



Psychosocial Effects of Participating in the Abreast in a Boat Dragon Boat Program

SUMMARY REPORT

Catherine Sabiston, Meghan McDonough, Peter Crocker

School of Human Kinetics
The University of British Columbia
Room 220B War Memorial Gym
6081 University Boulevard
V6T 1Z1
(604) 822-0219
csabiston@shaw.ca
meghanmcdonough@telus.net

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Introduction

Purpose: To examine the effects that Abreast in a Boat has on participants' perceptions of themselves physically, motivation to participate in sport and physical activities, and social support resources.

Justification:

Abreast in a Boat, a dragon boating program for survivors of breast cancer was started as a research project to examine the effects of upper body exercise on breast cancer survivors (McKenzie, 1998). The physical benefits of this program include improved physical fitness without increases in lymphedema symptoms¹. Anecdotal evidence suggests that participation in the program leads to mental health improvements, but little research has been published to date that explores such effects in detail. Physical activity participation has been shown to lead to positive psychosocial health in the general population². Participants in Abreast in a Boat are a very unique population. Their experience of participating in a physical activity program and the program's effects on motivation, physical self-perceptions, and social support may in turn be unique. Body perceptions and the influence of physical activity on those perceptions may be distinct for a population that has undergone invasive treatments. Reasons for initiating and continuing participation in sport and physical activity might be different given the opportunities for social support from other breast cancer survivors. As in the general population, participation in sport and physical activity programs may result in positive psychosocial benefits, but the mechanisms through which this occurs and the experiences of the participants in this population may be quite unique.

Objectives:

1. To investigate explore new participants' perceptions of physical self, social support, and motivation both before participating in the dragon boat program and following the completion of one season (3 months) of participation.
2. To explore returning participants' retrospective and current perceptions of physical self, social support, and motivation to participate in sport and physical activity.

The following is a summary of the results from the interviews that were conducted during the 2003 Abreast in a Boat season. In total, 15 novice paddlers (Mean age: 54.23 years, ranging from 46-60 years) were interviewed prior to and following their first season of dragon boating. 20 experienced paddlers (Mean age: 58.69 years, ranging from 42-70 years) were interviewed and asked about their participation in the program, which ranged from 2 to 8 years. The interviews were audiotaped and were then transcribed verbatim and subjected to analyses. Overall, the group of women reported a range of education (high school, college, university, professional degrees and advanced graduate degrees). The women were participating 4-10 years post-diagnosis, and there was a diversity of breast cancer treatments represented, ranging from lymph node dissection and lumpectomies to mastectomies, radiation, chemotherapy, tomoxifen, and reconstructive surgery.

¹ McKenzie, D.C. (1998). Abreast in a Boat: A race against breast cancer. *Canadian Medical Association Journal*, 159, 376-378.

² Gauvin, L., & Spence, J.C. (1996). Physical activity and psychological well-being: Knowledge base, current issues, and caveats. *Nutrition Review*, 54, S53-S65.

Finding out about Abreast in a Boat

Where did you first hear about Abreast in a Boat?

- Friends
- Media
- Newsletter or web page
- Social events and retreats
- Knew people who were involved as coaches and participants
- Cancer clinic or hospital
- Support group
- Doctors and nurses
- Saw the Alcan races the year before
- Just knew

Reasons for involvement in Abreast in a Boat

Why did you get involved with Abreast in a Boat?

- Physical fitness: Exercise, structured activity, getting into shape, & losing weight
- Social affiliation: Friendships, being on a team, meeting new people
- Social support
- Fun, enjoyment, challenge
- Travel opportunities
- Health: Maintain and improve healthy lifestyles
- Get involved in breast cancer survivor movement

Goals and Expectations

What did you expect to get out of your participation in Abreast in a Boat?

