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A Dance/Movement Therapy Clinical Model for Women with Gynecologic Cancer Undergoing High Dose Rate Brachytherapy

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Abstract This literature-based study generated a clinical dance/movement therapy program intended for patients with gynecological cancer to run concurrently with the high dose rate (HDR) brachytherapy treatment. A ten-week clinical model combines elements from established dance/movement therapy practices to specifically address psychological and psychosocial issues relevant to the targeted patient population. In order to develop an appropriate intervention, the movement tasks and themes chosen were based on findings of their effectiveness in various studies. Dance/movement therapy has been shown to directly address psychological issues, such as self-image, anxiety and depression, through a holistic approach which serves to aid the healing process of the individual by strengthening the mind–body connection. These psychological issues occur as secondary stressors to medical conditions, such as cancer, and may reduce a patient's quality of life and abilities to cope with their illness. For patients diagnosed with gynecologic cancer these secondary stressors may include altered self-image, sense of isolation or betrayal by one's body, anxiety, depression, and complications related to sexuality. The following article correlates the efficacy of dance/movement therapy applied to patients with gynecologic cancer being treated with HDR brachytherapy.

Keywords Dance/movement therapy · Cancer · Anxiety · Depression · Self-esteem · Body image

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Introduction

A ten-week dance/movement therapy intervention has been designed to attend to the needs of women with gynecologic cancer being treated with high dose rate (HDR) brachytherapy. The model is based on extant research in the following areas: (1) secondary psychological stressors of gynecologic cancer, (2) benefits of mind–body therapies for oncology patients, and (3) dance/movement therapy techniques and their clinical outcome. The emerging themes found in the research on stressors of cancer were used as the foundation of the intervention. Driven by the proven efficacy of mind–body therapies in cancer treatment, the authors have incorporated dance/movement therapy techniques that have been shown to be effective in responding to these psychological needs.

According to the estimates of the American Cancer Society (ACS), approximately 78,290 new cases of gynecologic cancer will have emerged in 2007 in the United States; roughly 28,020 of these women will not have survived the disease (ACS, 2007). A diagnosis of cancer not only has obvious physical ramifications for the patient, but the trauma of a diagnosis produces psychological stress as well (Fawzy, 1999; Serlin, Classen, Frances, & Angell, 2000). A traumatic life experience, such as a life-threatening illness, forces an individual to alter future plans (Fawzy & Fawzy, 1997). Having to reframe the future may result in anxiety, depression, confusion, and hopelessness. In addition, the physical side effects of illness and medical treatments, such as fatigue, disfigurement, and acute pain, may further distort patients' psychological states, their body image, body awareness, and self-esteem (Ashing-Giwa et al., 2004; Cohen & Walco, 1999; Dibbell-Hope, 2000; Fawzy, 1999).

Dance/movement therapy employs the integrated mind–body dynamic through the use of improvisational movement experiences, creative expression, and integration of relaxation techniques and imagery to facilitate communication and expressive work. There is evidence that dance/movement therapy and other creative mind–body methods empower individuals to express needs and feelings on both verbal and non-verbal levels by helping people reconnect with the body as an instrument of expression (Achterberg et al., 1992; Dibbell-Hope, 2000; Goodill, 2005; Lippin & Micozzi, 2006; Serlin et al., 2000). Having an alternative outlet for expression is especially useful when it may be difficult for patients to verbalize strongly felt physical and emotional experiences, as often occurs during treatment for life-threatening illnesses such as cancer. Furthermore, dance/movement therapy has been found to be effective in alleviating negative emotional and physical side effects for oncology patients (Cohen & Walco, 1999; Dibbell-Hope, 2000; Goodill, 2005; Sandel et al., 2005; Serlin et al., 2000).

The ten-week time frame was chosen specifically to complement the medical treatment plan used for certain types of gynecologic cancer. Typically, the treatment process that includes HDR brachytherapy is approximately four weeks long, following six weeks of external beam radiation therapy (EBRT). The chosen treatment for a diagnosis of gynecologic cancer is dependent on the stage and type of cancer. Treatment options include surgery, radiation therapy, chemotherapy, or a combination of any of these methods. For the purposes of this research, HDR brachytherapy is further explained. During internal radiation, also referred to as

brachytherapy or implant therapy, the source of radiation is placed inside the body at the site of the tumor (Cox & Ang, 2003; NIH, 2003). Internal therapy allows the healthcare professionals to treat a patient with higher doses of radiation in a shorter timeframe than with external therapy (NIH, 2003). Instruments inserted into the vaginal canal administer the HDR brachytherapy treatment. A transfer tube is inserted to meet the site of the tumor. An external device is attached and delivers the radiation. The patient is asked to lie perfectly still for ten or twenty minutes periods in an isolated, protective chamber. The initial procedure tends to be the longest, lasting approximately ninety minutes to two hours as the treatment plan is created; following visits are brief. Health practitioners and researchers have noted that advanced anxiety can be incurred due to the uncomfortable and isolative nature of the procedure (León-Pizarro et al., 2007; Mary Dugan-Jordan, personal communication, June 15, 2006).

In this context, the aim of the dance/movement therapy based intervention is to explore relaxing movement techniques, imagery exercises and breathing exercises that can be utilized before, during, and after the procedure. By providing a set of tools for the patient, she may find a way to positively cope with the pending distress of the treatment. In addition, working through spontaneous movement exercises, dance/movement therapy can provide an outlet for the patient to cope with her new situation (Cohen & Walco, 1999), during and after the treatment plan, in a group environment with other gynecologic cancer patients. The dance/movement therapy group process is a unique approach to group therapy—it is a physically based experience, which can be used with individuals feeling disconnected from their own bodies to increase body awareness and self-image (Ho, 2005). At the same time, the group experience may combat the sense of isolation, lack of universality, and communication issues attendant to the diagnosis of cancer (Fawzy, 1999).

Methodology

In order to develop a clinical model of dance/movement therapy for women with gynecologic cancer, the researcher conducted a literature-based study. Both empirical and non-empirical information was identified to illustrate how dance/movement therapy is a viable alternative option for psychosocial intervention for the population specified.

The following constructs and phenomena are specifically relevant to the topic and are defined below. The research reviewed may have defined the terms according to the measurement tools used in the specific studies. Yet for the purposes of this research, the following definitions serve to focus the discussion of key psychological responses to gynecologic cancer.

