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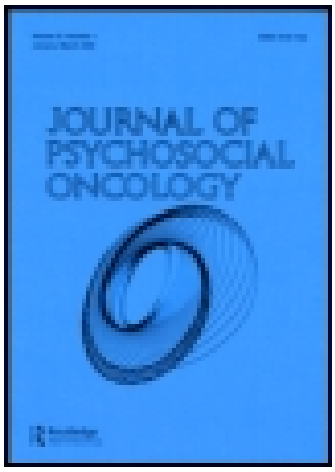

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Breast and Prostate Cancer Survivor Responses to Group Exercise and Supportive Group Psychotherapy

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Abstract

This study qualitatively examined an 8 week group exercise and counseling intervention for breast and prostate cancer survivors. Groups exercised 3 days per week, 50 minutes per session, performing moderate intensity aerobic and resistance training. Groups also underwent 90 minute supportive group psychotherapy sessions once per week. Survivors discussed their experiences in focus groups post intervention. Transcripts were analyzed using interpretative phenomenological

analysis. Survivors described how exercise facilitated counseling by creating mutual aid and trust, and counseling helped participants with self-identity, sexuality, and returning to normalcy. When possible, counselors and fitness professionals should create partnerships to optimally support cancer survivors.

Key words

exercise physiology; oncology; counseling; intervention; focus group

Introduction

Mental health interventions remain underutilized in oncology, especially among men (Carmack Taylor et al., 2006; Eakin & Strycker, 2001; Kaplan, 2008; Krizek, Roberts, Ragan, Ferrara, & Lord, 1999; Nekolaichuk, Cumming, Turner, Yushchyshyn, & Sela, 2011; Petersson, Berglund, Brodin, Glimelius, & Sjödén, 2000; Sherman et al., 2007; Steginga et al., 2008). Some studies have shown that this appears to be due to patient preference, rather than a lack of available services (Carmack Taylor et al., 2006; Krizek et al., 1999; Nekolaichuk et al., 2011; Petersson et al., 2000; Sherman et al., 2007). Barriers among male cancer survivors to accessing psychosocial support include:

1. a sense of stigma and therefore social constraint from seeking mental health service (Kaplan, 2008; Steginga et al., 2008);
2. the failure of healthcare providers to ask about emotional distress (Kaplan, 2008; Plass & Koch, 2001);
3. a lack of awareness among survivors of available resources (Eakin & Strycker, 2001; Kaplan, 2008; Plass & Koch, 2001); and
4. not believing they require mental health services (Boudioni et al., 2001; Eakin & Strycker, 2001; Krizek et al., 1999; Plass & Koch, 2001; Sherman et al., 2007).

When male cancer survivors do participate in psychological support services, they identify valuable components as being the information presented on their medical and health outcomes and the provision of stress management techniques (Berglund, Petersson, Eriksson, & Häggman, 2003; Boudioni et al., 2001; Chambers, Pinnock, Lepore, Hughes & O'Connell, 2011; Sherman et al., 2007). Some studies indicate that more stereotypical counseling areas are rated

lower in importance and preference or are avoided by men altogether (Berglund et al., 2003; Boudioni et al., 2001; Sherman et al., 2007). This has been attributed to a common male view that sharing emotions is uncomfortable and undermines their masculinity (Roth, Weinberger & Nelson, 2008). However, a seminal study in this area by Krizek and colleagues (1999), demonstrated that once a prostate cancer survivor actually commits to attending the first support group session, he tends to stay with the program. The problem remains of how to attract cancer survivors to attend and engage in counseling.

