

Amazon Heart: An Exploration of the Role of Challenge Events in Personal Growth After Breast Cancer

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High-profile events where in response to the experience of breast cancer women take on adventure activities to raise awareness and/or funds for breast cancer are increasing. These activities offer physical and psychological challenges within a peer support group setting. We investigated the experiences of 21 breast cancer survivors who participated in a 7-day breast cancer awareness motorcycle ride. Assessments included a qualitative pre/postinterview, solicited diary, pre-6-month follow-up survey. Measures included satisfaction with life, distress, happiness, global well being, meaning in life. Motivators were a desire for peer support, to promote breast cancer awareness, enjoyment, and personal growth. The ride incorporated physical and emotional challenge. A positive peer support experience led to feelings of inner peace, accomplishment, self-learning, a positive perspective, and improved social support. For a minority of women peer support or recreational expectations

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were not met resulting in negative feelings. No significant changes were observed over time in adjustment measures. Adventure events where women undertake emotional and physical challenge in an environment of group peer support provide opportunity for personal growth. In this context, peer support may provide the catalyst for the experience to become transformational and so is critical to generating positive outcomes. Realistic expectations of the ride are also influential.

KEYWORDS *cancer, peer support, personal growth, posttraumatic transformation*

INTRODUCTION

Recently there has been an increasing focus in psycho-oncology research on positive responses to the experience of cancer and the proposal that some aspects of life may actually improve after cancer. This approach has been described as positive psychology where individuals undergo personal growth subsequent to adversity or trauma (Joseph & Limley, 2005). On this view, following adversity individuals may experience enhanced personal relationships, a change in the perception of the self, and finally, an altered philosophy of life. In cancer, this approach proposes that a cancer diagnosis is a transitional event that alters an individual's assumptions about the world, with positive and negative consequences (Andrykowski et al., 1996). Thus, after cancer, the individual may undergo a process of self-transformation that incorporates the meaning of the cancer into that person's worldview and integrates aspects of the cancer into a redefined self (Carpenter, Brokkopp, & Andrykowski, 1999).

This process of transformation has been operationalized as benefit finding. In this approach, benefit finding is conceptualized as posttraumatic personal growth, where individuals find a positive change in their life as a consequence of their cancer experience (Tomich & Helgeson, 2004). Research in this area has typically assessed benefit finding by self-report survey across a range of domains such as family, worldview, social contact, daily activity, career, and religion. Tomich and Helgeson (2004) found that in women with more advanced breast cancer, early benefit finding predicted negative affect 9 months later. These authors suggested that benefit finding may reflect denial; or that a failure to realize early expected benefits may lead to violated expectations and distress over time. By contrast, Carver and Antoni (2004) found that initial benefit finding in women diagnosed with breast cancer predicted more positive emotions and better quality of life and less depression 4 to 7 years later. Schulz and Mohamed (2004) assessed patients with gastrointestinal malignancies and found that social support was predictive of benefit finding over time, highlighting the importance of

considering the interaction between coping, personal resources, and outcomes. Without adequate social support, benefit finding may be difficult to achieve. Hence, not all cancer patients may experience positive life changes as a result of their illness. To date, how and under what conditions benefit finding after cancer is likely to occur remains unclear. An understanding of how positive outcomes are derived is necessary if this aspect of adjustment is to be promoted through psychosocial intervention.

Community-based events where breast cancer survivors undertake physically and emotionally difficult activity challenges to raise awareness and/or funds for breast cancer may provide a unique ecological phenomenon from which to extend our present understanding of self-transformation or benefit finding after cancer. For example, in 1995 a group of 17 breast cancer survivors from the United States undertook to climb Mt. Aconcagua (23,000 ft) in Argentina to raise funds and awareness for the breast cancer. This was followed by others with several subsequent mountain challenges including Mt. McKinley in Alaska, Mt. Fuji in Japan, and Mt. Kilimanjaro in Africa. A similar phenomena can be observed in the development and expansion globally of Dragon Boat racing teams for breast cancer survivors that offer physical challenge with a competitive goal in a supportive group setting. The first team, *Abreast in a Boat*, was established in Vancouver in February 1996, and there are now more than 145 teams globally in 14 countries. Women who participate in Dragon Boat racing have reported a number of benefits from participation, including improved physical and emotional well-being, increased self-esteem, improved social support, and transcendence of their breast cancer experience to develop a positive outlook (Unruh & Elvin, 2004). However, negative aspects were also reported, specifically emotional distress when other team members experienced a cancer recurrence. Thus, women's experiences of such events may have positive and negative aspects.