Anxiety

As discussed in Sadock and Sadock's Synopsis of Psychiatry (2003), anxiety is differentiated from fear as a signal to alert the individual experiencing it. "It warns of impending danger and enables a person to take measures to deal with a threat" (p. 591). Anxiety is comprised of physiological sensations, such as palpitations and

sweating, as well as an awareness of being nervous or frightened (Sadock & Sadock, 2003). In addition to the physiological response, the individual may experience distortions in thinking, perceiving, and learning.

Depression

Depression is associated with a decrease in energy and interest, increased feelings of guilt, difficulty concentrating, changes in appetite, and suicidal ideation. Additionally, cognitive impairment may occur, as well as impaired functioning on the social, interpersonal, and occupational levels (Sadock & Sadock, 2003).

Body Image

The term "body image" was not operationally defined in the majority of articles found for this research project. Following Pylvänäinen (2003), a tripartite model was considered in developing this clinical model. Body image is comprised of image-properties, body-self, and body-memory. Image-properties are based on the individual's self-perception of the appearance of their body, including their own beliefs about the body. This includes socially-constructed ideals. Body-self is described as the core of the individual in relation to the environment. Body-memory encompasses past experiences and memories that contribute to the current evaluation of sensations; this includes habitual, traumatic, and erotic past experiences (Pylvänäinen, 2003).

An exhaustive search of the relevant literature was conducted using the PsycInfo, OVID Medline, and CINAHL databases (Ginsburgs, 2007). After thorough investigation of the research material, Ginsburgs (2007) employed Garrard's (2004) Matrix Model method. Main elements of the text were divided into matrices highlighting the published works and their relevant information. The outcomes, techniques, and theories were collated into specific sections, although many had information that could have been included in multiple matrices. Parallels were then drawn from both the quantitative and qualitative research based on instruments used to gather data, common findings on mood scales, contradictory findings, populations in which research was performed, and psychological tools implemented in treatments. These parallels were found by summarizing each matrix by topic and lists of authors by significant themes. Prominent themes that surfaced in the analysis of the data were used to design the clinical model for the dance/movement therapy intervention.

Understanding Gynecologic Cancer, Treatment, and Psychological Stressors

Gynecologic cancers include any cancer of the female genital system: uterine, ovarian, cervical, vulvar, vaginal, and endometrial. Cervical cancer is second only to breast cancer as the leading cause of death in women worldwide. The American Cancer Society's figures for US cases of gynecologic cancer for 2007 show that

uterine and ovarian accounted for the majority of the 78,290 cases of female cancer diagnosis (ACS, 2007).

In recent years, research has shown that various psychological consequences result from a diagnosis of gynecologic cancer (Ashing-Giwa et al., 2004; Juraskova et al., 2003; Klee Thranov, & Machin, 2000; Lutgendorf et al., 2002; Noor-Mahomed, Schlebusch, & Bosch, 2003; Wenzel, Vergote, & Cella, 2003). The data is not only valuable to healthcare professionals, but also essential to the patient's awareness for the journey ahead of her following diagnosis. As Fawzy and Fawzy's (1997) life trajectory model illustrates, an oncology patient will need to reevaluate her future plans based on the medical diagnosis. The plans for the future "assumptive world" will be altered to include the psychological and physical responses to the cancer and its treatment:

> Gynecologic cancer can be particularly distressing for patients, both physically and emotionally, due to the aggressiveness of the surgical and medical treatment administered, treatment-related side effects experienced, fears about disease recurrence or death, and changes in life-style necessitated by the disease. (Wenzel et al., 2003)

Wenzel et al. (2003) acknowledge that, with the evolving paradigm of cancer management as addressing the quality of life in addition to the quantity, supportive care has become a key component in cancer management. A discussion follows of the main psychological consequences found in research on effects of gynecologic cancer to establish a basis for treatment objectives in the dance/movement therapy intervention.

Body Image, Self-Esteem, and Sexual Functioning

In a qualitative study, Ashing-Giwa and colleagues (2004) researched the effects of cervical cancer in a diverse sample of Caucasian, African American, Latina, and Asian American women. The authors found a common misconception, in certain populations, of cervical cancer as a sexually transmitted disease related to promiscuity, which increased the existing negative psychosocial reactions of the cancer patient. The research found that fear, shock, denial, anxiety, depression, shame, and anger were a result of this misconception (Ashing-Giwa et al., 2004). In turn, the fear and shame negatively impacted the women's sense of self. Women from each sample expressed concerns about their body image and femininity. Feelings such as being "damaged and worn out after the diagnosis" were common among the African American and Caucasian participants (Ashing-Giwa et al., 2004, p. 717). Treatment effects, such as infertility, early menopause, and surgical scars, increased the distress women felt about themselves.

Similarly, intimate relationships and sexual functioning are affected. Loss of libido and sexual desire make it difficult for a woman to engage in intimate relationships. Wenzel et al. (2003) found that 13% of the 151 patients in their study discussed problems with sexuality as a main difficulty during diagnosis and treatment. Another 49%, while not directly citing concerns about intimacy, body

image, and sexual functioning, identify their primary battle with overall feelings of depression, anxiety, and fatigue, which of course adds to the loss of sexual feeling. Wenzel et al. (2003) suggest that gynecologic cancer patients commonly experience increased sexual dysfunction due to "physiologic, anatomic, or psychological factors, or a combination of these factors" (p. 217). The authors address the erosion of self-esteem and its role in adversely affecting sexual response. The cosmetic issues, such as disfiguring surgical treatments, hair loss, and loss of reproductive function negatively impact a woman's self-esteem. If she has a negative sexual self-image, her sexual response is consequently lowered. Additionally, other factors, such as stress, depression, and fatigue, will leave a woman with decreased desire, arousal, and orgasm (Wenzel et al., 2003).

