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Fostering Growth in the Survivorship Experience: Investigating Breast Cancer Survivors' Lived Experiences Scaling Mt. Kilimanjaro from a Posttraumatic Growth Perspective

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Abstract

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Keywords

Breast Cancer, Posttraumatic Growth, Physical Activity, Lived Experience, Women's Health, Case Study

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Fostering Growth in the Survivorship Experience: Investigating Breast Cancer Survivors' Lived Experiences Scaling Mt. Kilimanjaro from a Posttraumatic Growth Perspective

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The aim of this study was to use an ethnographic case study approach to explore breast cancer survivors' experiences scaling Mt. Kilimanjaro from a posttraumatic growth perspective. Three breast cancer survivors who participated in interviews and observations during a nine-day climb on the mountain were included in this study. Findings are presented first as three individual case studies and then offered as a cross-case analysis to emphasize themes that illustrated the women's shared experiences of growing from adversity. Participation in the climb on Mt. Kilimanjaro provided an opportunity for the women to (a) nurture priorities, (b) foster self-belief, and (c) cultivate connections. Future research should conduct investigations into the role of physical activity as a facilitator of the posttraumatic growth process. Key Words: Breast Cancer, Posttraumatic Growth, Physical Activity, Lived Experience, Women's Health, Case Study.

Breast cancer remains the most frequently diagnosed cancer in North American women. Breast cancer is perceived as fatal (Kearney, 2006), but people are increasingly surviving the life threatening disease. Due to medical advances, the five-year relative survival rate for female breast cancer patients has improved from 63% in the early 1960s to 89% today (<http://www.cancer.org>). These statistics demonstrate that while breast cancer is a serious health issue for many North American women and others around the world, so, too, is survivorship. Defined as a life-long, dynamic process, survivorship begins when women have completed medical treatment for breast cancer yet live with the memories of their treatment and the possibility of a cancer reoccurrence (Pelusi, 1997; Thomas-MacLean, 2004). Although survivorship is considered the most important outcome of a breast cancer experience, it is understudied, and thus, the least understood aspect of the disease (Kaiser, 2008). Researching how breast cancer survivors (BCS) actively construct their lives and the meaning of cancer to better understand the process of adjustment following the disease is of particular interest.

It is well understood that recovering from breast cancer can be a difficult experience. Intrusive medical procedures and aversive treatment often lead survivors to experience negative outcomes including decreased psychosocial adjustment, negative changes in life perspective, decreased physical function, and other psychosocial disruptions (Arman & Rehnsfeldt, 2003; Bloom, 2002). As a result, researchers have

primarily investigated the potential for negative psychosocial sequelae (Stanton, Bower, & Low, 2006). However, recently there has been an increasing focus in psycho-oncology research on positive psychological changes to the experience of cancer (Bower et al., 2005; Carver & Antoni, 2004; Cordova, Cunningham, Carlson, & Andrykowski, 2001; Tomich & Helgeson, 2002). Such changes are reflected in experiences of posttraumatic growth (PTG). According to Tedeschi and Calhoun (2004), PTG is defined as “positive psychological change experienced as a result of the struggle with highly challenging life circumstances” (p.1). It describes the experience of individuals whose development or growth post-trauma is transformative or deeply profound.

The major areas of growth whereby people often experience positive psychological change after trauma include changes in self-perception, changes in relationships with others, and changes in one’s general philosophy of life (Tedeschi & Calhoun, 2004). According to Taku, Cann, Calhoun, and Tedeschi (2008), changes in perception of self include an increased awareness of personal strength, resiliency or autonomy, as well as creating new opportunities. Changes in interpersonal relationships consist of greater compassion, closeness in relationships, or altruism. Changes in philosophy of life involve a greater appreciation of life or spiritual/existential development. These post trauma changes have been variously labeled as meaning focused coping (Folkman, 2008), positive reappraisal or benefit finding/reminding (Tennen & Affleck, 2002), stress-related growth (Park, Cohen, & Murch, 1996), thriving (Abraido-Lanza, Guier, & Colon, 1998), flourishing (Ryff & Singer, 1998), positive emotions (Folkman & Moskowitz, 2000), and adversarial growth (Linley & Joseph, 2004). These terms have been used interchangeably within the literature to describe the growth reported by people after various adverse events. For the purpose of this study, the term PTG was adopted because it focuses more distinctly on the consequences of major crises (i.e., breast cancer) rather than lower level stress. Moreover, it embraces a comprehensive approach to post trauma changes because it implies that growth can coexist with psychological distress (Tedeschi & Calhoun, 2004).