Motorcycle riding has provided a focus for similar programs. In 1996 a group of Australian breast cancer survivors, the *Fence liners*, undertook a 3-month 17,000-km motorcycle journey around Australia to raise funds and awareness for breast cancer. In 2004, two young breast cancer survivors from the United States and Australia established a not-for-profit charity called *Amazon Heart* that has conducted peer support adventures for young breast cancer survivors in the United States, United Kingdom, and Australia. These 7-to10-day rides raise awareness and funds for breast cancer. The core aim of the rides is to provide opportunity for peer support, physical and emotional challenge, and growth and celebration of life after breast cancer, mirroring the personal experiences of the *Amazon Heart* founders. Anecdotally, ride participants have reported improvements in their psychosocial adjustment and attitude toward life after breast cancer as a result of taking part in these rides (Campbell & Dwyer, 2006). This is consistent with Unruh and Elvin (2004), where women described positive life changes after

participation in Dragon Boating that suggested the event provided a stimulus for posttraumatic growth.

We propose that for women with breast cancer physical challenge or adventure events may provide a mechanism for achieving personal transformation with regards to a change in the perception of the self and an altered philosophy of life (Joseph & Limley, 2005). Enhanced personal relationships may develop from the group support aspect of these events that may provide a unique source of peer support. Accordingly, we undertook an exploratory ecological qualitative study with women with breast cancer who were participating in an Amazon Heart challenge motorcycle event to investigate women's experiences from the framework of (1) self-transformation and (2) peer support. On the basis of previous anecdotal reports of improved psychosocial well-being after such events we also assessed positive and negative adjustment before and after ride participation.

METHOD

Participants

Participants were 21 of the 22 women who undertook the 2005 Australian motorcycle ride across two Australian states from Sydney to Noosa, a 7-day trip of approximately 745 miles (1200 km). Participants were from the United States ($n = 10$) and Australia ($n = 11$) and of these women, 18 were riders and 3 were part of the support crew driving the lead and sweep vans. Women who participated in the support crew did so on the basis of insufficient competency in motorcycle riding. The majority of participants considered themselves to be experienced motorcycle riders (68.4%) with a mean length of riding experience on a motorcycle of 11 years ($SD = 20.51$).

Participants' demographic and medical characteristics are presented in Table 1. The mean age of women at diagnosis of breast cancer in Queensland is 66.2 years, hence this was a comparatively young breast cancer cohort (Queensland Cancer Registry, 2008).

Amazon Heart

The primary purpose of the Amazon Heart ride was to create a unique peer support opportunity, as well as raise funds and awareness of breast cancer. Breast cancer survivors were invited to apply for 20 motorcycle riding and four support van driver positions. Preference was given to experienced motorcycle riders, although two positions were reserved for new riders who gained their license specifically for this event. On the basis that Amazon Heart's mission is to promote issues important for younger women with breast cancer a selection preference was given to "young" survivors, defined

TABLE 1 Sociodemographic and Medical Characteristics of Respondents

Sociodemographics		Medical characteristics	
Age (years)		Age at diagnosis (yrs)	
<i>M (SD)</i>	45.1 (5.8)	<i>M (SD)</i>	39.9 (6.2)
Range	38–56	Range	27–55
Marital status & children (%)		Time since diagnosis (years)	
Married	61	<i>M (SD)</i>	4.8 (2.1)
Had children	63	Range	1–11
Educational level (%)		Cancer treatments received (%)	
University degree	58	Conservative breast surgery	38
Trade/technical certificate	26	Mastectomy	62
High school	16	Radiation	43
Employment status (%)		Chemotherapy	67
Full-time	68	Hormone	33
Part-time/Casual	32		

as those who were premenopausal or had young children at the time of diagnosis. Applications were sought internationally via e-mail to the databases of the Young Survival Coalition in the United States, and Amazon Heart's own international e-mail database, as well as through the newsletter of Breast Cancer Network Australia and media coverage in Australia.