Physical Goals and Expectations

- Increased fitness
- Increased strength
- Weight loss
- Muscle development
- Improved health
- Learn a new sport/improve dragon boating skill
- Enhanced physical confidence

Social Goals and Expectations

- Meet new people
- Make new friends
- Be part of a team
- Social support, including support for breast cancer

Mental Goals and Expectations

- Fun
- Motivation for change in healthy lifestyle
- Decreases in stress and anxiety
- Reduced fears: water, swimming, social/team

Other Expectations

- Opportunity to travel to races
- Winning
- Raising awareness of breast cancer

Physical description

Participants were asked to describe themselves physically at the time of the interview(s).

Amongst participants, the following physical changes resulting from Abreast in a Boat were discussed:

Appearance

- Decreased clothing size
- Feels younger
- More muscular

“My arms changed a little. I think they got a little more cut, you know (laugh). I’m 50 years old, I want to be cut! I don’t care.”

Weight

- Lost weight (but not as much as expected)
- Gained weight (muscle mass)
- No weight change/weight maintenance

“But the weight, I think the weight probably is a little higher. I mean, I think I weigh more than I did because of the muscles...so the scales don’t show the muscles, it still says 10lbs more than what I was before all of this started.”

Aerobic Fitness

- Increased fitness
- No physical fitness changes

“And I was quite surprised, like when you start out, “oh I’m never going to get this, I’m never going to get the energy up.” So back to the gym, and it kind of makes you continue with the gym and keep pushing, pushing, pushing because you know that once you get to the races, you’ve got to have this endurance built up and I found that as I progressed through, by the time that we got to our Alcan races, that 500 meters was like no problem at all.”

Energy

- Experienced energy fluctuations due to illness and injury
- No change in energy
- Increased energy

“I have more energy for, for everything, not just for exercising but for like doing household chores, and getting through the day, and enjoying work more, and being more physical at work, and you know.”

Strength

- Increased strength

“I feel 100% stronger...I never thought about it, and then as things were coming, now it's really important. Like I really want to be in shape and build some muscles and things.”

“I never thought that I would be a jogger...I never jogged in my life. But you know, now I am jogging a little bit. It just feels so good. It's fun, yeah.”

Sport Competence

- Dragon boat skill improved
- Felt their fitness, strength, and confidence gained through Abreast in a Boat led them to improve in other activities and/or try new activities.

Health

- All participants described themselves as generally healthy
- A few participants reported physical injuries and/or illnesses that conflicted with their dragon boat participation
- Changed diet to improve their health
- Still struggling to describe self as healthy

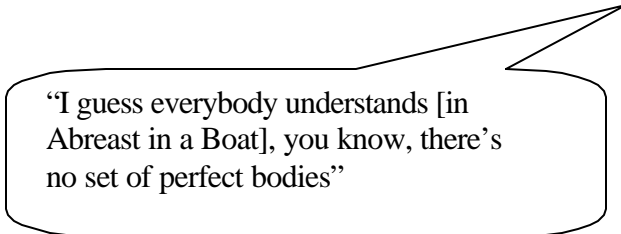
In addition to the above, some of the participants came to describe themselves as athletes through their involvement in dragon boating. This identity is important to them – it is inspirational, empowering and foundational to their sense of self. Abreast in a Boat changed how many women felt about themselves physically and changed the factors that influenced how they felt about themselves.

“You walk into my house and you see, like, running shoes, and there's sports bags, and there's a life jacket, and there's a paddle. It feels like an athlete's house.”

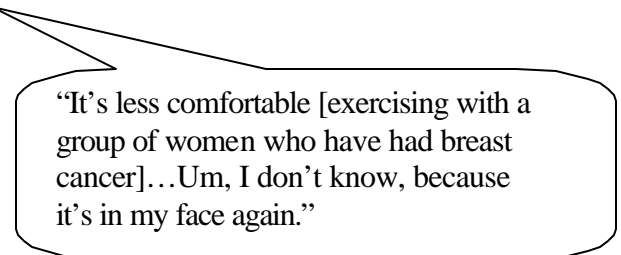
“ I think being thin or, you know, keeping my weight down just for health sake, that was important. But now, it's to keep it down but also to be in really good shape...to be able to run, and to cycle, play tennis, and do whatever I want. And have some muscles.”

