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## Above and beyond cancer: a novel approach to growth and resilience in cancer survivors

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### Abstract

**Background:** Although cancer diagnosis and treatment frequently cause distress, many survivors report personal growth, change, and transformation. To better understand these dynamics, we used a qualitative approach to study twenty-seven heterogeneous cancer survivors who participated in physically and emotionally challenging journeys through the Above and Beyond Cancer organization. Groups traveled to Kathmandu (Nepal), Mt. Kilimanjaro (Tanzania), and Mt. Kailash (China), and volunteered at nearby cancer hospitals.

**Methods:** Survivors completed short essays and surveys pre-departure, 3 weeks, and 3 months post-trip. Qualitative responses were categorized into themes by 4 independent reviewers following consensus, and quantitative measures assessed sociodemographic characteristics and mood.

**Results:** Qualitative findings highlighted the role of new experiences and social support in enabling participants to develop new meaning, growth, and a new sense of their capabilities. Quantitative measures showed that anxiety of participants decreased over time.

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Conflicts of interest statement

The authors report no conflicts of interest.

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Statement regarding ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Conclusions:** This study points to lifestyle undertakings that can support personal growth in cancer survivors.

### Keywords

Cancer survivors; Exercise interventions; Growth; Positive psychology; Resilience; Service; Well-being

## Introduction

The diagnosis of cancer serves as a highly stressful or traumatic life event for many individuals. It can often be life-threatening, unexpected, seen as uncontrollable, and associated with long-lasting sequelae such as compromises to physical and cognitive functioning, neuropathies, and fatigue.<sup>[1,2]</sup> Cancer often poses a challenge to an individual's worldview, such as belief in control over one's future and belief in a just world.<sup>[3–5]</sup> Although frequently followed by distress, such challenges may also provide the impetus for positive growth.<sup>[5]</sup>

Efforts to address the impact of cancer have often been directed at reducing distress.<sup>[6–8]</sup> However, adapting one's perspectives and assumptions about one's worldviews can help individuals process adverse events and may result in positive changes.<sup>[9]</sup> For example, although it is common for individuals to dwell on what they do not have or on their own misfortunes or health challenges, someone with a cancer experience may shift their focus to what they do have, such as meaningful relationships and the advantages of a well-developed medical system.<sup>[10]</sup> To facilitate this process, the Above and Beyond Cancer (ABC) Foundation aims to promote growth and well-being in cancer survivors by taking survivors and caregivers on physically and emotionally challenging journeys for the purpose of empowerment, inspiration, community building, and advocacy. In these journeys, participants engage in volunteer activities and strenuous physical challenges in various locations in Asia, South America, and Africa. Activities involve rigorous treks and volunteering at nearby cancer hospitals. In general, before the day's activities, mornings included a group meeting in which trip participants were encouraged to share their intentions for the day. A reflection such as a poem or reading would be shared with the group, followed by a group yoga class led by an instructor. Participants reconvened at the end of the day to reflect on what surprised them, moved them, and inspired them about the day's activity. Journaling was encouraged throughout the trip and written reflections were compiled at the end of the journeys.

The aim of this research was to use the reflections from ABC journey participants to provide insights regarding survivor perceptions of the processes involved in personal growth, transformation, and thriving in cancer survivors. We recruited from the exceptional survivors participating in the ABC program to better understand how the types of activities in these journeys might influence their personal growth. Understanding these dynamics will help the development of future programs aimed at supporting survivors by facilitating positive change. We assessed reflections and moods of 3 cohorts of survivors participating in ABC

journeys that took place in locations including Nepal, Kenya, and Tanzania, and the Tibetan plateau in China.

## Methods

Study participants were recruited from a convenience sample of adult cancer survivors who self-selected for participation in an ABC journey between 2015 and 2018. Acceptance to participate in these journeys was based on medical/physical clearance and motivation for the journey (acceptance rate: ~80%). Participants were never turned away for their inability to pay. Trips were paid for through a combination of philanthropic efforts, personal fundraising, and needs-based scholarships from the ABC foundation. Participants for this study were recruited and consented by ABC staff during an informational meeting before each trip and were then emailed a link to an online survey. Short essays and surveys were administered at three time points: 2 to 3 weeks before trip departure (pre-trip), 3 to 4 weeks after trip completion (post-trip), and 3 months later (follow-up). The follow-up for the first Nepal trip was completed six months post-trip and was moved up to three months for subsequent trips to improve participation and to be more proximal to the trip. All study procedures were approved by the Institutional Review Board of MercyOne Hospital, Des Moines Iowa.