Once participants were selected for the event they were provided with a detailed information guide about fundraising, media relations, and preparation for the ride. A Yahoo e-mail group was also set up so the women could meet each other and share their experiences and ideas in the lead-up to the ride. New riders were contacted fortnightly by telephone to follow their progress through training and provide any assistance required in gaining their license.

Prior to the event all riders were assisted in organizing test rides of their loan Harley-Davidson motorcycles. Participants arrived 2 days before the start of the event to attend an evening briefing where event safety policies were outlined and the peer support nature of the event was discussed. At this time participants were invited to introduce themselves and share their expectations and anxieties about the ride within the group. Motorcycle riding of itself has inherent risks, and though the women were experienced in riding motorcycles, few had experience in riding in a group formation and the ride strategies needed to safely negotiate traffic in a group formation (e.g., merging into highway traffic and changing lanes as a large ride group). As well, half of the participants were from the United States and so were riding with different road rules, and for most riders the roads were unfamiliar. Finally, the loaned bikes would typically be of a greater weight and different handling to the women's usual motorcycles. To address this aspect of the challenge the next 2 days were spent in training rides before the ride formally commenced so the women could become accustomed to

their new motorcycles and receive instructions about riding in a staggered patrol group formation, local road rules, and event structure.

Procedure and Materials

Owing to the paucity of data regarding the experiences of women with breast cancer participating in these activities, we utilized two qualitative techniques (pre/post in-depth interviews and personal journals) to provide an understanding of women's motivations for participating and their personal experience of the event as it relates to their cancer journey. Thus in a prospective approach three qualitative data sets were available to compare and identify convergent and divergent themes. As well, we administered brief standardized self-report measures before the ride and 6 months subsequently to assess well-being, psychosocial distress, and meaning in life. Ethical clearance for the study was obtained from the University of Queensland. All participants provided written informed consent.

Qualitative Assessments

First, women undertook in-depth interviews by telephone before and after the ride. The interviews were audiotaped. In the preride interviews women were asked about their motivation for participating in the ride, what positive or negative effects they anticipated from the ride, and if they felt that breast cancer had affected their view of themselves. The postride interview occurred in the 2 weeks after the ride; and at this time women were asked about what positive or negative effects they had actually experienced from the ride and if they felt their view of themselves had changed as a consequence of the ride. All 21 women completed preride interviews, and 20 women completed postride interviews.

Second, women kept a study-solicited written diary of key aspects of the ride experience for the duration of the ride (Jones, 2000). This approach allows for the collection of prospective qualitative data reducing recall bias and potentially capturing moments of change. Diaries were unstructured to allow the women to report the most salient aspects of the ride from their own perspectives (Clayton & Thorne, 2000). In all, 19 women provided diaries to the researchers.

Quantitative Measures

Psychosocial distress and well being. Global quality of life was assessed with the generic 5-item Satisfaction with Life measure (Diener, Emmons, Larsen, & Griffin, 1985). Examples of items include "In most ways my life is close to the ideal" and "If I could live my life over again I would change almost nothing." Participants are asked to indicate level of agreement with

five statements over the last week using a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale has good reliability ($\alpha = .89$) and has been used previously with cancer patients (Diener, Suh, Lucas, & Smith, 1999; Steginga, Occhipinti, Gardiner, Yaxley, & Heathcote, 2004).

Psychological distress was assessed with the Distress Thermometer that is a single-item question assessing global distress in the past week on a scale of 0 (*no distress*) to 10 (*extreme distress*) (Holland, 1997; National Comprehensive Cancer Network, 2002). This scale has good sensitivity and specificity when used with a cutoff point of ≥ 4 and has comparable accuracy with longer distress screening instruments (Ransom, Jacobsen, & Booth-Jones, 2006). The Subjective Happiness Scale (Fordyce, 1988) asked women to indicate their current level of happiness on a scale of 0 (*extremely unhappy*) to 10 (*extremely happy*). General health was assessed with the Global Health Status rating (Rowan, 1994) that includes a single item "How would you describe your general health?" on a 5-point scale ranging from 1 (*very poor*) to 5 (*excellent*).