Body-Related Issues

The participants were asked about their body images. The women discussed having negative perceptions about their bodies that were related to the physical changes they have endured as a result of breast cancer treatments (i.e., hair loss, changes in skin, loss of breast(s), weight fluctuations). Some women discussed Abreast in a Boat as an environment where they felt comfortable with these physical changes, and other women felt that Abreast in a Boat was a constant reminder of their experiences with breast cancer. Also, some participants felt that the pink shirts and the atmosphere of Abreast in a Boat made them stand out as a special population.



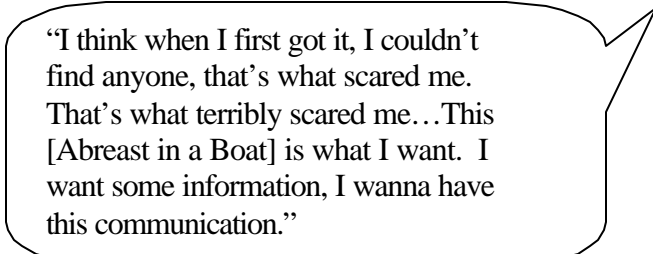
“I guess everybody understands [in Abreast in a Boat], you know, there’s no set of perfect bodies”



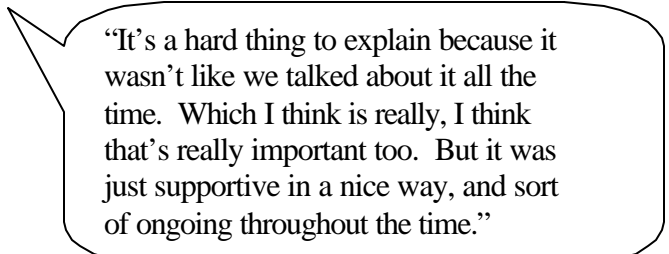
“It’s less comfortable [exercising with a group of women who have had breast cancer]...Um, I don’t know, because it’s in my face again.”

Social Support

Participants were asked to identify people who provided them with support, and to discuss how they were supported both in coping with breast cancer and in participating in the dragon boat program. This support was typically provided by a partner, family members, friends, other Abreast in a Boat members, support groups, work colleagues, doctors, or a higher power. Support from other Abreast in a Boat members was unique because teammates had a first-hand understanding of the breast cancer experience, but that support was provided within a context where discussing breast cancer was not the primary focus.



“I think when I first got it, I couldn’t find anyone, that’s what scared me. That’s what terribly scared me... This [Abreast in a Boat] is what I want. I want some information, I wanna have this communication.”



“It’s a hard thing to explain because it wasn’t like we talked about it all the time. Which I think is really, I think that’s really important too. But it was just supportive in a nice way, and sort of ongoing throughout the time.”

Social support for coping with breast cancer was primarily emotional support (e.g. being there, talking, listening) and tangible support (primarily assistance with personal and household tasks, and managing treatments). In contrast, social support for dragon boat was primarily esteem support (e.g. encouragement, watching races, congratulating).

While Abreast in a Boat was a valuable social support resource to many participants, some reported not needing support from this group because they received enough support in other areas of their lives. Some also reported that they had difficulty opening up and connecting to the group because of the emphasis on breast cancer—because being part of Abreast in a Boat affirmed and constantly reminded them of their status as a survivor.

Administration

Following the main questions in each interview, participants were invited to discuss other thoughts that they wanted to share. From these discussions, a number of points were raised that are best described as administrative issues surrounding the Abreast in a Boat organization. While these issues were not the focus of this study, the results are presented below because participants and the organization's administration may find them to be useful feedback. Please note that these comments represent information spontaneously volunteered by participants. Because specific questions on these issues were not posed, this section does not necessarily represent the entire range of opinions of the participants on all of these issues.