Isolation, Fear of Death and Dying, Emotional Distress, and Quality of Life

Noor-Mahomed et al. (2003) researched suicidal behavior in females diagnosed with cervical cancer. In their efforts, the data found a positive correlation between suicidal behavior and the following psychological issues: depression, anxiety about death and dying, emotional stress/distress. All the participants in the study demonstrated anxiety and depression. Some of their psychological reactions to stress included the sense that no one understood them, depression, anxiety, feelings of awkwardness when close to others, and feelings of loneliness (Noor-Mahomed et al., 2003). The authors discuss the disruption caused by a cancer diagnosis and the accompanying "fear of abandonment, real or perceived, social stigmatization, guilt about role reversal, and concerns about becoming a burden to significant others" (Noor-Mahomed et al., p. 170). Isolation is an inherent consequence of these fears and may widen the gap between the patient and others.

Ashing-Giwa and colleagues (2004) found that the women "experienced depression due to worry about the illness, social isolation, and lack of physical activity" (p. 720). The Caucasian subjects in their research expressed concerns about isolation as well as fears of a painful death and the unknown. In an optimistic finding for early stages of gynecologic cancer, Lutgendorf and colleagues (2002) found that one year after diagnosis, depression and anxiety decreased for women. On the other hand, for advanced regional gynecologic cancer patients, anxiety and depression still appeared elevated (Lutgendorf et al., 2002).

Bradley, Rose, Lutgendorf, Costanzo, and Anderson (2006) compiled data on the quality of life, mood, and demographics of long-term survivors of cervical and endometrial cancer. The study was comprised of 152 survivors, the majority of whom were originally diagnosed with early stages of the cancer, and 9% of whom had experienced a recurrence. The researchers' goal was to assess the quality of life at least five years post-treatment. Findings concurred with those of Lutgendorf and colleagues (2002): five years post-treatment, there was not a significant difference in quality of life or depressive symptoms between the gynecologic cancer patients and the control group (Bradley et al., 2006). The data did demonstrate higher levels of anxiety, dysphoria, anger, and confusion among the cervical cancer survivors than the endometrial cancer survivors or healthy control group (Bradley et al., 2006).

An interesting finding in Bradley and colleagues (2006) research was that "quality of life, mood, and mental health were significantly associated with employment and relationship status" (p. 485). After comparing the findings from the questionnaires on mood and quality of life to the demographic information, including employment status and relationship status, the researchers found that those who were unemployed and unmarried had significant decrements. The authors note that, perhaps, those who cannot share their experience of the cancer treatment with someone are at a higher risk for persistent psychosocial problems (Bradley et al., 2006).

In Fawzy's (1999) review of the significance of psychosocial interventions for cancer patients, psychotherapy can be especially useful after a diagnosis of cancer. The patient may "experience acute grief, anger, anxiety and depression as well as decreased concentration, psychomotor retardation, and changes in appetite, sleep and energy levels" (p. 1562). Spiegel's (1989) study on psychosocial interventions for women with metastatic breast cancer found that patients were helped with their sense of isolation by being in a group. Providing support to one another also fostered the patient's sense of purpose. In Spiegel's (1989) study, improvements in the *quantity* of life were found when the original goal was to determine improvements in the *quality* of life. The researchers found that the psychosocial intervention provided to the treatment group increased the survival rate by an average of twice as long as the control group. The authors emphasized that the goals of the program were "living as fully as possible, improving communication with family members and doctors, facing and mastering fears about death and dying, and controlling pain and other symptoms" (Spiegel, Bloom, Kramer, & Gottheil, 1989, p. 890). Through these goals, the patients were able to improve their quality of life as well as the quantity. Creating a sense of belongingness and an environment where one can express one's own feelings may have been one of the supporting factors of the group (Spiegel et al., 1989).

Clinical Usefulness of Dance/Movement Therapy for Adults Living with Cancer

Dance/movement therapy can be viewed in terms of emotional benefit and physical benefit. Physical activity, such as exercise or dance, has been documented as creating a state of well-being (Aktas & Ogce, 2005). On this basic level, complete body movement incorporated in dance/movement therapy sessions can provide improvements to body systems, such as the respiratory and muscular systems. In addition, such movement can improve overall health, physical coordination, and muscle tone (Aktas & Ogce, 2005).

In Dibbell-Hope's (2000) research on breast cancer and the utility of dance/movement therapy, the author noted the following improvements produced by dance/movement therapy: "redefinition and strengthening of body-image, clarification of ego boundaries, outlets for relief of physical tension, anxiety, and aggression, reduction in cognitive and kinesthetic disorientation, increase in capacity for communication, pleasure, fun and spontaneity and support for therapeutic medical goals" (p. 52).

With a reawakened connection to one's own body and emotions, a sense of control is gained, which could potentially alter other facets of one's life. In Anne Krantz's "Healing through Dance" (2005), the author reminds the reader that one's creativity and "connection to one's body as source of discovery, pleasure, and wisdom, need to be revitalized" (p. 2). When a person achieves this, it helps her to make sense of her experience. One is then given the tools to understand her own illness (whether medical or mental), and how, on a body level, she may be able to relieve her own pain and discomfort. The patient is better prepared to tolerate the fluctuations in her mental and physical states, thereby allowing her greater access to her own resources for dealing with life (p. 4).

Sandel and colleagues completed a study in 2005 of a twelve-week intervention with women with breast cancer. The intervention utilized the Lebed Method, Focus on Healing through Movement and Dance, and integrated dance/movement therapy techniques. The goals of the trial were to address the physical and emotional needs of the women and their quality of life, measure and seek out any improvements throughout the intervention (Sandel et al., 2005). The findings of the study showed a statistically significant change in the FACT-B measurements for health-related quality of life as well as Body Image measures. These improvements were found in both groups after the Lebed Method/dance/movement therapy intervention.

According to Serlin et al. (2000), dance/movement therapists have a unique ability to work with medical patients, specifically breast cancer patients. "Dance therapists, working holistically with mind, body, and spirit are uniquely positioned to work with illnesses that become manifest in body, mind, and spirit" (p. 123). This belief breathes life into the development of the supportive, existential group designed to reconnect the patients with their "unfamiliar" bodies. The goals of the existential model are to create a safe environment for the patients to express themselves; improve their communication skills through group rapport and empathy; and better prepare them to tolerate strong emotions (Serlin et al., 2000).