## Procedure

The present study recruited individuals from three ABC journeys between 2015 and 2018. The journey to Kathmandu, Nepal ( $n = 10$  [of the 12 survivor attendees on the trip]) involved medically focused service following the 2015 Nepal earthquakes. Participants donated supplies and time, built a garden, met with patients and staff at Bhaktapur Cancer Hospital, and hosted the first Cancer Survivorship Conference in Nepal. The second journey ( $n = 10$  [of 16 survivor-attendees]) started in Nairobi, Kenya (2017) where participants provided medical care and support to cancer patients at Kenyatta National Hospital and then flew to Tanzania to summit Mount Kilimanjaro. The third journey ( $n = 7$  [of 9 survivor-attendees]) included service activities at the Bhaktapur Cancer Hospital and Kanti Children's Hospital in Kathmandu followed by a trek circumambulating Mount Kailash on the Tibetan plateau (2018). Each journey lasted approximately 2 to 3 weeks. During these journeys, participants interacted with other cancer survivors and caregivers, both on the trip and in local hospitals, had daily group meetings in the evening to process their experiences, and were encouraged to journal and reflect on their own cancer journey.

## Study Approach

A phenomenological approach was adopted for this qualitative case study to examine the lived experiences of cancer survivors who self-selected to undergo physically and emotionally challenging journeys. Phenomenological qualitative case studies are ideal for exploring a given phenomenon within the boundaries of a "case," such as a unique context.<sup>[11,12]</sup> Furthermore, phenomenological approaches rely on the recruitment of individuals who likely have commonly perceived features of their lived experiences in order to help generate a generalizable description of the experience.<sup>[13]</sup> The phenomenon in the present study is positive growth among cancer survivors, and the context (ie, case) in which it

occurred is the ABC journeys. We conceptualize “positive growth” as reported improvement in psychological well-being or adjustment.

This qualitative approach using written responses was supplemented by quantitative data. The qualitative responses allowed for exploration of the lived experiences of cancer survivors on these journeys, and the quantitative data provided additional insight into whether these experiences influenced various mood states. Those assessed were anxiety, depression, anger, vigor, fatigue, and confusion. Overall, a qualitative approach supplemented by quantitative data is useful for providing a foundation for developing models and a deeper understanding of this phenomenon.<sup>[11,12]</sup>

### Open-ended Structured Questions

Participants responded to web-based, open-ended, structured questions in a diary format pre-trip, post-trip, and follow-up (Table 1). This method of qualitative inquiry was selected to enhance participant retention as well as convenience.

### Measures

At baseline, all participants provided sociodemographic information (age, sex, race, ethnicity, marital status, education, and work status) and disease and treatment information (cancer stage, time since diagnosis, treatment).

**Mood.**—At each time-point, participants completed the Profile of Mood States Short-form (POMS-SF) to assess various aspects of mood. The scale is a 37-item self-report measure assessing six different dimensions of mood during the last week, rated from “not at all” to “extremely.”<sup>[14]</sup> The 6 mood subscales of the POMS-SF are anxiety, depression, anger, vigor, fatigue, and confusion. Total mood disturbance is calculated by subtracting the vigor subscale score from the sum of the 5 other subscales. Higher scores indicate a greater degree of mood disturbance. This scale has commonly been used in research with cancer patients and survivors and is useful for measuring distress over time.<sup>[15]</sup>

### Qualitative Analysis

A blend of deductive then inductive-dominant qualitative content analysis was utilized.<sup>[16]</sup> The preliminary code list was developed using the aims of the ABC program as well as reading a subset of responses several times to form first impressions. Four coders (MVB, SKL, AN, NA) independently read and analyzed all diary entries using the code list, then participated in joint coding meetings over the course of several months to resolve differences on codes and themes identified. Consensus coding was conducted using Microsoft Word. The code list was iteratively adapted, and some responses were recoded using the final version of the code list. Rigor was maintained via record keeping within the code list, including decisions and dates for each new code, as well as their definitions, inclusion/exclusion criteria, adaptations, and examples using excerpts from participant diary entries. Overarching themes were derived from the responses after reaching consensus. Coders categorized responses into overarching themes by identifying coding patterns and creating a diagram together to make sense of the data and represent themes visually (Fig. 1). Pretrip

responses were used to collate reasons for going on the trip, and post-trip and follow-up responses were analyzed together to produce the overarching themes.