- The coaches were great
- Liked how the organization is very upfront about the expectations and commitment involved when novices are joining
- The Abreast in a Boat society is very well organized
- Like having novices in each crew: adds excitement for the experienced paddlers
- Really like the diversity of each team: anyone from 20-something to 70-plus can do it
- Liked that the teams and the coaches changed around each year. Provides an opportunity to meet new people each season.
- 3 months a year is the right amount of time
- Want the season to be longer
- Many participants, novices and experienced participants alike, discussed being inspired to volunteer to help at the organization/administration level because they liked what was going on in the organization, or felt that they had something to offer the organization to help work towards positive change
- Many women expressed being very impressed by and grateful of the work that Dr. Don McKenzie and the people on the board of the society have done to create and continue Abreast in a Boat
- It is very important for the coaches to have some knowledge of the breast cancer experience.
- Need to do more training before starting dragon boat for the first time
- Need more teams to fill the needs of women with breast cancer
- Teams should be able to share paddlers at races if one team is short and another has too many
- Almost all of the women discussed the challenge of being there to participate, but at the same time being in a race and wanting to do their best to win. Opinions were very divided about whether they wanted a more competitive model or liked the non-competitive position of the group.
- Don't like the song that they sing because it focuses on breast cancer, not on the participants as athletes
- Need to focus more on supporting Abreast in a Boat members
- The organization is primarily made up of women who are already well supported. Would like to see them reach out to women with breast cancer who are more socially isolated or financially challenged

- There are not many visible minorities represented in the organization. It would be helpful to reach out to cultural groups where women with breast cancer may be particularly isolated because discussing breast cancer is still taboo.
- Should consider recruiting new members through doctors to target a broader demographic of breast cancer survivors.
- The organization needs to make some changes now that it has grown so large
- Don't like the political issues and discussions around the administration of the organization. Discussions and arguments of this nature can be divisive.
- Some participants struggled with the idea of raising awareness:
 - Some felt that people are aware of breast cancer already, so what are they raising awareness of?
 - Some felt that the goal of raising awareness, although a major focus of the organization, is really a secondary aim for them as participants. They are there to paddle.

While opinions and comments of this nature obviously varied widely and touched on a large number of issues, the dominant message from participants was that Abreast in a Boat was a positive experience, but many had thoughts on how the organization could continue to improve.

Thank You and Research Publications

We would like to thank all of the women who took the time and the courage to discuss their experiences with us. Your contribution is what makes this research possible.

We hope to do justice to your efforts by communicating the results of this project through this report to people within the Abreast in a Boat organization, and to the scientific community through presentations at conferences and publications in scientific journals.

To date, portions of this research have been presented at the following venues:

- North American Society for the Psychology of Sport and Physical Activity
Vancouver, BC. June 2004
- Canadian Society for Exercise Physiology
Saskatoon, SK. October 2004
- Canadian Society for Psychomotor Learning and Sport Psychology
Saskatoon, SK. October 2004

These presentations can be viewed on our web page at
<http://www.hkin.educ.ubc.ca/behavioural/index.html>

We are also currently writing manuscripts for print publication. Details on these publications will be available on our website in the future.

In addition, the results of this research are being used to develop further research projects, so that we can continue to document more about the experiences of participants in programs like Abreast in a Boat, and inform future practice.

CHANGES IN PHYSICAL SELF-PERCEPTIONS AND PHYSICAL CHARACTERISTICS AMONG NOVICE ABREAST IN A BOAT PARTICIPANTS
Presented at the North American Society for Psychology of Sport and Physical Activity (June 2004). Vancouver, BC.

Meghan McDonough, Catherine Sabiston, Don McKenzie, Diana Jespersen, & Peter Crocker
The University of British Columbia