The positive changes described by women who have managed the disturbances associated with breast cancer include improved relationships, new possibilities for one’s life, a greater appreciation for life, a greater sense of personal strength, and spiritual development (Tomich & Helgeson, 2002). In a study conducted by Sears, Stanton, and Danoff-Burg (2003), they found that 83% of breast cancer patients reported finding some benefit in their experience such as positive changes in health-related behaviours. Taylor, Lichtman, and Wood (1984) found that BCS reported a revised outlook on life including gaining a new life perspective or attitude as a result of their struggle with the disease. Recently, other work has found links to positive psychology growth among BCS involved in challenging activities (Burke & Sabiston, 2010; Dunn, Campbell, Penn, Dwyer, & Chambers, 2009; Sabiston, McDonough, & Crocker, 2007). For example, BCS involved a breast cancer awareness motorcycle ride experienced a sense of personal transformation including feelings of inner peace, accomplishment, self-learning, a positive perspective, and improved social support (Dunn et al., 2009). Sabiston et al. (2007) found links to PTG among BCS involved in a dragon boat program. In particular, dragon boating has been found to facilitate psychological strength, appreciation for life, closer relationships, and new possibilities and opportunities.

According to Dunn et al. (2009), little is known about how and under what conditions positive responses to the experience of cancer are likely to occur. For instance, there is a marked absence of research on this phenomenon among BCS within the context of sport and physical activity. As such, researchers know very little about how specific physical activity contexts shape people's experiences of PTG. This gap in the literature is a significant oversight given the important health benefits associated with participation in physical activity among BCS such as dragon boating (McDonough, Sabiston, & Crocker, 2008; Parry 2007, 2008; Sabiston et al., 2007) and scaling Mt. Kilimanjaro (Burke & Sabiston, 2010). According to Dunn et al., emotionally and physically challenging activities may provide a vehicle for women with breast cancer to experience personal transformation. They also suggest that adventure events are becoming presented in the breast cancer community as adaptive and therapeutic. For this reason, a better understanding of the physical activity context (i.e., high altitude mountain trekking) in which positive psychological changes are generated is necessary if this aspect of adjustment is to be promoted through health interventions. Neglecting to consider the mental health benefits of physical activity participation among BCS may hinder improved health and wellbeing of this population. Failing to conduct research in this area may sustain a lack of awareness and contribute to an underestimation of the importance of engaging in physical activity post-treatment. BCS need to be informed of strategies (i.e., physical activity) to remain well and improve their quality of life after cancer. A physical challenge such as scaling Mt. Kilimanjaro may be an activity that provides positive effects of physical activity on the mental health of BCS.

Mt. Kilimanjaro is located in Northern Tanzania and is the highest mountain in Africa (5,895 meters). Although it is often considered a difficult endeavor that is both physically and mentally demanding, the number of people who attempt to scale the mountain is continually rising. An average climb to the summit takes six days and involves walking uphill about 80 km over terrain that can be both steep and grueling. Camping, cold temperatures, and effects of high altitude including shortage of breath, headaches, and difficulty sleeping are part of the experience. Though the climb is technically very easy and requires no real previous climbing experience, it remains a challenging undertaking. For this reason, detailed preparation, physical fitness and stamina, and an ability to acclimatize are crucial for a successful climb. Breast cancer survivors may take on this challenge because the inherent nature of the activity of high altitude mountain trekking lends itself to obvious potential for gains during the survivorship experience by helping them encounter positive and satisfying thoughts and emotions (Burke & Sabiston, 2010). Performing in such an environment may help promote experiences of PTG and, therefore, provides an ideal context for researchers in health and exercise psychology wanting to study this phenomenon among people facing major life crises.

Arrays of methodologies and underlying epistemologies have been used in the investigation of PTG. However, most research has relied on the use of narrow scales such as the Stress-Related Growth Scale (Park et al., 1996), Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996), and Benefit Finding Scale (Mohr et al., 1999) to investigate specific predictions, associations, and consequences of the positive changes that can emerge from the struggle with crisis. A disadvantage of this type of research methodology is the inability to investigate all of the domains of growth and associated

mechanisms (McMillen, 2004). Using standardized psychometric measures, it is not possible to fully illustrate the different pathways through which growth is manifested. For this reason, there is a lack of understanding on the PTG phenomenon in social context and, more specifically, people's perspectives of trauma-related growth during participation in different physical activity settings. It is this gap in the literature that calls for an emergent methodology, such as an ethnographic case study approach, that takes us beyond the one-dimensional assessments of PTG.

The use of an ethnographic case study approach was well suited and necessary in this study to understand how the unique activity of scaling Mt. Kilimanjaro contributed to experiences of PTG and improved mental health. Adopting this type of methodology provided a broad and comprehensive understanding of the experiences of individuals who have faced a major life crisis and opened a window on how PTG was shaped by the environment of high altitude mountaineering. Since the PTG model is based on people's own internal perspective (Tedeschi & Calhoun, 2004), it seemed important to give priority and respect to the social context in which the women constructed their own views of their lives after breast cancer. Thus, the purpose of this study was to use a case study approach to analyze three BCS' lived experiences scaling Mt. Kilimanjaro from a PTG perspective. The present study draws on ethnographic data collected from a larger research project (Burke & Sabiston, 2010) - the crux of which was to explore BCS' experiences of subjective well-being during a climb on Mt. Kilimanjaro.