Self-reported data showed significant improvements in mood variables: positive changes in fatigue, vigor and tension, and decreases in depression and anxiety (Serlin et al., 2000). However, the researchers observed other changes, suggesting that participants seemed to become more connected to their bodies over time. Women who initially did not actively participate took on the role of leader in later sessions. The movements and body attitudes associated with depression, hopelessness, and sadness (Kestenberg, 1975), became invigorated and confident (Serlin, et al., 2000). The intention of the treatment was to enable the women to have a greater sense of control over their bodies and mind. Throughout the experience, improved sense of empowerment and empathy and understanding from group process allowed them to explore the emotional and physical changes in their lives.

Dibbell-Hope (2000) summarized the benefits of the group process in her work on dance/movement therapy and breast cancer. She noted: "It provides an effective, efficient and economical system of peer support, offers information, hope and understanding from other patients facing similar issues, and often leads to increased responsiveness to medical treatment and longer survival time" (p. 52). Motivated by this theory, and a belief that a physical ailment requires a physical treatment, Dibbell-Hope (2000) examined whether Authentic Movement could positively

impact women adapting to breast cancer, and if this impact could last over time. Authentic Movement provides a safe space for a mover to move in response to her own impulses, accessing the unconscious, while being witnessed by another (Lowell, 1999). Through dialogue, both the witness and mover are able to share their subjective responses to the experience. Due to its structure and process, Authentic Movement is often used in a dance/movement therapy context (Pallaro, 2007).

In the qualitative findings, Dibbell-Hope (2000) discovered that many of the women felt that the group provided a safe environment that decreased their sense of isolation and increased their ability to cope with their negative feelings towards their body and their mood disturbances. However, in the quantitative data, little improvement was found in overall mood, distress, body image, and self-esteem. On subscales of both the POMS and the SCL-90, significant improvements in vigor, fatigue, and somatization did occur (Dibbell-Hope, 2000).

Mannheim and Weis (2006) studied the effects of group dance/movement therapy for women with breast, or other cancers, who were seen in the inpatient rehabilitation clinic of the Tumor Biology Center in Germany. Using a pre-test and post-test design, one group of seventy seven women received an average of seven sessions and were evaluated on quality of life, levels of anxiety and depression, as well as self-image, using standardized instruments. Participant responses to the dance/movement therapy sessions were gathered using a specially designed dance/movement therapy feedback form consisting of open-ended written narratives and evaluations of videotapes of the sessions. There was a significant reduction in anxiety and depression scores as measured by the Hospital Anxiety and Depression Scale ($p < .001$), significant improvement in role functioning ($p < .001$), emotional functioning ($p < .001$), fatigue ($p < .001$), and physical functioning ($p < .001$) subscales on the IORTC-QLQ-C30 (Quality of Life) scale; and significant improvements in self-reported "ability to deal with problems" ($p < .01$) and self-esteem ($p < .001$) on the Frankfurt Self-Image Concept Scale.

Ho (2005) reported on a study of dance/movement therapy with twenty two adult cancer patients, both women and men. Conducted in China, the intervention included structured dance forms with relaxation and guided imagery, offered in ninety minutes weekly sessions over a six weeks timeframe. Ho's (2005) study found statistically significant decreases in self reported stress ($p = .042$, $d = .49$) and significant increases in self-esteem ($p = .0999$, $d = .46$). Narrative responses from participants referenced positive changes in relaxation, self-awareness, and emotional regulation and mood.

The thread among the studies in dance/movement therapy and cancer care is the connection between the mind and body being reestablished, reinforced, or rejuvenated. "At its very core, dance/movement therapy emphasizes the holism of mind and body, thereby providing a new avenue for exploring the complicated inter-relationship of factors involved in coping with cancer" (Cohen & Walco, 1999, p. 41). The patients are able to identify new outlets to facilitate healing during a stressful, life-changing experience. The sense of empowerment during this time may inspire the patient to explore a wider variety of positive and constructive

communications with their healthcare professionals and significant people in their lives. They may find a renewed sense of hope (Ho, 2005), which could potentially contribute to an increased adherence to medical treatment, and improved coping strategies (Goodill, 2005).

Dance/Movement Therapy for Women with a Diagnosis of Gynecologic Cancer

As we have noted, the most prominent psychological responses to a gynecologic cancer diagnosis and its treatment are anxiety, depression, isolation, decreased quality of life, and negative changes in body image and self-esteem. Emerging from the data are clues to an intervention that can specifically address these psychosocial and psychological effects. A large percentage of participants in multiple studies reported that at the time of diagnosis, and five to ten years post diagnosis, they would be willing to participate in psychosocial interventions to alleviate the negative repercussions of their illness (Juraskova et al., 2003; Wenzel et al., 2002, 2005). Research on mind–body interventions show an increased capacity for these types of approaches to positively treat anxiety, depression, quality of life, as well as quantity of life (Spiegel et al., 1989). Combining key elements such as breath work, group support, imagery, new coping skills and resources, and physical exercises, dance/movement therapy constitutes a treatment modality to treat the whole individual. Within the field of dance/movement therapy, the holistic integration of techniques contains the necessary ingredients effective for treating the psychological and emotional issues surrounding gynecologic cancer patients on all levels of functioning. Positive coping skills, reframing, acceptance, and social support, inherent in dance/movement therapy, have been linked to better quality of life, increased adherence to medical treatments, and decreases in medical visits and costs. To successfully treat gynecologic cancer patients, all of these factors must be present, as the psychoneuroimmunological model shows that the relationship between mind and body affects long-term outcomes.

Clinical Dance/Movement Therapy Program

Dance/movement therapy provides therapeutic support for many of the prominent psychological disruptions occurring with a cancer diagnosis and its treatment. The following intervention was developed to provide psychosocial treatment for gynecologic cancer patients after initial diagnosis until completion of HDR brachytherapy. Various sources concluded that treatment for psychological stressors should begin as soon as possible, and continue even past treatment completion (Ashing-Giwa et al., 2004; Dibbell-Hope, 2000; Fobair, 1997b; Hawighorst-Knapstein et al., 2004; Juraskova et al., 2003; Lutgendorf et al., 2002; Wenzel et al., 2002, 2005). Psychological symptoms, such as reactive depression and anxiety, can present themselves immediately following diagnosis, and persist long after cancer treatment has been terminated. Introducing an intervention in the early stages of the oncology patient's experience provides resources that can be utilized for as long as

necessary. This intervention will specifically focus on approximately the first ten weeks from diagnosis, through EBRT and HDR brachytherapy (one possible option for treatment in cases of gynecologic cancer).