Previous research indicated that combining individual counseling with personalized exercise for breast cancer survivors improved QOL more than using either exercise or counseling alone (Naumann et al., 2012). Other studies that examined multimodal interventions in cancer survivors have predominantly focused on female survivors; specifically breast cancer survivors(Berglund, Bolund, Gustavsson, & Sjoden, 1993; Block et al., 2009; Cho, Yoo, & Kim, 2006; Courneya et al., 2003; Culos-Reed, Robinson, Lau, O'Connor, & Keats 2007; Rabin, Pinto, Dunsiger, Nash, & Trask, 2009; Van Weert et al., 2005). This pilot study extended from the prior work, which was done in breast cancer survivors only (Naumann et al., 2012), to include prostate cancer survivors. One goal of the pilot study was to examine if prostate cancer survivors would participate in a combined exercise and counseling intervention. It was hypothesized that combining the modes (exercise and counseling) would facilitate acceptance of and participation in the counseling portion of the intervention, thus addressing the problem of disengagement of male cancer survivors with psychological counseling described in the literature (Berglund et al., 2003; Boudioni et al., 2001; Sherman et al., 2007). Prostate cancer survivors were chosen as they represent a similarly large proportion of the population of male-specific cancers as breast cancer

survivors do for females (Australian Institute of Health and Welfare & Australasian Association of Cancer Registries, 2010). The purpose of this study was to examine the lived experience of both the breast and prostate cancer survivors participating in the intervention, to determine how a multimodal intervention may be designed to optimally engage both populations.

Method

Prostate and breast cancer survivors were recruited to participate in a group exercise and supportive group psychotherapy (SGP) intervention through hospitals in the Perth metropolitan area, the Cancer Associations, and the Fremantle General Practitioner network. Inclusion criteria were:

- 25 to 80 years old;
- confirmed Stage I, II or III breast or prostate cancer;
- completed all planned surgery, chemotherapy and/or radiation therapy;
- and able to participate in exercise as determined by physician clearance.

Men and women participated in separate groups. Before the intervention, participants completed pre-exercise screening and assessments. Post-intervention assessments were completed the week after the intervention, which included a focus group interview. This paper centers on the psychosocial aspects of participating in the program as data was gathered during focus group sessions. This study was approved by the University of Notre Dame Australia's Human Research Ethics Committee (#08002F).

The 8 week intervention consisted of group exercise and SGP. Group exercise was delivered by a fitness professional 3 days per week for 50 minutes per session. All exercise sessions included 20-30 minutes of aerobic training, 20-30 minutes of resistance training, and 10

minutes of static stretching. As a pilot study, one of the purposes was to formulate an exercise intervention framework to inform a subsequent larger trial that was implemented after the conclusion of this pilot study. Therefore, exercise prescriptions were individualized to the needs of the group, with a range of modalities used. Aerobic training comprised the following components; participants walked outside or up and down stairs; used aerobic training machines, including treadmills, stationary bicycles, ellipticals, rowers, and arm cranks; and undertook cardio boxing and hydrotherapy class sessions. Resistance training was completed using body weight, free weight, and resistance machine exercises. The intensity of exercise was prescribed using rating of perceived exertion (RPE) (Borg, 1982) varying intensities progressing from light (RPE of 6-10) to hard (RPE of 13-15), however, the average intensity was moderate (RPE of 12).

The SGP program was based on the seminal work of Cain et al. (1986), which developed formal models of group psychological interventions in cancer survivors. The SGP was delivered by two accredited counselors, once per week for 90 minutes. Each weekly session was based around 8 themes, which reflected the ongoing needs of cancer survivors (Jefford et al., 2008; Marlow, Cartmill, Cieplucha & Lowrie, 2003). The themes were: 1) exploring life stories, 2) implications of living with cancer, 3) coping with stress, 4) mindfulness and feeling anxious, 5) relationships and support, 6) self-identity, 7) hope, and 8) moving forward.

Each SGP session included opportunity for individual expression, group discussion, teaching, and problem solving (Breitbart, 2002; Breitbart et al., 2010; Cain et al., 1986). The proposed benefits of participating in these experiences together were creating a sense of belonging and normalcy, sharing and reshaping their identities, feeling a sense of mutual aid, and creating hope by comparison of coping success.