Abreast in a Boat is a dragon boat program for survivors of breast cancer. The physical benefits of dragon boating for breast cancer survivors have been investigated, but little is known about the social and psychological implications of participating in this program. This study aimed to better understand the physical self-perceptions of novice Abreast in a Boat participants, examine changes in physical self-perceptions over the first season in the program, and compare perceived physical-self changes to changes in actual strength and body composition. Fifteen novice Abreast in a Boat volunteers participated in two 45-60 minute interviews at the beginning and end of the three-month dragon boat season. The semi-structured interviews included discussions of physical self-perceptions and any perceived changes in physical self. Eight of these women also completed assessments of height, weight, BMI, sum of skinfolds, maximum strength, and VO_2 . A content analysis of the physical self interview data indicated that the women varied greatly in the degree of change they experienced. Perceived changes were experienced in strength, endurance, general feelings of fitness, dragon boating skill, confidence and motivation to try other physical activities, weight, and body composition. Several women also discussed a sense of athletic identity as a result of their participation in the dragon boat program. Physical measures indicated that there were significant changes only in strength and VO_2 over the three month period. While the women experienced significant changes in strength and endurance, many of them perceived changes in multiple facets of the physical self. While exercise programs for breast cancer survivors, like Abreast in a Boat, have a positive impact on participants' physical health, they can also play a role in contributing to positive physical self-perceptions after breast cancer.

BODY-RELATED CONCERNS IN BREAST CANCER SURVIVORS INVOLVED IN DRAGON BOAT ACTIVITY. Presented at the Canadian Society for Psychomotor Learning and Sport Psychology (October 2004). Saskatoon, Saskatchewan.

C.M. Sabiston, M.H. McDonough, & P.R.E. Crocker. (University of British Columbia)

Exercise is a common prescription for women who have survived breast cancer. Research indicates that physical activity protocols are effective in enhancing both physiological and psychological health during and following breast cancer treatments (e.g., Courneya et al., 2002). Dragon boating is a popular form of exercise that survivors of breast cancer engage in for both physical and psychosocial reasons (McDonough et al., 2004). However, the prominence and public awareness of breast cancer dragon boat teams may create situations in which evaluations by others are inevitable. Participants may also feel evaluated by others as a result of the physical changes their bodies have endured due to invasive medical treatments. It is therefore important to examine the perceptions and prevalence of body related concerns in breast cancer survivors. Concern about body-specific evaluations by others is referred to as social physique anxiety (SPA). SPA is theoretically grounded in self-presentation/social anxiety frameworks, as well as indirectly associated with stress and coping perspectives (Hart et al., 1989; Kowalski & Leary, 1995; Lazarus, 1993). Investigations of SPA in special populations have been limited.

The purpose of this research was to examine reports of social physique anxiety among novice and experienced participants in *Abreast in a Boat*, and compare SPA in both social environments and in sport situations (including dragon boating). 15 novice and 20 experienced *Abreast in a Boat* participants volunteered to take part in 60-90 minute interviews. Qualitative methodologies were used given the scarce measurement instruments specific to this population, and the need to gain in-depth reports of SPA. The semi-structured interviews were grounded in self-presentation and physical self theoretical perspectives. The interviews were transcribed verbatim, QSR NUDIST 6.0 was used as a data storage tool, and themes were induced using content analysis.

Most novice and experienced paddlers discussed awareness of concerns and perceived evaluations about their physiques. Appraisals of these concerns ranged from threat to acceptance. Some women reported having little to no thoughts about their bodies in social situations. Conversely, some paddlers discussed general feelings of being uncomfortable in environments where their altered feminine body would be noticed. Issues around weight change as a result of breast cancer treatments also emerged as potential precursors to SPA. In sport situations, lack of competence was reported as an antecedent of SPA. Experienced and novice women reported different experiences of SPA influenced by being around other breast cancer survivors in the dragon boats. Overall, differences in SPA between novice and experienced paddlers emerged, and some of the antecedents, perceived appraisals, and consequences of social physique anxiety were unanticipated and are explained from self-presentation and stress perspectives.

Funded by Social Sciences and Humanities Research Council of Canada and Michael Smith Foundation for Health Research doctoral fellowships.

PADDLING ABREAST: SOCIAL SUPPORT TYPES, NETWORKS, AND CHANGE AMONG NOVICE BREAST CANCER SURVIVOR DRAGON BOATERS

Presented at the Canadian Society for Psychomotor Learning and Sport Psychology (October 2004). Saskatoon, Saskatchewan.