Method

Participants

The three participants ranged in age from 43 to 63 years and had been diagnosed with Stage I to Stage III breast cancer between four and 12 years before the study. Participants had undergone multiple treatments for breast cancer. All three of the women had chemotherapy, radiation therapy, and tamoxifen. One woman had a mastectomy and two women had a lumpectomy. All of the participants were employed full-time. Participants had no prior high altitude trekking experience and were attempting to scale the mountain for the first time, yet they indicated that they had some past experience with sport and/or exercise (i.e., walking, yoga, hiking, skiing, and dragon boating) before and after diagnosis. Nonetheless, all participants reported that preparing for and participating in the climb on Mt. Kilimanjaro involved a significant increase in their activity levels.

A multi-case study approach (Stake, 2006) was used in the study to explore experiences of PTG within a real-life context. This type of qualitative methodology was deemed appropriate since it enabled a comprehensive portrayal of PTG in a social context through an exploration of real cases operating in real situations. Three cases (out of a total of six cases) comprised the case study. Each case, or breast cancer survivor, was purposively selected based on data from a previous study investigating their experiences of subjective well-being during a climb on Mt. Kilimanjaro. The participants were chosen to participate in the present study based on their relevance to the phenomenon under investigation. That is, their reported experiences scaling Mt. Kilimanjaro added most to the portrayal of PTG in real time (Stake, 2006) and therefore enhanced our understanding of the phenomenon under investigation.

Given the ethnographic nature of our study and small sample, we recognize that it is inappropriate for us to attempt to generalize the findings to BCS or other special populations attempting to scale Mt Kilimanjaro or other mountains. Having said this, we are aware of Wolcott's (1995) view that we must attempt to learn as much as we can from studying a single case or a very small number of cases. As such, the participants chosen for this study were deemed cases rich in information (Stake, 2006) and intended to be illuminative rather than definitive. Furthermore, participants were selected based on time since diagnosis/treatment. Since studies have found a consistent and significant increase in PTGI scores over 18 months among women with breast cancer (e.g., see Manne et al., 2004), inclusion criteria involved a minimum of 18 months post-treatment.

Procedure

Following approval from the University Behavioural Research Ethics Board, the primary researcher (who is an experienced high altitude mountaineer) joined a Mt. Kilimanjaro expedition *organized by an initiative in Toronto, Ontario*. The trekking expedition consisted of 37 people including six BCS (for a review of the data collection procedures, see Burke & Sabiston, 2010). This study is a secondary analysis of previous data collected on Mt Kilimanjaro. In particular, a case study analysis (each case was analyzed individually and across case) was used to provide insight into the PTG phenomenon.

An intra case analysis was carried out with the purpose of introducing the reader to the women who participated in the study and gaining insight into how each woman experienced PTG during the climb on the mountain. By providing background information on the women and focusing on how they experienced PTG, we were able to gain a holistic view of the phenomenon under investigation. This involved reading the transcripts in order to construct a chronicled and summarized account of the phenomenon under investigation for each of the three participants. The aim was to emphasize the women's experiences of PTG in social context by exploring each case in detail and providing a thick description of the phenomenon under investigation. In this way, we focused on how each of the three women experienced PTG during the climb on the mountain.

A cross case analysis (Stake, 2006) was then carried out with the purpose of developing general knowledge about the main themes that made up the content of the BCS' experiences of PTG in relation to their climb on the mountain. The aim was to emphasize the common relationships across cases. In this regard, we focused on what (as opposed to why or how) the participants said and did in order to identify patterns of similarity between cases. Analyzing what people say and do allows researchers to uncover the content and meaning of their experiences (Smith & Sparkes, 2005). The first step involved re-reading the interview transcripts and field diary with a view of identifying under what circumstances the phenomenon of PTG was alluded to in the participants' accounts of their experiences scaling the mountain. Analytic memos were used as we made preliminary and tentative connections to the broad domains of PTG that we identified the participants experiencing. This included situations in which participants spoke about their struggles with breast cancer in relation to their philosophy of life, perception of self, and relationship with others. These domains of growth were

interconnected rather than independent and discrete categories. Therefore, the data provided to illuminate each of these domains in action are connected and, at times, can be interchanged. Next, connections across the data were explored in an attempt to identify themes (i.e., nurturing priorities, fostering self-belief, and cultivating connections) that reflected the women's experience of growing from adversity. As part of this process, meaning units were noted by coding and categorizing the underlying experiences of PTG based on the women's behaviors and responses.