To examine the participants' experiences, qualitative data were gathered during focus group sessions, one week post-intervention. During these semi structured interviews, the facilitator asked the participants to describe their overall experience of the program. Sessions lasted 90 minutes and were audio-recorded, then transcribed verbatim.

Interpretative phenomenological analysis was utilized as a methodological approach to the analysis with an idiographic focus within the psychological domain (Smith, Flowers, & Larkin, 2001). It provided in depth exploration of how the individual made sense of the phenomena of interest. NVivo Version 8 (QSR International, VIC) was used to facilitate the analysis after transcriptions were first read to identify emerging themes (Smith et al., 2001).

In addition to the qualitative reports of participants, the intervention was objectively determined to be feasible if participant attendance and retention rates to both components of the intervention were at least 80% (Martin, Battaglini, Groff & Naumann 2013).

Results

Overall, 31 survivors (12 men and 19 women) enrolled into the study; however, three people dropped out after the initial assessment for the program: one man withdrew six weeks into the program after suffering a heart attack unrelated to the program; one woman suffered a back injury prior to the assessment and was no longer eligible; and one woman came to her assessment, but never returned. In a follow-up telephone call, she disclosed that she lacked the motivation to force herself to make the commitment. Seventeen breast and 11 prostate cancer survivors completed the program (Table 1).

The women had an average attendance rate of 85% for both the exercise and SGP sessions, while the men attended an average of 80% of the exercise sessions and 87% of the SGP

sessions. Participants' reasons for missing days were mostly minor illness (women) and work commitments (men).

All 11 men and 14 of the women participated in the focus groups. Three women did not participate due to scheduling conflicts. Data presented here focused on comments pertinent to the program design that related to their participation experience. Seven major themes highlighted the value of the program for the participants. Themes focused on being given the opportunity to explore and redefine self-identity and the provision of ongoing support to succeed, despite prior failures. In addition, the importance of exercise variety and maintaining exercise behaviors, along with the value of the combined exercise and counseling model were highlighted. In terms of counseling, participants often changed their perceptions of counseling from an unwanted to beneficial and meaningful component, and spoke of the importance of participating in the program as a group.

Changing perceptions of counseling

At the initial assessment, many of the men asked if they could opt out of the counseling sessions. They were drawn to the program for the free exercise classes, but expressed no interest in the psychological component. It was explained to them that the counseling was a compulsory component of the whole intervention. During the focus groups, some men recalled their reluctance to participate due to a sense of stigma surrounding mental health services. They highlighted their beliefs that going to counseling made them appear less masculine. Other participants, both men and women, described that they simply did not think they needed counseling. However, post program, many realized after participating in the SGP sessions how much they needed and wanted counseling. Overall, being in a group had motivated everyone to

attend. One survivor stated, "Even if I didn't feel 100%, I thought I've gotta go, I can't bloody miss it. It was like a magnet drawing me here."

Although the time allocated to the exercise component of the program was greater, the SGP was equally important. One participant commented, "just all exercise wouldn't have been as meaningful to me, or it wouldn't have been as good without the counseling." In contrast to most others, one man described how the counseling, rather than the exercise, drew him to the program because he felt he had not dealt with the mental repercussions of prostate cancer. Some of the benefits participants derived from counseling included stress management, coping skills and having the group support.

The importance of participating in the intervention as a group

While the program could have been taught individually, "confronting the problems and coping with people that are suffering the same thing is very beneficial." The act of sharing became important for the groups. One woman described the counseling as "very helpful in sharing my journey with the group and learning from their experiences too. It was also extremely beneficial to learn techniques to manage stress, breathing and also in letting go of issues from the past."

Even the few men and women who did not feel the counseling was intrinsically important or useful still felt that participating in the counseling was crucial to the dynamic of the group. Therefore, the group aspect of the counseling made it important to them.