Meaning in life or benefit finding. Meaning in life was assessed with a 4-item scale previously developed by (Tomich & Helgeson, 2002). This scale includes items such as "In the past month how much energy have you spent trying to figure out why breast cancer happened to you?" and "How much good has come out of having breast cancer?" that are rated on a 5-point Likert-type scale ranging from 1 (*none*) to 5 (*a lot*). The first two items are averaged to form a composite score for the extent of the individuals search for meaning. The latter two are considered separately as indicators of harm or good from the experience. In a sample of breast cancer survivors search for meaning was found to be associated with negative affect (Tomich & Helgeson, 2002).

In all, 20 women completed preride surveys, and 19 completed these at 6 months.

Analysis

Qualitative data. The pre- and postride audiotaped interviews were transcribed verbatim, and complete copies of the journal entries were retained for detailed analysis. Three of the researchers (JD, DP, SC) independently reviewed each of the three qualitative data sets and utilized a process of open coding to identify units of meaning that reflected common themes related to the event experience. Once themes were identified these were then compared to the constructs identified in the study literature review to assess for congruence. From this a concept map was drawn to demonstrate how these themes appeared to interrelate. All data was then reviewed again independently by these researchers to check validity and ensure that the identified themes and emergent concept map were congruent with the data

(Clayton & Thorne, 2000). Finally, the data sets were compared to each other as a final method of verification of the themes and concept map.

Questionnaire data. Mean scores and standard deviations were calculated and compared to existing norms. Following this paired *t* tests were undertaken to assess for change between the Time 1 (T1, preride) and Time 2 (T2, 6 months postride) assessments.

RESULTS

Qualitative Data

MOTIVATORS TO PARTICIPATE

The desire to obtain peer support from women perceived as similar to them presented as a strong motivator for women to undertake the ride and was also central to the benefits women described as occurring as an outcome of the ride. The nature of this support was viewed as different to existing support groups, and being in a position to reciprocate this and support other women on the ride was also important.

When I saw it I thought that's sort of what I want to do ... Rather than sitting around in therapy groups and support groups or going to hospital situations or any more to do with the medical side of things. To just get out there and celebrate life ... have fun and being with other people who have been through the same thing, but in another environment, not like an artificially set up environment.

Preride interview. Other motivators described included a desire to increase breast cancer awareness in the community, thus taking on a consumer advocate role. Personal enjoyment and pleasure was also reported. Women described a desire for achieving personal growth in a range of ways that included a sense of personal challenge and mastery, confronting their breast cancer experience and challenging their own mortality, gaining a more positive life perspective, and enhancing their sense of self esteem.

I think it's a very important thing that hit home again was reaching into the community and showing other, not just breast cancer survivors, but other cancer survivors, and even the general community that life goes on and that there are fantastic opportunities from the breast cancer experience. (Preride interview)

There is a sense of a great physical challenge and the risk and danger element in motorcycling. It's like challenging that issue of mortality and taking back some control and choosing to engage in an activity that does

have some inherent risks in it but making your choice rather than having it put on you. (Preride interview)

I don't want to be limited and I think that's why I like the idea of the motorcycle and I like the idea of going halfway round the world to Australia and it felt like I was breaking out of my box and that sounds like a healthy thing to do. (Preride interview)

Challenge Characteristics

In undertaking this ride women anticipated and experienced a number of personal challenges that included practical physical challenges (e.g., weather, road rules, physicality of the riding, shared accommodation), and emotional challenges that were from being away from their usual social network, making new friendships and joining a new group, coping with strong emotions during the ride.

Just the actual whether I can physically cope you know, and that I don't get tired . . . that's my main concern I think. I just want to be able to do it, I want to be able to complete it. . . I don't want to let anyone down. (Preride interview)

I'm kind of a loner I suppose. . . that has me a little worried because I'm not a big people person and you know a week and a half with twenty strangers is kind of a bit daunting. . . So, I suppose in a sense that's my biggest challenge, to see how I get along with these people. (Preride interview)

Social Context as a Change Setting

Within the diaries and in the postride interviews a pattern emerged suggesting how these themes interrelated. First, the bike ride presented as a specific social context characterized by the physical challenge of the ride, isolation from the woman's usual social network, the development of a new social network within a novel geographic and physical environment, and finally the experience of public exposure as a breast cancer advocate.