The criteria for judging the quality of this study were informed by a non-realist position, which contends that good-quality research is evaluated using criteria that are consistent with its own internal meaning structures and purposes (Smith & Deemer, 2000; Sparkes & Smith, 2009). Given the nature of the inquiry, the list of characteristics of prolonged engagement, persistent observation, impact, and authenticity is deemed appropriate for this particular study. Prolonged engagement was achieved by the first author (Shaunna Burke) immersing herself in the everyday activities experienced by the women during the nine-day climb on the mountain. Absorbing myself in the day-to-day lives of the women, helped to build trust and rapport and allowed for an in-depth account of what took place throughout the climb. Persistent observation was accomplished by the first author (Shaunna Burke) consistently engaging in purposeful observations on what she saw and heard. This strategy allowed for context-rich and meaningful thick descriptions of the participants' experiences (Wolcott, 2009). Impact was achieved by representing the women's experiences in a manner that portrays their thoughts, behaviors, and emotional reactions and responses. Credibility was also ascertained by means of authenticity. Direct quotes from the participants were included in the representations of their experiences on the mountain. Also, the participants were afforded the opportunity to contribute and share their views after reading the transcribed interviews and field notes.

Results

Results are presented in two sections. In the first section, the results are organized as separate cases in order to provide background information on each of the three women and open a window on the phenomenon under investigation by depicting how PTG was experienced from different perspectives. A short vignette of each of the three women's experiences of PTG, based on their own words, is presented in order to capture a holistic essence of the subject studied and to understand the essential meaning of the data (Noor, 2008).

In the second section, the results are organized into themes that emerged from the data to illustrate the commonalities among the BCS' experiences of PTG in relation to their climb on Mt Kilimanjaro. Rich, in-depth information "using ample but non-technical description and narrative" (Stake, 2006, p. vii) is provided to highlight the phenomenon in detail and show its complexity. Key themes are presented using the voice of the three women to convey their experiences of PTG. Field notes, including direct quotes from informal conversations and interactions with the participants, are also used to illustrate how the BCS constructed their understanding of PTG during the climb on the mountain. Pseudonyms are used throughout for confidentiality purposes.

Individual Experiences of PTG

Three women (represented as cases) experienced PTG in relation to their climb on Mt Kilimanjaro. These women had unique personal accounts of their experiences with breast cancer and scaling the mountain. The following is a brief description of each case.

Case A: Jessica. Jessica, who is White and in her mid forties, is a single working mother of three teenage children, about 10 years ago, she was diagnosed with Stage three breast cancer. For her, the disease was one more stressful and very difficult incident that she had to cope with in her life. Despite the hardships associated with the diagnosis and treatment, her experience with the disease led to fundamental changes in both her philosophy of life and way of living. As a result of cancer, she dealt with existential questions and found a renewed way of living closer to her own values and beliefs. She pointed out that the most significant change resulting from cancer was a newfound belief in herself and a more positive attitude toward life. Her experience with breast cancer also led to a new view of relationships. Before cancer, Jessica felt alone and distrusting of others. After cancer, she embraced true and supportive relationships and began to see the good in people.

Participating in the climb on Mt. Kilimanjaro fulfilled Jessica's renewed desire to live fully. Although the climb was met with anticipation and concern as to whether she would be able to physically reach her goal of standing on the summit, she embraced the challenge. She welcomed the physical discomforts (i.e., shortness of breath, difficult living conditions) associated with the climb and maintained a positive attitude throughout the expedition. She fostered close relationships with some of the other BCS who were on the trip, accepting support from them during difficult moments. Jessica's experience with breast cancer resulted in weight gain and physical inactivity. The climb on Mt. Kilimanjaro represented an opportunity for her to test her physical capabilities and prove to herself that she was once again healthy and strong.

Case B: Bonnie. Bonnie, who is White and in her mid-sixties, is married with three grown children, about 12 years ago, she was diagnosed with stage two breast cancer. Awareness of the disease fostered a sense of terror and sudden fear of dying, causing her to reflect on her life and seek help from a therapist. She pointed out that talking about death and dying was the most positive thing that happened to her. It led to a new insight into her situation and a desire to lead a new kind of life – a life that involved more than just looking after her family. She began setting personal goals and living for herself. Inspired by the movie *The Bucket List*, she began traveling, skiing, training for her pilots licence, and much more. After cancer, Bonnie felt that she gained control over her own life.

Climbing Mt. Kilimanjaro was never a goal of hers but, when the opportunity surfaced, Bonnie embraced it. Although she was excited by the chance to spend time in the mountains, she was ultimately driven to join the expedition for the opportunity to travel to Africa and immerse herself in the culture. Throughout the trek Bonnie placed importance on the process of climbing the mountain, rather than merely getting to the summit. She enjoyed the camaraderie of the group (especially her interactions with the porters and African guides) and appreciated the beauty of the views around her. For

Bonnie, the climb was a physical and mental challenge. She pushed both her body and mind beyond what she believed she was capable of, proving to herself that she was strong and capable.

Case C: Rachel. Rachel, who is East Indian and in her early forties, is single and works full-time, about four years ago she was diagnosed with Stage one breast cancer. Her knowledge of the disease created a sense of shock and confusion, as she struggled to make sense of her reality. She pointed out that her experience with the disease was very stressful defining her world as black and her spirit broken. However, cancer also resulted in positive changes. As Rachel gave herself time and space to reflect on her needs and wants, she began re-evaluating her life including work and her relationships with others. Buried under a general feeling of “being stuck,” she became aware of what was important to her. This realization gave her the chance to start over. It led to a new beginning that entailed living more than she has ever lived. It also allowed her to experience a feeling of “letting the mask fall” as she began feeling like she could be more herself around others.