Results of dance/movement therapy studies have provided encouraging evidence to utilize techniques such as imagery, relaxation exercises, and spontaneous movement in group environments (Erwin-Grabner, Goodill, Hill, & Von Neida, 1999; Ho, 2005; Sandel et al., 2005; Serlin et al., 2000). Coupled with Yalom's (1995) theories of group process, the intervention is based on a group setting to provide therapeutic factors such as instillation of hope, universality, altruism, and information sharing.

The intervention has been developed to focus on the psychosocial and psychological issues of the female patients to facilitate the healing process. The goals of the intervention program, based on the emerging themes of the literature, are to:

- build communication and interactional skills through social support;
- increase the women's sense of self and body awareness;
- improve self-esteem and body image;
- learn relaxation and guided imagery techniques to utilize in stressful situations;
- develop coping skills to handle life stressors;
- be spontaneous and have fun;
- increase the capacity to verbally and non-verbally express one's fears and anxieties;
- begin one's healing process.

Sessions are to be held on a weekly basis for ninety minutes, in a closed group format. The preference would be for the group to meet outside of the hospital setting where treatment is occurring; however, due to scheduling constraints, this might not be feasible. Sessions should be held in a comfortable space, with enough room for patients to move about without obstruction. One of the most significant factors is creating a psychologically safe environment for the participants to build a new community (Fobair, 1997a). In the chaos created by a medical diagnosis, stability and balance can enhance a patient's personal experience. With this idea in mind, the dance/movement therapy intervention begins and ends in roughly the same format for every meeting of the group. The opening and closing exercises create boundaries containing the group and providing a safe atmosphere. The middle section of a dance/movement therapy session is for theme development, and themes in this program differ from week to week.

Following is a description of the warm-up and closure, and after that, a detailed description of the weekly themes. Descriptions rely on concepts and terminology from Laban Movement Analysis (Amighi, Loman, Lewis, & Sossin, 1999; Dell, 1977; North, 1972).

Warm-up

As the group comes together, the group leader will inquire about how the patients are feeling on a physical level that day, to determine the extent of the movement process of the group. A verbal check-in will allow the patients to share any

experiences, emotions, fears, and anxieties. Time will be allotted to encourage the patients to interact verbally to build the relationships beneficial to group process. Serlin (2007) noted that "through dialogue, the loneliness of carrying the illness alone is reduced" (p. 83). During this process, the therapist should engage in active listening. Halprin (2000) discussed the exercise of active listening as a way to cultivate an empathic relationship with the patients.

Following the verbal check-in, deep breathing exercises will be initiated to encourage the patients to focus on themselves. The intention is to promote a sense of grounding within the group setting, and help to develop a stronger sense of self and mind–body connection. Deep breathing exercises used in the warm-up will also be available to the patients during any treatments, as a relaxation technique. In addition, breathing exercises help the patient to switch gears from a listening mode to a feeling mode (Halprin, 2000).

The patients will be asked to complete an internal scan of the body, moving from the head to the toes, to increase awareness of any sensations or tensions held in any part of the body. The goal of this technique is to increase the mind-body connection by creating tools to become more aware of the physical self (Dosamantes Alperson, 1980). With a keener sense of internal awareness, the patient may be better prepared to communicate with her doctors about any changes occurring on a physical level.

After the internal scan is completed, patients will begin moderate stretching. The exercises will move from the head to the feet to start to enliven the body. Krantz (2005) discussed the defenses potentially utilized during a cancer diagnosis, such as "repression of thoughts and emotions and dissociation of traumatic experience" (p. 3). Use of such defenses may result in constrained expression and action (Krantz, 2005). Thus, moving through isolation exercises sequentially from the head down aims to ease the patient back into a sense of her own body. The movements are coordinated with breathing patterns in order to awaken an awareness of the connection between mind, body, and spirit. Such exercises include, but are not limited to, neck rolls, shoulder circles, circling of the wrists and ankles, torso side bends, spinal twists, toe reaches, and leg stretches. Additionally, the patients work with tensing and releasing of the muscles.

Closure

As the session draws to a close, patients settle back into their own bodies by moving through a sequence of deep breathing. The patients will be encouraged to allow the exhalations to release any remaining tension or anxiety that they may still be holding. As the body becomes more relaxed, a guided imagery exercise will be introduced to connect a positive image to the relaxed physical state. The imagery exercises will contribute another resource for the patients to adopt during other stressful life situations. The group will end with a final verbal check-in, as to elicit feedback from the experience. Patients will be able to explore any physical sensations and emotional reactions to the group that day. As feelings emerge through the movement process, the patient needs to take the time to evaluate the experience, draw parallels to other experiences in her life, and receive feedback from others (Schmais, 1985). This is an uncensored and free discussion. Making

verbal connections to non-verbal experiences encourages reflection on one's own internal state.

With cancer patients, and working in a psychosocial supportive framework, the therapist routinely attempts to end each session on a positive note. This author uses a technique aimed at having the group take a full breath together and imagine drawing in positive energy, compassion, and kindness from the group experience. On exhaling, the members are asked to leave something positive and caring behind for all the other individuals to carry with them.

Both the warm-up and closure are meant to be somewhat ritualized. This is to provide consistency within the group. A new community founded on these rituals can begin to flourish and explore themes and metaphors related to one's own inner states.

Themes

Week 1: Developing Trust and Creating a Community

The session will begin with the warm-up outlined above with a verbal check-in, followed by breathing and moderate stretching. As this is the first group session, extra time should be taken to allow for the patients to introduce themselves and get to know the other members of the group. This first session helps to establish a trusting relationship and build a safe environment where members feel comfortable exploring their emotional experiences. After the body warm-up, the remainder of the first session will be structured, in order to help members feel at ease in the beginning of their treatment. Spontaneous movement exercises will be added to the intervention in later weeks.

An additional reason to base the first week on structured movement is to facilitate assessment. Specifically, the therapist observes to gain a better understanding of each individual's movement capacity and emotional attitude (Sandel, 1993). If feasible, the patients will leave their chairs while retaining the circle formation. The therapist will guide the members through movements to encourage synchrony within the group. Through synchronous movement, the members may begin to share rhythmic structure, Efforts, and spatial usage, which can lead the group towards a sense of solidarity (Schmais, 1985). Building this unity in the initial sessions will set a precedent for the remainder of the intervention.