I really feel like this will be a special ride and group of women. I know for myself that the bonds from last year's rides are just getting stronger. The new riders seem to be fitting right into the group and joining our Amazon Spirit. It is amazing to watch as each ride unfolds. (Journal entry, Day 1)

Today was the toughest day physically for me. Lots of freeway driving and really high speeds, the wind is a killer and the pace fast and furious.

From my vantage point I felt like we were Hells Angels or something. Riding like an intense storm. (Journal entry, Day 5)

When we arrived at the Zoo we were greeted once again by breast cancer survivors, almost 100 of them. It made me very emotional to see them all cheering for our arrival. This support makes this trip all the more special. (Journal entry, Day 6)

Within this social context peer support then presented as the catalyst of change. The processes by which this occurred included open emotional expression, storytelling, sharing of concerns, social identification, and the creation or reestablishment of close connections with other women who have also experienced breast cancer.

Our first night, wow!!! Stories, crying. Joy. And now I have new sisters. My life could not be better right now. (Journal entry, Day 1)

Within half an hour we were talking about the cancer experience. First time I'd ever really talked to someone like me. . .you don't realise what you've been missing till its there. (Journal entry, Day 1)

I feel that the bonding of relationships went that notch deeper. Also, some of the conversations were about the issues that we are facing and some personal stories as well. Which is what this ride is all about—I think that by the end of the week this will have happened. (Journal entry, Day 6)

When the peer support experience resulted in a close connection with other women, then positive outcomes were described including feelings of inner peace, accomplishment, self-learning, a positive perspective shift, and improved social support. This occurred for most participants.

I felt as if I was a real integral part of an organisation that was. . .giving a message and making a difference. I just felt you know just a very strong part of the whole. . .it felt good. (Postride interview)

I kind of broke out of my mould here of my life, from being a wife and a mum and I travelled across, literally across the world, and just took two weeks to do something for myself. And, so in that sense it fulfilled everything and even more so and I proved to myself I could do something that I'd never done before and I felt really proud of myself. I came home feeling really complete. (Postride interview)

I feel like I came back calmer and more confident and better perspective on my life and what's important to me. (Postride interview)

I was part of something. . .that being a survivor is an encouragement to others. On they way home I was to share. . .that there a difference in me—a peace. (Journal entry postride)

However, for a minority of riders (less than 15%) this feeling of connection did not occur, and this along with the physical challenges of the ride or unmet recreational expectations resulted in disappointment and negative feelings.

Although I have come on this very social, structured trip, I feel unusually introspective. While many of these women are warm and welcoming, I do not feel a natural kinship with them as I was hoping. (Journal entry, second day)

The final day of the ride and we had a hard time. It was very hot and miserable and the physical toll is showing up . . . I am so homesick . . . I have felt very isolated from my family and it has affected my mood. (Journal entry, last ride day)

Assimilating the Experience

Six months after the ride women reported positive effects with regards to the creation of new friendships and for some a feeling of having moved on from their breast cancer experience.

Over the last 10 years since my diagnosis, I have been taking on many breast cancer “causes.” Many fundraising, awareness walks, runs and celebrations of survivorship. I have waved the flags, worn the pins and bracelets. I felt it my duty to “carry the torch” for the cure. Some kind of closure or release happened to me after my 2nd (Amazon Heart) ride (2005 Oz). I took myself off of the breast cancer speakers group I was on, limited my involvement in several events. I’ve completed my transformation—come full circle—back to me—not just a 10 year survivor—a complete woman (who rides)!!!

I have a better sense of closure and it fulfilled my need for self expression.

The benefit for me is having met some new friends. A secondary benefit—accepting I’m not cut out to ride a motorbike!

It has made me a stronger and more confident and independent person. Given me a huge network of friends who share a common bond.

By contrast, a minority of women reported unmet expectations and feelings of lack of support after the ride.

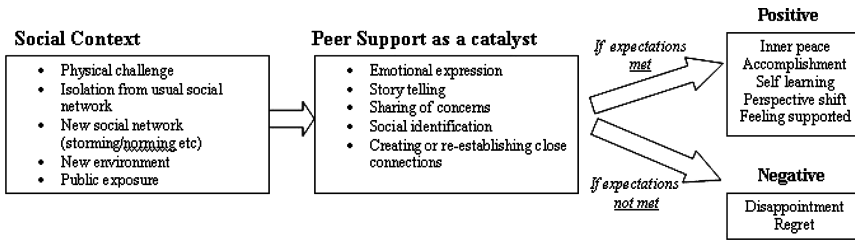


FIGURE 1 The process of growth after breast cancer through a transformational “Peak” experience.