Mountains were a defining image in Rachel’s recovery from the disease. In her art therapy classes, she drew a picture of herself crossing over a mountain pass and used this image as a tool to overcome breast cancer and get to “the other side.” For this reason, climbing Mt. Kilimanjaro was very important for Rachel. She pointed out that it was her destiny to climb the mountain. She appreciated every moment of the journey including the sunflowers in the nearby fields, the mountain sunrise and sunsets, getting to know the African guides and porters. For Rachel, climbing the mountain represented an opportunity for her to fully recover from the disease.

Shared Experiences of PTG

A changed philosophy of life: Nurturing priorities. The three women characterized breast cancer as fear and uncertainty about the future. Cancer presented a significant adaptive challenge to the women, especially soon after diagnosis and treatment. They perceived breast cancer as a threat of death and reported responding with fear, helplessness, and anxiety. However, the women also reported positive changes in their philosophy of life as a result of their struggle with breast cancer. Their encounter with the disease led them to embrace new experiences and lead a more active life. Climbing Mt. Kilimanjaro seemed to help them to nurture their priorities by continuing to live a life that was meaningful to them. It enabled them to live their lives in a way that mirrored their philosophy of life. In the words of Bonnie:

I was a stay at home mom, raising my three kids. My family was number one. I catered maybe too much to my kids. Holidays and travel revolved around my husband’s work. That was my life. I didn’t give it a second thought. I enjoyed it. I enjoyed every minute of it. I was not aware that I was missing out on anything; that this wasn’t for me until I was faced with cancer. All of a sudden, the end was starring me in the face. That’s when I really lost it. I froze in fear. I was terrified of dying. It wasn’t until I began to talk about death and dying and came to terms with the fact that I would die, whether it was a year from now or ten years from now, that I made a

shift and my perspective of life changed. I began thinking of what I wanted to do with my life and I started setting goals for myself. I really enjoy taking on new challenges and striving toward a goal. And climbing Mt. Kilimanjaro is one of those goals. Being here allows me to look after myself and continue doing what is important to me. (Interview 1)

Accepting her mortality seemed to help Bonnie construct a new understanding of what was important for her. Living her life in a way that involved setting personal goals and striving to attain them characterized her new outlook on life. Climbing Mt. Kilimanjaro appeared to nurture this newfound perspective by allowing her to work toward a worthy goal. It also helped her to look after herself by doing something for herself. When asked about her expectations regarding the climb, she expanded on her new philosophy of life after cancer. She shared:

Since breast cancer, I tend to focus more on the journey of life as opposed to the end result. For example, driving to the cottage I always take a different route. My husband likes to take the same route. For him, it is about getting there as fast as you can. But for me, I like to focus on the journey. I like to try a different route even if it takes us double the amount of time to get there. And for me, being here in Africa is not about getting to the summit; it's the process of climbing the mountain that is important. I am really enjoying every minute of the climb and it won't bother me if I don't reach the top of the mountain. (Interview 2)

For Bonnie, focusing on the process of climbing the mountain characterized how she approached life after cancer. However, as we got closer to the summit it was apparent that she began thinking about the outcome of the climb. The following field note illustrates this contradiction:

It was the day before the summit push. During supper she turned to the woman sitting beside her and shared, "I hope I make it to the top. It would be nice to get there." (Bonnie, Observation 3)

Rachel talked about how her encounter with breast cancer led to a new way a living her life post-treatment. The following field note illustrates how she approached life after cancer:

During the trek from the Second cave to Mauenzi Tarn, the group stopped to take a short break from the walk. As people began clustering together in small groups, she sought me out and sat beside me on a rock. As we engaged in a conversation about the events of the day, she repeated how much she was enjoying being on the mountain. She then paused, took a sip of her water and looked out onto the horizon at the outline of the summit of Kilimanjaro in the distance. She had a serious look in her eyes. She became very pensive and began to reflect on her cancer experience and shared: "I felt like I was close to death and I was given a second chance.

I'm not glad that I had cancer but it's changed my life tremendously. It is a new beginning. A new chapter has started. I am living more in the last couple of years than I've ever lived and that is important to me." She appeared to be relating her participation on the mountain with her new approach to life, which entailed living post-treatment. (Rachel, observation 3)

For Rachel, breast cancer afforded an opportunity to start over. Being close to death seemed to change the way she approached life. It involved a choice to be open and engaged with life by doing more. Participating in the climb on Mt Kilimanjaro appeared to reinforce her new outlook on life after cancer. Jessica also talked about how her encounter with breast cancer led to a changed sense of priorities:

The possibility of dying changed my whole attitude on things. It made me realize that I don't want to live with regrets. I want to know that if something happens, I lived my life the way I wanted to live it. Since finishing my treatments, I have gone to the Grand Canyon, I took my daughter and her friends to Las Vegas, I went to Australia to scuba dive off the Great Barrier Reef, and I have been zip lining, skiing, and snowboarding. And climbing Mt. Kilimanjaro is another example of one of those things that I am doing to prove to myself that I am living my life. (Jessica, Interview 1)

For all three of the participants, the awareness of death led to a changed philosophy of life that involved participation in new experiences and activities. Breast cancer allowed the women to embark on a significant new life path that was supported by their participation in the climb on Mt. Kilimanjaro. It allowed the women to embrace their newfound perspective on life. It enabled them to live life in a manner, at least from their viewpoint, that was fuller, richer, and perhaps more meaningful.