The use of Weight Effort in the movement sequences will develop the members' sense of self and grounding. Dance/movement therapy suggests that balancing the efforts in the weight category (strong and light) will encourage patients to assert themselves (Amighi et al., 1999). The therapist will lead the patients to move in all three planes of space, each of which is associated with certain aspects of behavior such as decision-making, communication with others, and one's relation to oneself (Amighi et al., 1999). For example, the therapist can suggest the connection of the feet to the earth utilizing opposing forces. Movements can include stomping the floor, and lightly tapping the toes. This engages the vertical plane, and provides insight into the preferences of the members. To move within the horizontal plane, using weight, and building trust, the circle will connect by pressing palms together

and tensing and releasing the pressure of the connection. Moving towards and away from the center of the circle will incorporate the sagittal plane and may be done by using strong or light qualities in the steps for either direction. Throughout the movement process, the therapist will take an opportunity to reflect each individual's movement, and acknowledge their unique identities. This will enable the therapist to develop a personal relationship to each member.

An additional way of developing a ritual, while setting the foundation for establishing relationships, can be the creation of a brief "routine" with choreographed steps. This will become a work in progress which continues through the end of the intervention, and with each individual's contribution. The session will end with the closure described above. The discussion provides patients with the opportunity to reflect on their experiences, and perhaps, set goals or share ideas for how they imagine the group will progress. The therapist will remind the patients to practice the breathing and imagery exercises to begin preparation for their upcoming medical treatments.

Week 2: Personal Identity and Support

During the verbal check-in, the therapist will ask the participants to share their reactions to the previous week's sessions. The themes that may emerge from this discussion can then be used within the session to enrich the group experience. After the members complete their warm-up, the group will move into a circle. From here, the therapist will invite the members to share leadership. This will help to maintain the sense of individuality of each group member, while encouraging the individual to be seen and heard by others. By sharing leadership, those who may typically remain quiet can practice taking the lead and communicating on their own behalf. Each individual will contribute a movement for all the members to "try on." As the group moves together, the encouragement of synchronicity will "transform the process of unfolding so that it no longer belongs to one individual alone, but to the entire group" (Schmais, 1985, p. 20).

Upon completion of the shared leadership, the therapist will guide exercises based on the Time Effort. Quick movements will be counter-balanced by slow and sustained movements. During treatment for cancer, there may be a sense of losing time, and the issue of time is paramount. Not only has the longevity of one's life been threatened, but also the chaos of appointments and treatments that ensue may make it difficult for the patient to take the time to process the experience. Finding a balance between active, rapid movement, and indulging in time, may enable the patient to cope better with the treatment process. The therapist should offer movements initially in isolated body parts, for example, quick followed by sustained movements in the arms and hands progressively moving down towards the feet. Then, the body parts can be integrated into whole body movement, experimenting with the Time Effort.

The group will conclude with the choreographed routine. This week, another movement will be added on, by suggestion of group members. After modifying the routine and rehearsing it, the group will move into closure for the week. Participants

will be asked to share their experience for that week, and once again be reminded to practice their breathing and imagery exercises.

Week 3: Body Awareness and Body Boundaries

This week's intervention is geared towards developing a sense of body awareness and body boundaries. The group will move through the verbal check-in and warm-up. The stretching exercises will be followed by self-massage. The leader will guide the group to move from the head to the feet using massage to release any bodily held tension or stress. By incorporating self-care tips, the leader is providing another resource for coping. Self-care is an important aspect for an individual during cancer treatment. Additionally, this will help increase the awareness of the individual's physical sensations and mind–body connection. This will help the women become familiar with their new bodies and re-establish body boundaries that may have become blurred during the initial stages of diagnosis and treatment.

The use of Bound Flow and Free Flow will complement this exploration of bodily held tensions. Participants will experience the opposing forces of tensing and releasing body parts, and find new resources, such as the breath and self-massage, to ease physical tension and stress. The majority of this session will be focused more on the individual; however, the group will come together to practice their routine before closure. The hope is to provide the patient with the understanding that she can find ways to take care of herself, but also rely on group support.

The leader will introduce the Bartenieff Fundamentals™ (Bartenieff & Lewis, 1980)—a set of exercises that build an awareness of the heel-coccyx connection, fingertip-scapula connection, pelvic-hip action, and body half connection. The series of exercises will encourage the re-connection with the pelvic area (the locus of concern) and the exercises can be reserved for additional usage after treatment has been completed. The exercises include the Rock and Roll, Knee Drop, Pelvic Forward Shift, and Diagonal Sit-up.

The group will wrap-up with the rehearsal of the choreographed piece, with a new step or phrase added, as well as the closure sequence.

Week 4: Coping with Advanced Anxiety and Transition

The group has had three meetings to establish a relationship and build a new community. At this juncture, the patients have two more weeks of EBRT, but are preparing for the HDR brachytherapy. The patients may be developing advance anxiety related to the procedure. The goal for this week is for the participants to use spontaneous movement for emotional expression, and to work in dyads to give each other support. The group will move through the warm-up as usual, and then pair off to work with empathic reflection (mirroring exercises). One member will initiate movement that will be reflected by the other member of the pair. The dyads will be encouraged to fully take on the qualities of the mover's experience. The use of the Space Effort will be introduced, so the participants can explore direct and indirect movements, in addition to the previously learned effort qualities. Working through spatial dimensions allows the mover to practice having multiple foci or singular

foci. This technique will be useful during the limited mobility during HDR brachytherapy, as the patient will want to practice singular focus with guided imagery to relieve the anxiety.

The use of mirroring, or empathic reflection, strengthens the feelings of being supported, or supporting another individual. As Yalom (1995) notes, group process elicits a sense of altruism, and the work in the dyads parallels the giving and receiving. The mover's self-esteem may increase as she gains support from a peer. Through self-esteem, one may be more willing to "reclaim those parts of herself/himself that were hidden from others" (Schmais, 1985, p. 29). In this process, increasing self-esteem may result in heightened body awareness, and vice versa. Each participant will have an opportunity to move and have her movement reflected, increasing and impacting the here-and-now experience.