## Quantitative Analyses

Descriptive analyses were conducted using SPSS v.25 (IBM, Armonk NY). Using the *lmer* function in the *lme4* package in R,<sup>[17]</sup> a linear mixed-effects model was used to analyze changes in mood across time, from baseline to 3-month follow-up with time defined as a categorical variable (0 = baseline, 1 = 3-week follow-up, 2 = 3-month follow-up), and a random intercept included for trip and participant.

## Results

### Participants

Participants were predominantly female (74%), white (100%), non-Hispanic (96%), married or living with partner (63%), with substantial education (59% college graduates), and employed full-time (82%). More than half (56%) had incomes higher than \$75,000 (range <25,000 to >100,000). The mean age was 50.3 years ( $\pm 12.89$ ; range 21–73). Ten survivors reported having early-stage cancer, 7 reported advanced stage cancers, and 9 were not sure of cancer stage. Average time since cancer diagnosis was 7.8 years ( $\pm 6.9$ ; range 1–22), and average time since last cancer treatment was 7.4 years ( $\pm 7.0$ ; range 0.6–21.3). In addition to surgery, previous treatments included radiation (54%), chemotherapy (35%), and hormonal therapy (36%), although these data were not complete. Most common cancer types included breast (33%,  $n = 9$ ), lymphoma (19%,  $n = 5$ ), sarcoma (15%,  $n = 4$ ), and prostate cancer (7%,  $n = 2$ ) (Table 2). Twenty-four of these survivors completed the post-trip assessment, 20 completed the 3-month assessment, and 26 completed 2 of the 3 assessments.

### Qualitative Responses

**Reasons for Going on Above and Beyond Journeys.**—Reported reasons for going on these journeys included the desire for growth, to challenge oneself, to help others, and to experience something new. Several participants reported taking a leap of faith in their decision to participate.

### Post-trip and 3-month Follow-up Responses

Qualitative responses suggested survivors underwent profoundly new and unique experiences during the journeys that challenged them in various ways, while allowing cultivation of strong relationships with others, including fellow survivors. This was done in a context that supported sharing and processing of experiences. These experiences led survivors to develop new perspectives and served as a catalyst for growth and development of resilience following the trip. As such, the overarching themes were organized into 5 categories: New experiences, Connectedness, New perspectives, Growth, and Resilience (Fig. 1). Quotes below are used to illustrate the broad range of experiences among the study participants. Representative quotes are presented for each code in the supplementary materials, <http://links.lww.com/OR9/A28>.

## New Experiences

New Experiences of participants were grounded in traveling to a new and distant country which compelled them to experience a new culture, a different setting, and challenges such as new foods, strenuous physical activity, and facing the reality that despite being cancer survivors, they benefitted from the privilege of living in a developed nation with adequate healthcare. The challenges and experiences faced in each trip differed based on the location and activities involved.

Some new experiences were related to meeting people from another culture. On the Mt. Kailash trip, many survivors were struck by the kindness of the local people, leading them to the conclusion that at their root, humans are good:

“People are kind. Despite our own troubles and illnesses, the human spirit and caring about others prevails” (F [Female], 3-month follow-up).

In Nepal, participants reflected on how learning about another culture helped to broaden their perspectives, and their admiration for Nepali culture:

“While their medical care is not like ours, they have what they have. They are making ‘do’ with it. The joy in their eyes and the kindness they project is priceless” (F, post 3-week).

“In Nepal the family is there for the entire [cremation] process and it becomes a time of bonding. This was by and far my most eye-opening experience on the trip ...” (F, post 3-week).

