatment group and who attended supportive expressive group therapy meetings had lower mood disturbance scores on the POMS.

Data Analysis

Mean scores and standard deviations were computed for each CSFQ total and subscale scores, as well as for the total scores on the POMS. We used the Wilcoxon matched-pairs signed-ranks test for the significance of changes (Siegel, 1956) on the CSFQ total and subscale scores. Because of the small sample size, we examined for statistical trends ($p < .01$) as well as identifying any result that was significant at the .05 or .01 alpha level.

RESULTS

The results of this study shown in Tables II and III indicate an improvement in sexual functioning following the intervention. The Changes in Sexual Functioning total score significantly increased from baseline to the posttreatment follow-up ($p < .01$), and also a trend was found indicating improvement from baseline to the 3-month follow-up assessment ($p < .10$). In examining the numbers of women's scores on specific CSFQ subscales (shown also in Tables II and III), we found that women significantly improved between baseline and posttreatment follow-up on the Frequency of Sex subscale ($p = .01$), Sexual Arousal subscale ($p < .01$), and a trend was found indicating improvement on the Orgasm subscale ($p < .10$). Between baseline and the three-month follow-up, significant improvement was found in the Frequency of Sex ($p < .05$). Also, there were statistical trends ($p < .10$) suggesting improvement for women on the Sexual Pleasure and Sexual Arousal subscales. Women's POMS total mood disturbance scores improved significantly between baseline and the posttreatment assessment ($p = .01$), but did not show significant improvement between their baseline and the 3-month posttreatment follow-up.

Table II. Comparisons of Women at Baseline to Posttreatment Follow-up on Changes in Scores on the Changes in Sexual Functioning Questionnaire (CSFQ) Total and Subscale Scores and Profile of Mood States Total Score (POMS; $n = 18$)

Variable	Mean score at baseline (*SD*)	Mean score at posttreatment follow-up (*SD*)	Results of Wilcoxon Matched Pairs Signed Ranks Test *Z*
CSFQ total score	38.0 (7.2)	47.9 (11.4)	3.05**
Frequency of sex	5.1 (1.4)	6.2 (1.8)	2.30**
Interest in sex	8.8 (2.0)	9.1 (2.0)	0.74
Sexual pleasure	2.3 (1.1)	3.5 (1.4)	0.74
Sexual arousal	8.0 (3.0)	9.9 (3.2)	2.66**
Orgasm	10.0 (2.2)	10.9 (3.3)	1.54*
POMS total score	44.5 (40.2)	20.1 (25.3)	−2.30**

$^{*}p < .10$. $^{**}p \leq .01$, using a one-tailed test of significance.

DISCUSSION

We examined the impact of a psychosexual intervention designed specifically for gynecological cancer survivors on these women's sexual functioning and mood disturbance. At the conclusion of the group intervention, the women reported enhanced sexual functioning and decreased mood disturbance. The improvement in patients' mood, however, was shown only immediately after treatment, returning to baseline by the 3-month follow-up. This lack of sustained improvement in mood after therapy suggests that women may need long-term, symptom-specific management of their mood disturbances in addition to treating their sexual concerns.

Regarding the findings relative to patients' sexual functioning, the most significant result of this investigation is that overall sexual functioning was significantly improved immediately following the last group intervention session. Specifically, sexual arousal and frequency of sex showed significant improvements, with orgasm showing a statistical trend suggesting improvement.

At the 3-month posttreatment follow-up, frequency of sex is the only sexual variable that showed statistically significant sustained gains after treatment, similar to the findings of Capone, Good, Westie, and Jacobson (1980), Cain et al. (1983), and Schover et al. (1987). However, overall sexual functioning, and specifically sexual arousal and sexual pleasure showed statistical trends suggesting possible improvement at the 3-month posttreatment follow-up. Because of the small sample size, we are uncertain about whether these findings of statistical trends would show significance in a larger sample. Interpreted conservatively, (if we only interpret the statistically significant findings as indicating improvement), then we conclude that only frequency of sex was significantly improved beyond the group intervention. That interpretation would suggest that women who have had gynecological cancer need help to maintain gains in sexual functioning other than frequency of sex beyond the 3-month limit imposed by our intervention.