In order to reinforce the sense of group support, a stretch cloth will be introduced for the group's use. The members can manipulate the stretch cloth by using different intensities of one's own body weight. By reflecting back on the Effort of Weight, the individuals can establish a stronger sense of self and grounding, which will be beneficial as they move into the isolation of HDR brachytherapy treatment. To continue building group cohesion, the group will come together to move through their routine and end with the closure sequence.

Weeks 5, 6, 7, and 8: Coping Skills and Femininity

These four sessions are meant to ease the participants through the transition of EBRT to HDR brachytherapy. During this time, the body of the sessions will continue to expand on the previously used elements of movement, but also incorporate spontaneous movement. The goal is for the patients to expand on their emotional expression through symbolic movement. The symbolic expression of unspoken thoughts gives form to the mover's fears and anxieties, which can then be addressed and transformed (Serlin, 2007). To transition from a more structured group to a less structured group, props will be incorporated, utilizing the technique of *kinesthetic imagining* (Serlin, 1966). Through the use of props, the anxiety and vulnerability, perhaps experienced through movement, may be decreased. The props may act as a transitional object, allowing the patients to safely move from a structured movement sequence to a more independent expressive action. For instance, scarves may elicit associations with femininity. The movement elicited with a scarf is often slow, sustained, and flowing. Introducing the scarves into the women's movement ritual may help them to move through their fears of loss of femininity and sexuality through an external object. On a physical level, practicing the slow and sustained movements increases the mover's ability to indulge more in time and become more aware of her body in space. Increasing body awareness and body image will enhance the mover's ability to connect with her feminine side, which may have been suppressed during the trauma of the diagnosis.

In addition to the final sequence for closure in the seventh and eighth week of the program, the therapist needs to bring awareness to the nearing termination date of the intervention. The participants have been working through fears of loss and grief, so it is essential that they prepare for the final closure to the group.

Week 9: Spontaneity and Closure

As the intervention nears its end, the verbal check-in of the session should reiterate the termination process and the available resources the patients can utilize outside of the group. The warm-up exercises, both breathing and stretching, should be reinforced as skills that may be drawn upon at any time. The body of the group should include spontaneous movement expression, with the availability of props. If the members seem to be having difficulty focusing on their individual needs, an Authentic Movement sequence may be introduced. In this technique, an observer witnesses the mover. The individual mover will be supported and seen by another, who can relate to the stressors that are being experienced. Feedback will be exchanged in the dyads, enabling the mover to begin a dialogue about the experience. After each member has moved and witnessed, the group will come back together to share their individual experiences. To re-establish the group as a community, the members will again move through their self-created dance routine, and follow the closure series.

Week 10: Spontaneity and Closure

The final session should provide some enjoyment, and reinforce the positive experiences that emerged during the ten-week intervention. The goal is to send the members off with good memories, new coping skills and resources, and a greater sense of their own bodies. Upon completion of the warm-up, the body of the session should be a fun and spontaneous experience in celebration of the work that has been done during the intervention. This should be an unstructured sequence, where the members are free to move in response to their impulses. In addition to the group routine and closing sequence, the technique previously mentioned in the closure section, should be incorporated. As a group, the members will close with deep breathing exercises, imagining the inhalation as "drawing in" the positive experience of the group sessions, and the exhalation as "leaving" something positive behind. To end the group with a focus on the individual, each member will have the opportunity to vocalize the most significant aspect they experienced. The leader should note at the end that continuing dance/movement therapy could be beneficial to cope with any delayed responses to the treatment. Table 1 displays the complete ten-week intervention in tabular format including the themes and techniques based on the goals for the group.

To date, this program has not been researched for efficacy in relation to clinical outcome variables, but has been piloted in clinical practice. Thus, only anecdotal evidence suggests the potential benefits of the intervention at this point. The case vignette below is an example.

Case Vignette: Dee

Dee, a thirty-eight year-old woman diagnosed nine years ago with ovarian cancer, joined the group as the youngest participant, single and with no children. Dee had a

Table 1 A week-by-week view of the dance/movement therapy interventions

	Week 1	Week 2	Week 3	Week 4	Weeks 5, 6, 7, and 8	Week 9	Week 10
Medical treatment	EBRT	EBRT	EBRT	EBRT	HDR brachytherapy	HDR brachytherapy	HDR brachytherapy
Themes for the group	Building relationships; creating a psychologically safe environment	Developing an individual identity, as well as learning to support and be supported by others	Body awareness, body boundaries and self-esteem	Preparing for the transition in treatment and advance anxiety	Exploring femininity, developing positive coping skills. Weeks 7 and 8 begin discussion on termination	Preparing for termination of group; building on previous techniques to continue developing personal identity and grounding	Review positive coping skills gained; have fun and be spontaneous
Dance/ movement therapy techniques	Use structure to create boundaries; introduce weight effort to establish a sense of self and grounding; work through planes, especially the horizontal plane associated with relating to others.	Sharing leadership to develop a personal identity, as well as support and be supported by others; introduction of Time Effort in order to learn balance between indulging in time and fighting time.	Tensing and releasing of muscles incorporating the flow effort; self-massage, and self-care techniques; Bartenieff Fundamentals™ to establish heel-coccyx and hip-pelvis connection.	Utilizing empathic reflection to increase self-esteem and self-awareness; incorporate space effort to develop capacity to have singular and multi-focus; to re-establish sense of self and grounding, revisit weight effort with stretch cloth.	Allow for less structure with the body of the session as spontaneous movement for emotional expression; use props to relieve anxiety if emotions become intense or overwhelming; begin to combine all effort qualities.	Continue with spontaneous movement; Authentic Movement can be offered as a chance for the patients to begin to focus back on individual (preparing for termination); being witnessed and observing others provides skills in supporting and being supported.	As closing session, the participants should be encouraged to be spontaneous and have fun, focusing on the positive experiences of the group in celebration; reflect on new coping skills and personal gains.

strong personality, with an assertive tone, and a great sense of humor. Dee had undergone a full hysterectomy when she was first diagnosed and was currently receiving chemotherapy to continue treatment. Dee had never attended a support group but was intrigued by the idea of dance/movement therapy. When Dee first joined the group, she swiftly took the lead. She provided feedback and support for other patients, but had a tendency to consume a lot of the group's time. The main topics of her discussions were her religious faith, her strength in coping with the disease, her attitude, and her independence. Dee prided herself on not needing anyone's help during her diagnosis and treatment. However, she had hoped to be an inspiration to others and was open to receiving feedback from the group members.