Furthermore, several participants in Nepal reflected on their access to health care relative to those in Nepal, and how emotionally challenging it was to see other cancer patients in need:

“As we were there as part of a cancer survivorship journey, it’s hard not to think about the fate of so many that get cancer in those areas and cannot get the care that they need.” (F, 3 month follow-up)

Some of the new experiences involved the physical challenges of the journey. For instance, the journey to Mount Kilimanjaro included strenuous physical activity, and feeling accomplished following an arduous climb up an 18,000+ foot mountain:

“I would say though I have given myself a reason to be proud.” (F, post 3-week).

“Most memorable was experiencing altitude sickness on the summit climb. I was unable to see the sunrise, the crater and the view from the top due to being a bit delirious .... It tested my mind to keep going when I wanted to turn back.” (3-month follow-up)

“Reaching the summit despite losing sight in one eye due to altitude issues was a blessing” (F, 3-month follow-up)

“Looking up at the rim of the mountain and my guide standing there looking back at me ..., taking a deep breath, and taking the final 8 steps to the top (F, post 3-week)

Others wrote about conquering their fears within these new experiences, whether these fears involved traveling, or anxieties surrounding getting to know a new group of people:

“I am terrified of flying. And yet I hopped on a plane with a bunch of strangers and flew on a plane for 20 hours to a country I didn’t know much about.” (F, post 3-week)

“And I found myself wondering ‘what do they think of me? Am I doing okay? Do they like me?’ ... After a couple of days and getting to know everyone better and experiencing these Nepal hospitals and culture and rituals, those thoughts were gone and i was so relieved.” (F, post 3-week)

Participants on all trips also discussed their appreciation for the opportunity to go on the trip.

### Connectedness

Almost every participant mentioned the connectedness they felt with other people throughout the trip, including other members of the trip or people they met along the way. One aspect of these connections was sharing the journey with other survivors:

“ ... the best part of the journey was the group of people that we had in this group. Everyone was so supportive of each other and made sure that we all made the journey.” (F, 3-month follow-up).

Participants also found that their experience as a survivor allowed them to connect with others beyond national boundaries and identities during the trip:

“ ... we met a woman in the breast cancer ward. She was 13 days out from a mastectomy and she had developed an infection. She was in her bed sobbing with a look on her face that I recognized all too well. It was almost a year to the day that I too had been crying because I was 13 days out from my mastectomy” (F, post 3-week).

“I understand better that cancer knows no language and the experience bonds people no matter what their culture or station in life. I think most of our group felt that” (F, post 3-week).

“[C]ancer creates a common bond among people that knocks down language and cultural barriers.... with the common bond of cancer, the cross-cultural interaction is easier” (M [Male], post 3-week).

Overall, strong connections with others were developed over the course of the trip. Many expressed a desire to maintain those relationships or were actively keeping in touch with others they met on the trip several months later.

### New Perspectives

Undergoing new experiences while cultivating strong connections with others facilitated new insights into participants’ own sense of themselves, the way they interact with the world and others, as well as how they think about their cancer experience:



“I learned that embracing the discomforts in my life isn’t a sign of weakness, but rather only means I am human and gives me a greater sense of empowerment by grieving the pain and being able to move on from it” (F, 3-month follow-up)

“Every day i remind myself of how grateful I am to have had this journey, how I can help others and not to miss a moment. Every moment of every day is a gift to be cherished” (F, 3-month follow-up).

“There isn’t a day that goes by that I don’t think about some aspect of the trip. It has changed the way I appreciate everyday things. I don’t take things for granted like I used to;” (F, 3-month follow-up).

Many also felt compelled to help others and found a new sense of purpose following the trip:

“While I was there, I constantly wanted to do more for the people at the hospital ... I also have the desire to return or help out even more. I had never really been interested in mission work before this, but now I daydream about where and who I’ll help next” (M, post 3-week)

“I continually think about wanting to help the children and patients fighting cancer in [the Kenyatta National] hospital” (F, 3-month follow-up)

Adopting these *new perspectives* because of their experiences during the trip was critical for survivors to develop growth and resilience.