In the end, the fellowship of the men or women to collectively improve their health became the focus. Sharing experiences transcended every aspect of the program. One female participant described the group as "filling an enormous hole for me." A male participant shared

that “this group’s the only place I’ve actually spoken, and shared and talked with other guys who’ve been through and are going through the same experience.” Both men and women supported one participant’s statement that “at times cancer can make you feel very alone, and suddenly you realize there are others going through exactly the same thing.” That similarity and knowing that everyone else faced the same problems and had many of the same fears made the participants feel safer.

The real bonding came from participating, as a team, to see how much they could achieve together. One survivor stated, “I think it’s the group, and the sense of camaraderie, and look we’re all in it together, so we’re all going to really go for it.” As the participants reiterated, the exercise alone was not enough—it was “being with people who are in the same situation and listening to their stories as well.” The participants shared stories and jokes, which allowed them simultaneously to bond together and cope. One man summarized the total importance of the group:

> I tried a gym program before and didn’t last long. You didn’t feel like going and you’d miss one—you miss one, you miss a couple. Whereas the fact that we were here and it was a group, and I knew if I didn’t come I’d be missing out being with you guys. The group aspect of doing, again as men, doing something together physical builds that bond.

Value that the combined exercise and counseling model offered participants.

There was strong support for the combined nature of the program, whereby exercise was perceived to facilitate trust and communication going into the counseling sessions. One male suggested they would not have sought out counseling aside from this program but had found it

very helpful, and others stated they had suppressed their feelings without realizing it until these issues were discussed during the SGP. Thus the program assisted them to deal with these issues and move forward. Each participant described what the program meant to them, and how their lives changed. One stated, "I feel like I've actually taken control and hopefully will continue to get it back on track. And that obviously helps your wellbeing."

Another major theme was the interdependence of physical and mental wellbeing. While describing the decreases in health and fitness experienced since her diagnosis, one woman stated, "I think that plays a big part in the mental anguish of going through cancer, because the mind and the body are totally connected." In describing how exercise improved more than just physical health, some men stated:

> You're pushing the envelope in your own personal physical continuum, and then suddenly you begin to find out that it goes further. And for me, my sense of self, and my sense of manhood… this is terrific.

> Being here has given me that boost, and that's been connected also to that side of who I am as a person. But [the program] has also given me the confidence that that side of it has got some hope, because being more physically fit and sort of heart rate and all that sort of stuff, that's all gonna help.

Other major benefits described were having more control and focus in their lives, having a "kick-start" to a healthier lifestyle, and "having something to look forward to" three mornings each

week. Aside from the mind-body connection, the survivors also felt that exercising together allowed them to better participate in counseling together:

> If you look at prostate cancer it sets people back a bit, and the exercise actually is probably a better vehicle to deal with the mental aspects, particularly for men. Just in generally speaking … men don't openly deal with cancer and a lot of things as openly as women do and I think the exercise program just provides a vehicle starting to talk about it, starting to think about it more yourself, getting over that hump, getting past that worrisome element of it as well.

The men discussed together how this worked:

> It brings you here [to counseling] in sort of, bit of an open state. Something going around in your brain that makes you feel good.
>
> And it actually helps to set the scene for here.
>
> It brings us together, that we're all working on this thing, all stretching, puffing, panting, sweating and then after … you all come together.

It was not just the men who felt they needed the exercise to open their minds and mouths. One female participant also echoed the sentiment:

> If you're not sharing anything else, you're just getting in the room, you don't know each other, it's hard to open up. But when you're out there doing the exercises, in between or

on the bikes in the morning, you're chatting. So you feel more confident about expressing new thoughts because you learn to trust people quicker.

An opportunity to explore and redefine self-identity.

All survivors were at some stage in the process of redefining and coming to terms with an altered self-identity. The biggest change was that society now labeled them a cancer "survivor." One female participant said, "I don't want to say I'm a breast cancer survivor. I don't want to be known as that, I just want to be me."