McDonough, M.H., Sabiston, C.M., Crocker, P.R.E.

School of Human Kinetics, The University of British Columbia

Numerous physical and psychosocial benefits of dragon boating among breast cancer survivors have been explored (e.g. Baldwin & Courneya, 1997; Courneya, Mackay, & McKenzie, 2002; Pinto et al., 2003; Turner et al., 2004). Anecdotal evidence also suggests social support is facilitated through participation in dragon boating (McKenzie, 1998). Dragon boating is a unique physical activity in that it requires coaction among a large number of participants. It is an ideal activity for breast cancer survivors because it can accommodate individuals with a wide range of skill and fitness levels on one team while providing an adequate intensity for each individual to experience a training effect (McKenzie, 1998). The opportunity for a large group to work together towards a common goal can facilitate social interactions and support that can have a positive influence on coping with breast cancer and engaging in an active lifestyle. The purpose of this study was to explore social support networks and types of support reported by novice Abreast in a Boat participants, and changes in support over the course of their first season. Fourteen women (M age = 54.23, SD = 4.66) participated in two 45 to 60 minute interviews at the beginning and end of a three month dragon boat season. The semi-structured interviews included a discussion of social support network, types of support, and support changes. The interviews were transcribed verbatim, and content analyzed with the aid of QSR NUDIST N6 by identifying common themes emerging from the data. Change was examined by creating profile summaries for each individual with respect to the emergent themes at the two time points, and comparing their responses on these themes. Many women expressed a desire to gain social benefits such as affiliation, social support, and being part of a team. These expectations were met in most cases, and many participants identified receiving unanticipated social benefits, including making social connections with other breast cancer survivors. Some participants had negative social experiences that did not meet their expectations, such as interpersonal conflict, social exclusion, and feeling overwhelmed by having a constant reminder of breast cancer. Most participants' existing social support networks remained stable, but expanded to include teammates who could provide a unique source of support for coping with breast cancer and for physical activity. Some participants did not experience change in their social support networks or support received because they felt excluded, were not ready to develop close relationships with other breast cancer survivors, or did not want support. Implications of these findings are discussed with respect to social support theory and coping with breast cancer and maintaining an active lifestyle.

This research is supported by The Social Sciences and Humanities Research Council of Canada and Michael Smith Foundation for Health Research doctoral fellowships.

PHYSIOLOGICAL AND PSYCHOLOGICAL CHANGE DURING A NOVICE SEASON OF DRAGON BOAT PADDLING AMONG BREAST CANCER SURVIVORS. Presented at the Canadian Society for Exercise Physiology (October, 2004). Saskatoon, Saskatchewan.

Catherine M. Sabiston, Meghan H. McDonough, Don C. McKenzie, Diana Jespersen, & Peter R.E. Crocker. University of British Columbia.

The purpose of this study was to examine the implications of physiological and psychological changes experienced by Abreast in a Boat participants during their first 12-weeks of dragon boat paddling. The participants (N=8, M age=55 years) completed assessments of BMI, sum of skinfolds (SOS), maximum strength (10RM), VO₂, and interview questions regarding their expectations and physical self-perceptions during time 1 (pre-season) and time 2 (post-season). Content analysis was used to deduce themes from the interview data. Several participants reported feeling stronger, increases in endurance and competence, and weight fluctuations. Significant changes in 10RM and VO₂ were observed over the 12-weeks. The perceived changes, coupled with the increased strength and aerobic capacity, appear to contribute to the participants' confidence and interest in other physical activities, athletic identity, and competitiveness. Employing interview data to compliment traditional physiological measures allowed for greater insight into the benefits of the Abreast in a Boat program. The women's increased interest and confidence to become involved in other physical activities may result in long-term health benefits, since perceptions of competence are significant predictors of initiating and maintaining active lifestyles. The implications of Abreast in a Boat therefore go beyond physiological change, and are only evident when researchers employ a combination of data collection methods.

Funded by Michael Smith Foundation for Health Research and Social Sciences and Humanities Research Council of Canada Doctoral Fellowships.