## Growth

New perspectives led survivors to experience growth and transformation that created meaningful changes in their lives. Many participants reported changes in their mindset and activities, allowing them to take time for themselves and practice self-care:

“Since returning home I feel a much greater sense of peace. Little things do not bug me near as much as they used to. I still have bouts of anxiety but never as bad as it used to be.” ... “Several things that I still take into consideration being home is the ability to enjoy each day. I work hard to not let anxieties of everyday activities affect my view of life. I try to look at every frustrating situation and ask will this still upset me in a week. If the answer is no I do my best to drop my bitter emotions right away.” (F, 3-month follow-up)

In addition to taking time for themselves, some participants felt a call to action, with one reporting concrete plans to do volunteer work:

“I am trying to get my fundraiser going, to help other survivors join in the classes at the YMCA.” (F, post 3-week)

## Resilience

Another change reported by many participants that followed developing new perspectives was a new-found awareness of their own inner strength. Participants felt greater confidence in their ability to navigate through life following the trip:



“The epiphany moment when I realized I was causing myself so much pain, made me realize that I needed to let go of this intense sadness. I didn’t even know I was carrying these feelings inside me. Although grief is a process that we carry with us for a lifetime, this Journey moved me leaps and bounds forward.” (F, 3-month follow-up).

“[I learned to] Embrace the suffering. I learned to let myself feel and deal with suffering and the emotions that come along with it. Doing so made me feel stronger and more able to move on and let those feelings go.” (F, post 3-week).

“It has lead me to believe I can do just about anything. I rely on the fact that if you put one step in front of the other and keep going, then anything can be accomplished (F; post 3-week).

Participants also reflected on finding greater meaning in their status as a cancer survivor, and finding value in the experience:

“ ... even after 10 years my cancer journey remains an important aspect of my life as well as my decision making. I feel like incredible experiences such as that really stick with you” (M, post 3-week)

These qualitative findings help to illustrate the impact these journeys had on the survivors, helping them to broaden their horizons, open to experience a new culture and to connect with others, and to create meaningful and sustainable changes in their lives following the trip.

## Quantitative Results

As seen in Table 3, there was a significant reduction in self-reported anxiety at post-trip ( $t(40.93) = -3.15, P = .003$ ) which was sustained at the 3-month follow-up ( $t(41.13) = -2.10, P = .04$ ). Although there were sustained decreases in depression, anger, and fatigue over time, none of these reached statistical significance. Confusion decreased from baseline to post-trip, and by the 3-month follow-up this reduction was significant ( $t(42.49) = -2.82, P = .007$ ). There was a decreasing trend in total distress from pre-trip to post-trip ( $t(37.04) = -1.89, p = 0.06$ ), with levels of total distress at the 3-month follow-up remaining substantially below pre-trip levels, although the decrease from baseline to the 3 month follow-up was not significant ( $P = .54$ ). Beta estimates, standard errors,  $P$  values, and effect sizes can be found in Table 4.

## Discussion

This qualitative case study supplemented by quantitative data examined the experiences of 27 cancer survivors who undertook challenging journeys to find enrichment in their lives. The aim of this study was to improve our understanding of how experiences such as those included in these journeys promoted personal growth among cancer survivors. Findings from qualitative responses suggest that new experiences gained from the journeys, along with the strong interpersonal and cross-cultural connections made among other survivors provided the necessary kindling for participants to form new perspectives regarding their own sense of self, inner strength, and cancer survivorship. These new perspectives shifted their values

and priorities, leading to moments of growth and increased resilience. Figure 1 illustrates the proposed model of growth and may serve to inform creation of other programs that aim to provide such enrichment to the lives of cancer survivors.

The quantitative results provide additional insight into the qualitative findings. Mood assessments showed sustained drops in anxiety and a reduction in confusion at 3 months following completion of these journeys. The significant drops in anxiety may have resulted from the deep connection with others developed during the trip as well as the reported feelings of gratitude. Since participants experienced growth and meaning from their new perspectives, this may have led to a reduction in confusion. Further research may clarify these results. The overall findings are consistent with models describing post-traumatic growth (PTG),<sup>[3,4,18,19]</sup> and personal growth from nature-based experiences.<sup>[20]</sup>