A changed perception of self: Fostering self-belief. The women reported positive psychological changes in themselves as a result of their struggle with breast cancer. Their experience with the disease seemed to lead them to embark on a journey that involved focusing more on themselves and developing self-knowledge. Climbing Mt. Kilimanjaro appeared to help the women to continue learning about themselves and provided a vehicle in which the women were able to foster a sense of self-belief:

As much as there were some very bad experiences associated with having had breast cancer, there have also been some really good experiences...I am working on finding myself and getting to know myself - finding out who I really am. I went through 45 years of my life not really knowing much about myself and not being who I wanted to be. Maybe it will take my whole life to figure it out. I don't know, but I think that climbing Mt. Kilimanjaro is helping me to better understand myself. I am no longer putting myself on hold. It is teaching me that I am physically capable and that there are a lot of things in life that I can do. (Jessica, Interview 3)

As a result of her struggle with breast cancer, Jessica came to realize that she did not know herself. This discovery led her to begin looking inward. Participating in the climb on Mt. Kilimanjaro was a way in which she learned about her physical capabilities and gained a sense of belief in herself. However, there were moments on the mountain when Jessica doubted herself and questioned her abilities to continue climbing. The following field note illustrates this contradiction:

It was during the summit push at two o'clock in the morning when I came across Jessica who was sitting breathless and slumped over on a rock. As I approached her, she turned to me and said, "I think I am going to turn back. I can't do this anymore. I can't breathe. I can't get enough oxygen into my lungs. I don't think I can make it." (Jessica, Observation 3)

Climbing Mt. Kilimanjaro seemed to help Bonnie to believe in her potential as a person. The following field note illustrates this change:

On the decent from Gilman's Point (5,685m), as I descended the mountain with Bonnie and Kerrie they began to reflect on the climb to the summit. I saw that Bonnie was overwhelmed by joy and relief. Despite that she was exhausted both physically and mentally, reaching the summit was meaningful to her. She turned to Kerrie and me and stated: "This experience is part of my self-realization or my self-discovery. It is helping me realise how strong I really am. I am not a mountain climber. I don't see myself as a climber. But I really surprised myself at how much I could do. I look at other things in my life and say to myself 'if I can climb that mountain, then I can deal with this too.' I have much more faith in myself. I am more aware that I can face just about any challenge and that is very satisfying. (Bonnie, Interview 3)

For Bonnie, reaching the summit of the mountain led to the recognition that she possessed personal strength. It helped her to believe that she was physically strong and capable of handling just about anything. Furthermore, the climb on the mountain helped her gain confidence in herself as a person. Rachel was also positively influenced in this way as a result of her experience with breast cancer:

Breast cancer changed my life. I talk more about my needs and I have learned how to say 'no.' I am different and people notice that I have changed. I don't worry about the small stuff anymore and I say what is on my mind. I am comfortable in my own skin now. And, I am amazed that I am here climbing this mountain. Ten years ago I would have never even thought of doing something like this. I was just an average person. I was quiet and I did regular things. But after cancer, I decided that I was going to be whatever I wanted to be. And so I am here [on the mountain] trying something new. And simply being here is giving me confidence. I am

proud of myself for having the courage to follow my dream. (Rachel, Interview 2)

Rachel experienced a changed perception of self as a result of her struggle with breast cancer. In particular, it allowed her to be free to be herself and become the person she desired to be. Participating in the climb on the mountain gave her confidence in herself.

Overall, developing a sense of self-belief through the climb on the mountain was important to all of the BCS and appeared to serve as a foundation for positive psychological growth.