Depression after the ride. It took up way too much of my life before the ride. During the ride it was all excitement and “go go go” all the time. Wasn’t prepared for nothing at the end of the ride . . . Not really my cup of tea, I guess. Too touchy-feely and “group,” which is exactly why I never joined a breast cancer support group in the first place.

I felt a little lost when it all came to an end and I had to come home and not have the support.

The Process of Growth

From these themes we identified a process of growth where the social context of physical challenge in a novel social setting and unfamiliar external environment provided a social context where peer support acted as a potential catalyst for personal change or growth. If ride and peer support expectations were met then positive outcomes such as feelings of inner peace, accomplishment, and self-learning provided for a perspective shift consistent with posttransformational growth. However, if expectations were not met disappointment and regret could occur. Figure 1 presents a concept map summarising this with a proposed pathway for the interaction between social context, peer support, expectations, and potential positive and negative outcomes.

Self-Report Measures

Women reported good satisfaction with life before the ride and this was unchanged at the 6-month postassessment (T1: $M = 23.55$, $SD = 8.39$ vs. T2: $M = 22.15$, $SD = 8.99$, $p = .57$). Using the cutoff score of 4, women’s levels of distress were low at pretest and remained unchanged over time (T1: $M = 3.59$, $SD = 2.79$ vs. T2: $M = 3.69$, $SD = 3.14$, $p = .93$); happiness was high and consistent over time (T1: $M = 7.67$, $SD = 1.38$ vs. T2: $M = 7.81$, $SD = 1.05$, $p = .72$). Global health was very good before the ride with a trend for improvement over time (T1: $M = 3.94$, $SD = .89$ vs. T2: $M = 4.24$,

$SD = 1.03$, $p = .06$). Effort expended searching for meaning did not change over time (T1: $M = 2.19$, $SD = .93$ vs. T2: $M = 2.06$, $SD = .98$, $p = .63$). Mean scores appeared to be higher (by more than one standard deviation) than those previously reported by Tomich and Helgeson (2002) ($M = 1.17$, SD not reported) for breast cancer survivors.

Finally, 6 months after the ride, 83% of women advised they would participate in the ride again; 100% advised that they would recommend the ride to others; 68% were participating on the Amazon Heart postevent on-line e-mail network.

DISCUSSION

The current results provide unique ecological data concerning the motivations and experiences of women who participate in challenging breast cancer awareness events. From this data a picture emerges of how the mechanisms of seeking meaning and benefit finding may interact with peer support in determining outcomes. Women's motivations for undertaking the Amazon Heart ride centered largely on personal growth and the regaining of control after the diagnosis of breast cancer. This included the desire to confront their breast cancer experience and challenge their mortality, to gain a more positive life perspective, and to enhance their sense of self-esteem. The group peer support environment provided the context for this transformation along with the physical and emotional challenge of the event.

Luszczynska, Mohamed, and Schwarzer (2005) suggested that active assimilative coping strategies are more likely to lead to perceived personal growth after cancer. On this view, assimilative coping is where an individual attempts to reduce discrepancies between their goals before cancer, and goals that seem possible for them after cancer, by active intervention such as active coping or planning. People who utilize assimilative coping would also be more likely to have social interaction with others who have also experienced cancer by virtue of their active approach to coping. This in turn increases sensitivity to the concerns of others. By contrast, accommodative coping includes strategies that aim to adjust life goals to meet the constraints that have resulted from the cancer. Both ways of coping are proposed as necessary for adjustment, with accommodative coping linked to acceptance and assimilative coping linked to benefit finding. Participation in group events such as Amazon Heart may represent an example of assimilative coping where the goal is to complete the ride, and where peer supports as well as being a sought and desired outcome is also the catalyst for change.