The search for meaning has been described as a fundamental concern for many, if not most, cancer patients.<sup>[9]</sup> When an event occurs that is highly stressful or disrupts an individual's expected life trajectory, such as cancer diagnosis and treatment, searching for meaning is considered to be a key part of the recovery process.<sup>[21]</sup> When individuals find new meaning in a stressful or challenging experience, their psychological adjustment is often improved,<sup>[19]</sup> and they may experience PTG, which describes a positive transformation after trauma that emerges from a challenge to one's worldview.<sup>[21]</sup> Consistent with this type of processing, for participants in these ABC journeys, the rigorous physical and emotional experiences in a new and unfamiliar environment within the context of social support and group processing may have enhanced meaning-making and growth. Although it is difficult to distinguish the individual impacts of the journey elements, such as service, physical challenges, group processing, and social support, these findings highlight that the combination of these elements may yield a positive and powerful experience for cancer survivors.

Previous research has shown that improvements in mood and quality of life are also observed in cancer survivors when engaging in physical activity in nature-based interventions.<sup>[20,22,23]</sup> The combination of physical activity in nature while also in a new cultural setting appeared to have a profound impact for many participants. It is important to note, however, that participants in the first cohort who volunteered at a cancer hospital in Kathmandu during a year when they could not participate in a trek due to a natural disaster in Nepal, still reported personal growth, highlighting the potential role of a novel cultural setting and engaging in service activities.

Past studies have also shown relationships between social support, resilience, and PTG among various populations, including cancer survivors.<sup>[24–27]</sup> The importance of social support and/or group processing in developing new perspectives and positive outcomes in cancer patients has been highlighted previously.<sup>[28–30]</sup> Although there is a link between volunteering, positive well-being, and PTG,<sup>[31]</sup> findings are mixed among cancer survivors.<sup>[32,33]</sup> The present findings are unique because limited research has examined how physical challenges combined with service activity, group support, and reflection may enhance personal growth. Future research is needed to extend our understanding about how time-bounded events like ABC journeys can serve as catalysts for positive growth and change.

## Limitations

Limitations include small sample size and a drop-off in responses at post-trip and 3-months. The small sample led to underpowered quantitative findings; thus, examining trends rather than statistical significance gives a greater sense of the changing dynamics in this sample. Although the sample size for qualitative responses was not guided by data saturation because we were recruiting from an already small sample pool, we believe the number of responses collected were appropriate for qualitative analysis ( $n = 20\text{--}27$ ) and sufficient for drawing the conclusions stated herein.<sup>[34]</sup>

Because we do not have information on those who declined participation, it is not known how representative the responses of study participants are relative to responses of the entire group participating in each of these trips. Those who signed up for these journeys were self-selected individuals who were highly motivated and desired to challenge themselves with something new. These individuals were largely well-educated and well-resourced; thus, these findings may not be typical of cancer survivors but may reflect a subset that was poised for personal growth at the outset. Although needs-based scholarships were available from the ABC foundation, the cost of such programs may limit the generalizability of this sort of program as accessibility may have been restricted to survivors who could afford to take time off work and partially support the expenses for this experience. The need for philanthropic support limits large scale implementation of a program such as this. In light of these limitations, local programs that integrate physical challenges, service, and social connections within a natural beauty setting should be developed and implemented to improve access to such programs among cancer survivors.

The study did not have a control group, although for a unique sample such as this, absence of a control group is typical. Finally, both the structured nature of the qualitative questions, the written response format, and the lack of detailed discussions often seen in qualitative interviews or focus groups may have limited the scope of participants' responses regarding their experiences. In an interview format, participants may have elaborated on whether certain elements of the journeys contributed more to their growth, or if the totality of the experience was essential for such an outcome. However, the use of a structured written format may have enhanced participation and retention across the 3 timepoints.