A changed relationship with others: Cultivating connections. For Rachel and Jessica, breast cancer led to changes in the way they interacted with others. In particular, their experiences with the disease resulted in new ways of relating to other people that were deemed positive:

In the past, I always gave to other people. I am now learning to accept help and support and that is hard. I am learning how to allow people to do things for me. I understand the importance of not giving all of myself. (Jessica, Interview 4)

For Jessica, the consequences of coping with breast cancer included a change in the way that she both gave and received help from others. Breast cancer helped her learn how to allow other people support and care for her. It also led to the recognition of establishing personal boundaries. Significant changes in human relationships were also part of Rachel's experience of PTG. Her struggle with the disease allowed her to enjoy other people. It also produced a greater sense of freedom to be herself:

I don't know if I am going to wake up tomorrow but that's okay because I'm enjoying it now. When I am with someone, I enjoy their company. Like during the walks to camp, I get to know people. I always try to approach people of their best side, not on their wrong side. Before cancer I never really expressed my thoughts and feelings. Now when someone makes me feel good, I let them know. People don't always take the time to do that, they're too busy with their lives. (Rachel, Interview 3)

For Rachel, more intimate and meaningful relationships with other people were part of her experience of PTG. Climbing Mt. Kilimanjaro helped to cultivate this connection with others by helping her to feel close to the people who supported her during her struggle with cancer. The following field note illustrates this change:

As we rested at the summit of the mountain, I looked over at Rachel who was sitting alone on a rock. She looked tired and very emotional. As she looked out onto the horizon, she seemed lost in her thoughts. She then reached down, opened her backpack and removed a handful of little stones from her bag. She turned to me and shared: "The only reason I am here is because of the people in my life who have supported me along my cancer

journey. They gave me the strength to climb this mountain. And so I am leaving these stones behind for them.” As she gently placed the stones on the ground she began to cry. (Rachel, Observation 3)

The stones she carried with her up the mountain helped her to feel connected to the people who supported her through her struggles with cancer.

Overall, climbing Mt. Kilimanjaro provided a new opportunity that supported the women’s survivorship journey toward positive psychological growth. Their experience on the mountain aided in developing and maintaining priorities, self-belief, and connections with others that positively influenced their survivorship experience.

Discussion

In this article, we have illustrated how three breast cancer survivors (BCS) experienced posttraumatic growth (PTG) during an attempt to scale Mt. Kilimanjaro in Africa. Results revealed experiences of PTG based on three themes: (a) Nurturing priorities; (b) fostering self-belief and; (c) cultivating connections. These three specific themes framed the women’s everyday experiences on the mountain and suggest that some breast cancer patients live through profound positive changes in themselves, their relationships, and their philosophy of life after cancer. Consistent with previous research on PTG (Tedeschi & Calhoun, 2004, 2006), this study supports the premise that suffering and distress can lead to sources of positive change. Moreover, it emphasizes the importance of participation in meaningful activities such as high altitude mountain trekking that may act as a catalyst for personal growth and transformation.

For each of the women in this study, the breast cancer experience positively influenced how they viewed themselves, their relationship with others, and their philosophy of life. Scaling Mt. Kilimanjaro seemed to promote these positive changes by helping the women to live their lives in a way that was fuller, richer, and more meaningful. For example, the heightened awareness of death that transpired as a result of the women’s breast cancer diagnosis and treatment played an important role in prompting a realization of their priorities and altering the values and choices that the women made, including choices related to lifestyle (Shannon & Shaw, 2005). After surviving breast cancer, the women changed their priorities by making the conscious decision to engage in meaningful and novel activities such as climbing Mt. Kilimanjaro. In this way, participating in the climb on the mountain nurtured what was of most important to the women - embracing new experiences and living a more full life. It represented a shift in how the women approached life (Jordan, 2000). Future research should investigate the ways in which a breast cancer diagnosis and treatment makes one’s own mortality salient and how this salience is related to PTG (Calhoun & Tedeschi, 2004).

The experience of scaling Mt. Kilimanjaro seemed to promote positive psychological changes in the women. However, there were moments when the women’s thoughts, feelings, and behaviors during the climb contradicted their experiences of PTG. For example, while the challenge of climbing the mountain fostered a sense of self-belief for Jessica, it also nurtured doubts about her physical abilities to reach the summit. For Bonnie, the experience of the climb was at times more about the end result of accomplishing the feat rather than the experience of climbing the mountain itself. It is

possible that certain types of activities that foster experiences of PTG also foster stress that can be appraised as both challenges and threats. While this is in line with PTG theorists (Tedeschi & Calhoun, 2006), it is important to help women strive for the positive experiences while recognizing that certain types of activities may also at times prevent women from experiencing PTG.

According to Tedeschi and Calhoun (2004), the experience of breast cancer requires some change in view of self in order to experience PTG. In this study, climbing Mt. Kilimanjaro triggered an inward focus of attention on the self and fostered a sense of self-belief. Throughout the climb, it was apparent that the women transitioned into seeing themselves as capable and confident in their abilities to overcome adversity. Their experiences on the mountain promoted a sense that they had what it took to manage the novel and stressful challenges associated with not only the climb but also future challenges in their lives. This finding is consistent with previous research on PTG, which suggests that people who experience changes in self-perception feel more confident, self-reliant and self-assured, especially in relation to dealing with future difficult situations and experiences (Carver, 1998; Davis 2002; Tedeschi, Park, & Calhoun, 1998; Updegraff & Taylor, 2000). The women in this study drew on their experiences scaling the mountain to foster an increased experience of oneself as capable and self-efficacious. Bandura (1995) suggests that people with a strong sense of self-efficacy believe in their ability “to organize and execute the courses of action required to manage prospective situations” (p. 2). Future research should investigate the ways in which high altitude trekking contributes to improved self-efficacy and how self-efficacy is related to PTG.