In this regard, to date peer support has been largely described in the literature as a process of emotional and informational support based on shared experience that has the potential to improve coping, reduce social

isolation, and lessen distress (Dunn, Steginga, Millichap, & Rosoman, 2003; Dunn, Steginga, Occhipinti, & Wilson, 1999; Steginga, Pinnock, Gardner, Gardiner, & Dunn, 2005). The current study is the first to provide data supporting the idea that peer support may be a necessary prerequisite for successful self-transformation after cancer in certain contexts. Peer support in breast cancer has a long heritage internationally and has proven itself to be suitable across cultures, gender, and cancer site (Dunn et al., 2003; Steginga et al., 2007). Future research should broaden its conceptualization of the benefits of peer support to empirically investigate how such support may facilitate posttraumatic growth after cancer.

Happiness, distress, life satisfaction, and meaning making did not change over the course of this study. The lack of a positive change may reflect a ceiling effect given that women in the study reported very good general health, and happiness, and low cancer-related distress. Although based on their young age at diagnosis these women can be seen as at risk of higher psychological morbidity, they did not score highly on any distress measures suggesting they were high functioning at baseline. The disjunct between the women's self-reports of growth and improved perspective and the lack of change in the quantitative scales may also reflect a measurement issue. Specifically, it may be that the scales utilized did not tap into the domains of adjustment effected by ride participation. A recent meta-analysis found that benefit finding was related to less depression, and more positive well-being but also more intrusion and avoidance (Helgeson, Reynolds, & Tomich, 2006). No relationship was found between benefit finding and anxiety, global distress, or quality of life; and it was proposed that benefit finding may be independent of distress. In this regard, Park and Helgeson (2006) suggested that peoples' beliefs about whether they have grown as a result of a traumatic event may be more important than an objective measure of change. The measurement of self-transformation after cancer is a future challenge for research in the field.

Women who participated in this ride were a young, highly educated patient subgroup that scored higher on seeking meaning than comparison groups (Tomich & Helgeson, 2002). Previous research has found that women and younger people are more likely to report personal growth after cancer than men and older people (Foley et al., 2006; Lechner et al., 2003). Younger women diagnosed with breast cancer face a significant gap between where they find themselves with regard to facing a life-threatening illness and the suspension of previous life goals, and where they will have expected to be in their life trajectory. This can have the effect of isolating these women from their previous peer network and increasing feelings of stigma and separateness (Dunn & Steginga, 2000). For such women, peer support events such as Amazon Heart may play a unique role in promoting assimilation of the cancer experience in their life view after cancer.

Although after the ride most ride participants strongly positively endorsed this activity, a minority reported disappointment with the ride experience physically and emotionally and also with the peer support they encountered. These findings underscore the importance of event organizers ensuring participants have realistic expectations of the ride experience before the event. This could be achieved through providing testimonials to potential participants from previous riders and by including a goal clarification exercise in application procedures. Team and rapport building exercises early in the ride event could enhance the peer support experience, although it is important to recognize that this event is not a professional care service, but rather a community development activity that has emerged from individuals' personal challenges and aspirations. As well, the building of a postevent community through remote technologies such as the Internet may have further potential for providing support after the ride and reducing feelings of isolation or sadness once the heightened ride experience is completed.

Limitations

The current study reports ecological and cross-sectional data from which it is not possible to infer causality. However, as an exploratory study it provides a conceptual model for further empirical research. Such research could prospectively investigate the relationships between peer support and benefit finding using validated measures with a larger sample and also assess how challenge events as a coping approach interacts with gender and other sociodemographic and individual variables such as hope and optimism (Helgeson et al., 2006).

Implications for Clinical Practice

The dual phenomena of personal transformation and benefit finding as responses to a traumatic event continue to find expression in the literature (Park & Helgeson, 2006). This research is of particular application in the context of cancer where engaging in emotionally and physically challenging activities is increasingly presented in the community as adaptive and therapeutic. The findings of this study confirm self-report of positive outcomes that result from participation but at the same time demonstrate that not all will benefit from engaging in such activities. For practitioners care needs to be taken in the design and promotion of such events to guard against the formation of unrealistically optimistic expectations from participation. At the same time, strategies to monitor and then intervene for those where the experience is less than satisfactory should be incorporated into planning.

CONCLUSION

In the current study peer support emerged as a potential mediating factor in the process of posttraumatic growth or benefit finding after cancer. Peer support remains underrepresented in the literature generally, and the current study serves to reinforce the need for a greater understanding of this naturalistically occurring and profoundly important dynamic in the supportive care arena.

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