## Conclusions

These findings suggest that challenging journeys and service in the context of group support can play a role in enhancing mood, well-being, and personal growth of cancer survivors. Limited financial resources, physical ability, or motivation might be barriers to participating in adventure-based programs such as the ABC journeys. Therefore, the present findings point to the importance of finding alternative models for enhancing personal growth in cancer survivors with interventions potentially containing similar elements such as physical and/or emotional challenges in the context of social support or nature. The proposed model illustrating the relationships between the overarching themes (Fig. 1) may be helpful in informing development of similar programs that are more accessible to cancer survivors and do not require them to travel internationally. Other intervention models that have been presented include spin or yoga classes for cancer survivors, providing physical challenge in

the context of social support, or classes in mindfulness or other life skills combining skills and social support.<sup>[35–37]</sup> Future studies should also examine whether volunteer or service components apart from or within new cultural settings promote well-being and growth among cancer survivors.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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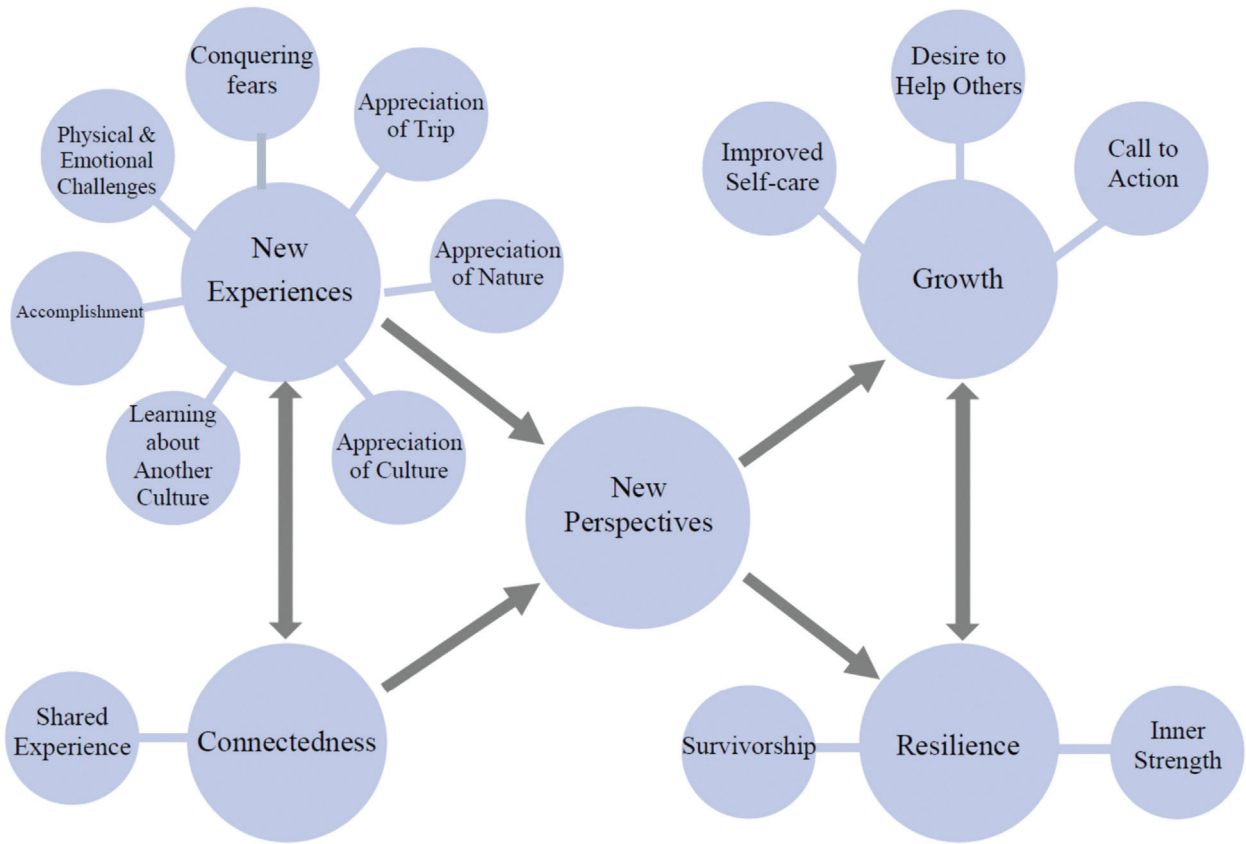
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**Figure 1.** Proposed mechanism of growth and resilience based on themes found in qualitative results. Categorized codes (small circles) are arranged around themes (larger circles). Arrows indicate the proposed relationships between themes. The journeys involved New Experiences within the context of Connectedness, and together they gave rise to New Perspectives, resulting in Growth and Resilience.