On a movement level, Dee preferred the Sagittal and Vertical planes, associated with decision-making and sense of self. She had limited movements in the Horizontal plane, which is connected with relating to others. Dee's gestures and postures were very quick and direct, not showing much indulgence of time; in addition, lightness was almost absent from her movements. Dee's speech patterns mirrored her physical affect. She was very quick to interrupt others, and there was strength to her words, coupled with the loud volume of her voice. She had no fear directly addressing, and perhaps challenging, anyone in the group, whether she had met them before or not.

The goals for Dee were to expand her movements to incorporate the Horizontal plane, and find a balance of more indulging movement qualities. The information that Dee typically shared with the group implied that she was protecting herself from more pain and anguish. She had built up a strong emotional barrier to keep others at a distance, leaving herself isolated and alone with her fears and anxieties. Throughout a few sessions, the groups began with a similar warm-up, as previously outlined. The members participated in shared leadership exercises to experience taking a leading role, as well as being witnessed and supported by others. Exercises that followed included movement into the Horizontal plane, reaching and connecting with other patients, and incorporating light and strong pressure. Discussion after the movement phase provided an opportunity for the patients to verbalize feelings associated with particular body movements, as well as describe the experience of seeing others take on their movement qualities.

After several weeks, Dee began to share her emotions in regards to her diagnosis and desire for support. She became more receptive to feedback from the other members in the group, and interrupted others less. Unbeknownst to her, Dee joined the group for what was her last session. At that session, she openly discussed her sadness for not bearing children, her loneliness due to a lack of intimate relationships, and her decreased feelings of sensuality and femininity. The group members asked to use scarves during the body of the movement exercises. They all supported Dee and followed her lead with light and sustained movements, moving in and out of the circle, and towards each other. The group ended with the members holding hands, and each member stating a positive thought or feeling they had towards Dee. As the group separated, Dee thanked all of the other participants and hugged them on her way out.

A few weeks later, the therapist met Dee in the hospital wing. She did not move as quickly as she had when they first met, and her speech was less pressured. She asked about the group, and warmly reflected on her last meeting with them. Dee

expressed feeling less isolated as well as more open to the support available from others. She had hoped to join the group again, but was unable to do so at that time because of further medical treatments.

This vignette illustrates the benefits of a strong social network in supporting a patient's ability to explore their emotional needs during a medical diagnosis. Through a physical and social exploration, Dee was able to gain insight into parts of herself that she had suppressed during her treatments.

Conclusion

Minimal research has been conducted or published to describe the gynecologic cancer experience of patients undergoing HDR brachytherapy treatment. The design of the dance/movement therapy intervention outlined in this paper is based on information gathered on the psychological responses associated with the diagnosis of gynecological cancer and its treatment options. With more research information, the intervention may be further developed specifically for the experience of HDR brachytherapy treatment. Additionally, the intervention is based on a closed session group with female patients at the same point of treatment. It can be used for different stages of treatment, and exercises and techniques are to be tailored to the needs of each stage. The ideal size for a group intervention such as the one described herein is from four to eight patients. However, the program could be conducted with as few as three women and as many as twelve. In some medical settings, the number of women undergoing the HDR brachytherapy in a shared timeframe may be too few to constitute a group. In that case, individual sessions could be adapted from the group design given above, retaining the thematic sequence.

Additional research is encouraged to gather qualitative data for women undergoing HDR brachytherapy. Anxiety and depression are significant responses to the treatment process; however, additional reactions need to be researched. A survey of female patients before, during, and after their HDR brachytherapy treatment would provide information useful in further developing the clinical intervention (Marc Micozzi, personal communication, February 20, 2007).

Patients with other diagnoses, such as breast cancer or prostate cancer, also receive HDR brachytherapy. The effects of anxiety and depression associated with the procedure are similar, though the psychological responses may be varied. It would be useful to compile research information related to other diagnoses and modify the intervention to be utilized with those populations. Chemotherapy has similar responses on physical and psychological symptoms, as well as treatment-specific limitations. The intervention could be adapted for patients receiving chemotherapy.

Researching the effects of dance/movement therapy for patients with gynecologic cancers would be useful to further support the implementation of such an intervention. A study gathering qualitative, quantitative, or both types of data could utilize such tools as the Profile of Mood States, Beck Depression Inventory, or open-ended interviews. This research could be based on a case study, or, if feasible, a larger sample of participants with an experimental and control group to develop

baseline measurements. Measures of anxiety and depression, coupled with qualitative data, would provide valuable information to modify a more specific intervention.

Inclusion of a psychosocial intervention in the oncology treatment plan has been shown to have a positive impact on the adverse psychological responses associated with a cancer diagnosis and its treatment. A diagosis of gynecologic cancer disturbs the life trajectory the patient is following, and she is forced to rethink future plans, with fear that the future may not be of great length. Fortunately, studies have found that psychosocial interventions can have a profound affect on quality of life, as well as quantity. Research covering various types of gynecologic cancers shows that social support positively correlates to adaptive coping skills, decreased depression, anxiety and stress, and increased self-esteem and body image. Furthermore, a proactive stance towards one's own treatment process can provide better outcomes to treatment (Dibbell-Hope, 2000; Goodill, 2005).

Dance/movement therapy's holistic approach uniquely allows participants to explore their emotional, social, cognitive, and physical selves. Dibbell-Hope's (2000) study was motivated by the belief that a trauma to the body should be treated with a body-oriented therapy. Successful outcomes have been measured for dance/movement therapy based interventions in the medical field, even for brief interventions. The underlying goal of this ten-week intervention is to create a psychologically safe environment for gynecologic cancer patients, integrating the various techniques that have proven to be effective in psychosocial interventions and dance/movement therapy based interventions. By building a social support system early on in the patient's treatment plan, the hope is that adaptive coping skills and emotional expression will allow the patient to combat the potential decrease in quality of life found in most studies. Future research is encouraged to modify this intervention as needed; however, the groundwork has been laid for a viable opportunity to address the emotional needs often ignored in the medical treatment of gynecologic cancer patients.

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