Sexuality and body image were big factors in self-identity. For both men and women, the treatments impaired sexual function and desire, which distressed them greatly. For the women, losing one or both breasts and gaining fat mass negatively changed their body image, which subsequently decreased their libido. For the men, gaining fat mass also worsened their body image. However, they focused their changes in sexuality directly on their inability to have and maintain an erection. For the men, sexuality and self-identity conjoined to create their notion of manliness. One male survivor stated:

> It's a social stigma. You talk about your manhood—it's what hangs between your legs—and then all of a sudden if that's not working properly, you know psychologically that impacts about how you feel.

Support to succeed, despite prior failures.

The participants' previous attempts to improve their fitness had often met with failure. Some of the barriers described were pain; "the barrier of going to the gym with all the gym bunnies, is very daunting because you've got that low self esteem;" and not knowing what exercises to do or potentially which ones may cause further complications after treatment. Many

of the women shared the sentiment, "If I went to a gym and said I'm a breast cancer survivor I wouldn't feel comfortable with the other people." Conversely, at the intervention, "you're not seen, for want of a better word, as an oddity."

Participants found the lack of mental health support frustrating. One female participant described a series of support group sessions she had attended prior to enrolment as "once a month … and I hardly know anyone, and we don't touch on anything really useful." One male participant commented on the inadequacy of prostate cancer support for survivors in the local area:

> I've run a support group for almost 18 months with two other conveners. I've mentioned a little bit here about how I feel about the ineffectiveness of support groups with PCFA [Prostate Cancer Foundation of Australia]. And I feel very frustrated because I don't see an improvement down the track … and that is wrong.

The importance of exercise variety.

A variety of exercise modes were delivered to determine which ones the participants enjoyed and found beneficial and whether any modes were unsuitable. All the participants identified the variety of activities as paramount for their enjoyment and accomplishments in the program. They reiterated that their health was not just related to the areas where they had received surgery, such as the pelvis or chest, but their whole body. The variety of exercise allowed them to work on all aspects of fitness.

> I so appreciated the range of exercises, I've now got a whole host. And I never used to do flexibility and that in the gym, now I'm gonna go there and do both.

One male participant commented further about the increased awareness of "the physicality of our life." He told an anecdote:

> The other day, I was walking along with the basket full of produce, and I was doing this [mimics bicep curls]—oh fucking hell, what's happening? So I think we're becoming more aware of the virtues.

The importance of maintaining exercise behaviors

Many participants who attended the final interview were concerned that once they had graduated, they would backslide: "I've also noticed that since I've stopped the exercise program, I'm eating quite naughty things." The participants knew that, despite all the fitness gains they had made in the two months, "you can lose it much faster than you can gain it." The staff tried to prepare the graduates to continue exercising. For some, this involved writing them an exercise routine to take to their local gym or to complete at home. Others decided to take up yoga or tai chi lessons. They were concerned that, without the regularly scheduled program, they would not continue exercising, and thus they were sad to discontinue. As one male participant said:

> It's just like giving someone a piece of cake and you had a sample and think, 'jeez, that's delicious', and then, 'sorry, but you can't have any more now'. All we've done is have a taste, and it bloody tastes good, and now we want the bloody slab of this cake, with our coffee.

However, the participants also understood that they needed to take responsibility for their continued exercise, and could not rely solely on the intervention:

> Ultimately, we're responsible for ourselves and we are the ones that have to maintain our own physical wellbeing. So it's good that the ball has been passed back to us and we're now there with it, and we've got the tools you've given us—the physical experience working in the gym and working in the pool. I feel you've equipped us really well to establish a routine and, with gentle prodding from our great friends, I think there's no reason why we can't continue.

Discussion

Results show that the group exercise and counseling intervention was acceptable, feasible, and beneficial to both breast and prostate cancer survivors, as evidenced by participant attendance, retention rates and participant feedback. Of particular interest was that the men embraced and benefited from the SGP component, despite some of them having an initial reluctance to attend.