Table 1

Qualitative questions.

Pre-trip Questions
1) What led you to go on this journey and what are you hoping to gain or learn from it?
Post-trip Questions
1) What was your most surprising experience on the journey?
2) What was your most touching experience on the journey?
3) What have been your most important insights from the journey (this could be about yourself, about the people you met, about cancer and cancer survivorship, other topics)?
4) How have you changed as a result of the journey and how can you keep that change alive?
5) What was the most challenging part of the journey?
Follow-up Questions
1) Looking back on your journey, what were the most important insights or learnings?
2) Has participation in this journey led to any changes in your attitudes or in your daily life, and if so please describe.
3) What has helped you sustain any changes you have made?
4) What has been the most challenging thing since you came back?

**Table 2**

Demographic and clinical characteristics.

<b>Participants, N = 27</b>	<b>N (%)</b>
Sex (female)	20 (74.1%)
Race (white)	27 (100%)
Ethnicity (non-Hispanic)	26 (96.3%)
Marital status	
Never married	2 (7%)
Married/living with partner	17 (63%)
Divorced	8 (30%)
Education	
Some college/trade school	10 (37.0%)
4-y college or university	7 (25.9%)
Graduate/professional school	9 (33.3%)
Missing	1 (3.7%)
Employment	
Full-time	22 (81.5%)
Part-time	2 (7.4%)
Retired	1 (3.7%)
Unemployed, looking for work	2 (7.4%)
Income	
<\$25,000	2 (7%)
\$25,001–\$50,000	3 (11%)
\$50,001–\$75,000	4 (15%)
\$75,001–\$100,000	6 (22.2%)
>\$100,000	9 (33.3%)
Missing	3 (11.1%)
Disease stage	
Early	8 (29.7%)
Advanced	10 (37.0%)
Unsure	9 (33.3%)
Cancer type	
Breast	9 (33.3%)
Lymphoma	5 (18.5%)
Sarcoma	4 (14.9%)
Prostate	2 (7.4%)
Other	7 (25.9%)
Treatment	
Radiation	12 (44%)
Chemotherapy after surgery	7 (26%)
Surgery	11 (41%)
Hormonal therapies	4 (15%)

Table 3

Estimated means of mood at 3 timepoints.

	Pre-Trip M (SD)	Post-trip M (SD)	3-mo follow-up, M (SD)
Anxiety	6.44 (4.78)	3.38 (3.10) **	4.16 (4.99) **
Depression	3.64 (4.91)	2.29 (4.45)	2.95 (6.40)
Anger	3.04 (3.95)	2.21 (4.32)	2.26 (4.37)
Vigor	14.92 (4.18)	14.96 (5.09)	13.79 (6.65)
Fatigue	5.16 (4.24)	4.21 (4.57)	4.47 (4.97)
Confusion	4.28 (3.76)	3.08 (2.73)	2.32 (3.13) *
Total mood disturbance	7.64 (10.96)	0.21 (13.85)	2.37 (12.66)

Significant differences from baseline.

\* *P* .05.

\*\* *P* .01.

Table 4

Summary of regression models with POMS-SF outcome variables, including the beta estimates, standard errors, *P* values, and effect sizes using Cohen *d*.

	Baseline to 3-wk follow-up			Baseline to 3-mo follow-up		
	$\beta$ (SE)	<i>P</i>	Cohen <i>d</i>	$\beta$ (SE)	<i>P</i>	Cohen <i>d</i>
Anxiety	−.843 (0.268)	.003	.760	−.607 (.288)	.042	.467
Depression	−.432 (0.457)	.351	.288	−.427 (.491)	.389	.121
Anger	−1.220 (0.779)	.126	.201	−.305 (.840)	.719	.187
Vigor	.197 (1.137)	.864	.009	−1.365 (1.224)	.271	.203
Fatigue	−.579 (0.356)	.112	.216	−.082 (.383)	.832	.149
Confusion	−.148 (0.294)	.617	.365	−.892 (.316)	.007	.567
Total mood disturbance	−8.610 (4.548)	.066	.595	−3.040 (4.898)	.539	.445

POMS-SF = Profile of Mood States Short-form, SE = standard error.