Our findings should be viewed in light of the methodological limitations of this preliminary treatment outcome study. Given the small sample size, generalization of our findings, to this or other cancer patient populations, should occur with caution. Research with larger samples is needed. Furthermore, we utilized a nonexperimental design, as we did not

Table III. Changes From Baseline to 3-Month Posttreatment Follow-up in Scores on the Changes in Sexual Functioning Questionnaire (CSFQ) and Profile of Mood States (POMS; $n = 16$)

Variable	Mean score at baseline (*SD*)	Mean score at 3-month posttreatment follow-up (*SD*)	Results of Wilcoxon Matched Pairs Signed Ranks Test *Z*
CSFQ			
Total score	38.0 (7.2)	42.2 (8.2)	1.32*
Frequency of sex	5.1 (1.4)	6.2 (1.4)	1.75**
Interest in sex	8.8 (2.0)	8.8 (2.2)	0.40
Sexual pleasure	2.3 (1.1)	3.6 (0.8)	1.32*
Sexual arousal	8.0 (3.0)	9.5 (2.7)	1.45*
Orgasm	10.0 (2.2)	10.5 (2.4)	0.39
POMS total score	42.3 (42.5)	44.4 (25.9)	1.09

$^{*}p < .10$. $^{**}p < .05$, using a one-tailed test of significance.

randomize our patients to no-treatment or alternative treatment conditions. Another limitation is that by recruiting individuals who had been referred by physicians, we may have obtained a somewhat restricted sample, possibly selecting a patient population that maintained a positive relationship with the medical community, which enabled them to be approached by physicians for participation in our research project. Moreover, our patients were predominantly Caucasian and had attended at least some college; this precluded any ethnic or social class comparisons and limited the generalizability of our findings. Also, because all but one of our patients self identified as heterosexual, we were unable to investigate changes in sexual functioning as they relate to sexual orientation; research should be conducted on the relationship of sexual orientation to sexual functioning in women who have been treated for gynecological cancer (Roberts, 2001). Additionally, all participants were seeking help for sexual problems, which further limits the generalizability of our findings. Nevertheless, since the extent of the literature in the area of psychosexual group therapy for these patients is extremely limited, this pilot treatment outcome study provides significant preliminary data on treatment-related changes in sexual function among such patients, which can be more systematically examined in future research.

It will be important to determine whether group therapy can help to improve the sexual functioning of patient populations living with other types of cancer or serious medical conditions. If this is indeed the case, psychologists and other mental health providers could help patients maintain their sexual gains after receiving psychosexual treatment such as the group intervention tested in this study. If sexual problems are tied to interpersonal difficulties with sexual partners, then couple therapy, or a combination of individual and couple therapy or group couple therapy, could target these problems. We recommend that communication between the woman and her sexual partner be thoroughly addressed in therapy, focusing on what the patient is ready to accept sexually, and distinguishing it from what she feels is expected of her. Possible feelings of obligation to perform sexually, despite a lack of improvement in sexual functioning, could compound a diminished self-concept and damaged body image. The latter, in turn, might be related to medical factors such as the site and severity of the cancer. Indeed, women who have received genital surgery are twice as likely to experience sexual dysfunction as the non-patient population (Lefkowitz & McCullough, 2000). Therefore, medical variables are likely to be at play, and should be investigated systematically within this context in future studies, as they may significantly impact both sexuality and interpersonal relationships (Thaler-DeMers, 2002).

In conclusion, this study has contributed to an innovative area of research, namely how the negative consequences of gynecological cancer on sexual functioning may be offset by group psychotherapy specifically geared toward addressing the sexual functioning of these patients. We concur with the recommendation of Andersen and Golden-Kreutz (2001) that clinicians should provide focused interventions to improve the sexual functioning of cancer patients. Furthermore, the results of our investigation underscore the need to treat the mood disturbance of women with gynecological cancer. Supportive, multidisciplinary treatment of women who have been treated for gynecological cancer appears to have the potential to enhance both their emotional well-being and sexual adjustment.

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