Importance of intervention components.

While many participants were initially reluctant to participate in the counseling, most found it extremely beneficial and important to their experience. Especially amongst men, it was cited that they found they did need counseling, even if they had not realized that before the intervention; this discovery of need for mental health services after engagement amongst male cancer survivors is common (Berglund et al., 2003). The SGP helped them cope with their experiences through the psychological exercises while sharing individual stories. Participants

found the exercise beneficial not only for improving their fitness, but also for helping them cope psychologically. The variety of exercises was described as paramount for their motivation, learning and enjoyment. Most importantly, the group bonding felt during the exercise sessions allowed for more open discussions and sharing within the SGP component.

Aside from any physiological improvements, the main outcome of the exercise component was to facilitate a sense of mutual aid, trust and group cohesion. Shared experience, both in the gym and through counseling, was the most recurrent theme of the feedback sessions. The group became the main source of enjoyment and motivation for the participants to attend the program. Mutual aid created and expressed between participants is often identified as a key benefit of group counseling interventions (Germino, 2001), and part of the reason why group psychotherapy has been called the 'gold standard' (Courneya et al., 2003).

Self-identity, prior experiences and overall benefits.

The participants' struggle to come to terms with a new self-identity was addressed in this program, with participants reporting that this intervention finally met their needs. Many stated that a large component was creating a sense of greater control over their health. Changes in self-identity, especially concerning sexuality, are common in cancer survivors (Binkley et al., 2012; Ferrell, Grant, Funk, Otis-Green, & Garcia, 1997; Lintz et al., 2003). A positive outcome of this study was that the men felt that the combination of exercise and SGP could help them regain a sense of their own masculinity. Conversely, the women did not discuss improved feelings of sexuality but rather focused on feelings of quality and wellbeing in their lives.

Maintenance of benefits and behaviors.

The participants felt concerned that the completion of the intervention would mean the end of their exercise routines. Research has shown that long-term physical activity engagement is unlikely among cancer survivors, even after participating in a structured intervention (Courneya et al., 2009; Ottenbacher et al., 2012). Further work is needed to investigate ways to help cancer survivors make lifestyle changes to permanently adopt physical activity.

Clinical Implications

Fitness and mental health professionals could collaboratively provide a multi-disciplined rehabilitation program for cancer survivors. Counselors could focus on building group cohesiveness, safety, and mutual aid, which may be achieved through group exercise participation. Fitness professionals could seek to address the specific physical rehabilitation needs of the cancer survivors and also provide a motivating and meaningful experience by including a wide variety of exercises in the program. Fitness and mental health professionals may find that forming collaborative approaches to care increases the quality of care they deliver to their mutual participants and increases participation and adherence rates to each of the components.

Conclusions

This study identified that group exercise facilitated supportive group psychotherapy, which was particularly important for many prostate cancer survivors who were initially reluctant to attend counseling. Together, the two intervention modes provided a greater meaning and benefit to breast and prostate cancer survivors' well-being than the participants felt either mode could have

alone. Despite some differences in experience between the two populations, we conclude that this intervention is suitable for both breast and prostate cancer survivors.

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Table 1 *Pilot Study Participant Characteristics*

Measure	Prostate cancer survivors (*n* = 11)	Breast cancer survivors (*n* = 17)
	n (%)	*n (%)*
Stage of cancer		
I	2 (18)	2 (12)
II	7 (64)	12 (70)
III	2 (18)	3 (18)
Underwent lumpectomy		3 (17)
Underwent mastectomy		11 (65)
Received chemotherapy		10 (59)
Received radiotherapy		9 (53)
Received/receiving hormone therapy		6 (35)
Underwent prostatectomy	10 (91)	
Received radiation (either external beam or brachytherapy)	4 (36)	
Underwent/undergoing androgen deprivation therapy	2 (18)	