The results of this study also suggest that the experience of breast cancer prompted two of the women to experience positive changes in relationships with others. Since their encounter with breast cancer, both Jessica and Rachel altered the way they interacted with others. For Jessica, breast cancer helped her learn how to allow other people to support and care for her. It also led to the recognition of establishing personal boundaries. For Rachel, breast cancer led to deeper relationships and a sense of liberty to be herself. This finding supports Calhoun and Tedeschi’s (2004) suggestion that people who struggle with traumatic events report a greater sense of intimacy, closeness, and freedom to be oneself. Bonnie may not have reported these changes because for her, the climb on the mountain was associated with a troubled relationship.

Climbing Mt. Kilimanjaro is an activity that is physically demanding and often stress-inducing. The difficult struggles (i. e., such as effects of high altitude, cold temperatures, and grim living conditions) that the women faced in their attempt to reach the summit of the mountain seemed to facilitate experiences of PTG. It is possible that deliberately placing oneself in a context such as high altitude mountain trekking that is both physically and mentally demanding helps trigger coping strategies that serve adaptive functions. According to MacFarlane (2003), mountains are sought out “as arenas of intense experience: places you could be temporarily disconcerted, or presented with the illusion of menace” (p. 76). The theory of PTG suggests that enduring distress is a vehicle for growth and change (Tedeschi & Calhoun, 2004). It is possible therefore that survivors of trauma who choose to take on activities that produce distress, make salient one’s vulnerabilities, and generate an awareness of one’s mortality may do so because it not only promotes psychological changes that are highly positive but also acts as a vehicle to “craft” new understandings of what it means to be a BCS. That is, the women

appeared to be involved in a process of reconstructing their lives through experiences on the mountain. They seemed to be engaged in an active process of building meanings around illness. This supports Frank's (2003) view of survivorship, which he defines as a "craft activity" (p. 251) that allows survivors to make illness what they want it to be.

For the BCS in this study, the specific stressors associated with climbing the mountain appeared to be construed as challenges. The women viewed the mountain as place to grow and test themselves. According to MacFarlane (2003), mountain—going is seen as a testing-ground—"a stage on which the self can be best illuminated" (p. 85). Folkman (2008) explains that stressors can be appraised as harm, threat, or challenge. He suggests that challenge appraisals are accompanied by positive emotions such as excitement, eagerness, and confidence (Folkman & Lazarus, 1985). Our findings are consistent with this observation in that the women appeared to deliberately seek out difficulty by choosing to participate in the climb in order to better themselves and experience positive emotions. For example, all three of the women appeared to encounter profound feelings of elation and satisfaction upon reaching the summit of the mountain. Reaching their goal of getting to the top seemed to be a defining moment in their lives. Tedeschi and Calhoun (2004) suggest that experiences are transformative when they have an affective component involved and not just cognitive engagement. Although positive emotions are not explicitly included in the model of PTG, they appear to be important in the process of PTG (Fredrickson, Tugade, Waugh, & Larkin, 2003) and should be investigated to better understand their role in the PTG experience.

It should be acknowledged that the results presented in this study simply open a window on the PTG phenomenon and need to be viewed as a point of departure for stimulating further questions and investigation. It is noteworthy that because this study only involved three breast cancer survivors it therefore may not be representative of the general group or population. The nature of case study research makes it difficult to draw generalizations from the data (Stake, 2006). In contrast, by providing sufficient detail about the experiences of the three women in our study, we hope the reader is able to make an informed decision as to whether the findings are applicable and transferable to other cases. Immersing myself as a participant observer in the activity under study enabled the generation of rich data about post-trauma changes within a natural context. This data has the potential to lead towards a more complex understanding of the theory of PTG by illuminating themes involved in the experience of PTG and how these underlying meanings are internalized in the subjective consciousness of women.

Given the relative lack of research investigating women's participation in outdoor physical activities (McDermott, 2004), this study provides an initial context for understanding the role that high altitude mountain trekking plays in the lives of women post-treatment. Although the research findings are preliminary, early indications suggest that scaling Mt. Kilimanjaro plays an important role in helping BCS experience positive changes following breast cancer. These unique findings contribute to our understanding of the impact of high altitude mountain trekking (a challenging form of physical activity) on the survivorship experience. It is important to continue advancing our understating of activities that are exceptionally challenging and may help women grow and develop post-cancer. The significance of the study lies not only in the investigation of the difficult activity of climbing Mt. Kilimanjaro and its link to PTG, but also in its use of an ethnographic case study approach. Very few researchers have immersed themselves in

the setting and used direct, first-hand observation to explore experiences of PTG. From an applied perspective, health practitioners should be aware of the potential for positive changes in their patients following trauma and adversity. Future research should acknowledge and conduct investigations into the optimal types and contextual elements needed to facilitate the PTG process.

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