



Exploring psychosocial outcomes of fly-fishing retreats for cancer survivors: A qualitative study

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ABSTRACT

Background and purpose: Fly-fishing retreats are nature-based interventions delivered globally to support the wellbeing of cancer survivors. However, few studies have examined the impact of these programs. To address this gap, this study explores the experiences of women and men attending fly-fishing retreats and identifies the key outcomes experienced.

Materials and methods: Attendees at eight fly-fishing retreats conducted in rural Victoria, Australia between 2022 and 2024, were invited to participate in semi-structured interviews. Interviews were conducted with 19 (8 women, 11 men) participants. Reflexive thematic analysis was used to develop themes inductively.

Results: Four key themes were identified: 1) *Cancer experience as motivation for attending*. The burden of cancer was described as isolating and disruptive, providing context for the realised value of the retreat. 2) *A restorative escape*. Retreats were meaningful and provided opportunities for immersion in nature, mindfulness, reflection, learning, and a break from day-to-day. 3) *Growth and empowerment*. Participants connected through their shared experiences, enjoyed achieving new skills, and experienced social support and vulnerability. 4) *Building connections, competence and joy going forward*. Both the male and female retreats provided value through sustained social connections, skill acquisition, enhanced wellbeing, and perspective shifts.

Conclusion: Fly-fishing retreats are a promising nature-based intervention that may support the wellbeing of cancer survivors. While further research is needed to confirm our results, the retreats provided opportunities for physical activity, immersion in nature, skill building, and group activities that generated social connection, support and flow-like experiences which may contribute to improved wellbeing.

1. Introduction

Globally, an estimated one in five people will develop cancer in their lifetime [1]. The impact of cancer extends beyond diagnosis and treatment into all aspects of life [2,3]. Fear of cancer recurrence/disease progression, fatigue, psychological distress [4], social isolation [5], anxiety and post-traumatic stress [6] are common concerns for cancer survivors. There is evidence that exposure to nature can provide wellbeing benefits. Recent systematic reviews have concluded that nature-based interventions (e.g., nature viewing, surrounding oneself in nature, activities that encourage engagement with nature) are beneficial for cardiovascular health, physical activity, mental health, social connectedness and psychosocial wellbeing for general populations [7–9]. A recent scoping review has also suggested that exposure to nature is beneficial for the wellbeing of cancer survivors [10]. However, of the 12 studies included in this review, only four examined interventions

that involved active engagement with nature such as immersion in a nature-rich setting. More work exploring the impact of nature-based interventions on cancer survivors' wellbeing is needed.

Fly-fishing has been promoted as a nature-based intervention that supports wellbeing by encouraging a physical activity that involves immersion and active engagement with nature through wading and casting in flowing and still water (i.e. lakes, rivers, streams). Fly-fishing can also be meditative due to the repetitive casting motion and focus required [11]. Two well established fly-fishing retreats for cancer survivors originated in the United States and now delivered globally are 'Casting for Recovery' a retreat for women with breast cancer founded in 1996 and 'Reel Recovery' founded in 2003 and focused on men with any type of cancer [12,13]. For women recovering from breast cancer the gentle casting motion of fly-fishing is a way for them to engage in physical therapy exercises often prescribed after breast cancer treatment [14]. These group-based programs are free to participants and delivered

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as two and a half day live-in retreats, by qualified volunteers. The retreats allow participants to be immersed in nature by learning how to fly-fish, and to connect with others with similar experiences in a non-clinical setting through facilitated peer conversations and activities. Retreat attendees are paired with a fly-fishing buddy who provides specialised fly-fishing education, while also being a source of interpersonal support. In some cases, the fly-fishing buddies are also cancer survivors.

There is a paucity of research evaluating fly-fishing interventions for cancer survivors. In a mixed methods study, Henry [14] evaluated the *Casting for Recovery* retreat using a quantitative pre-post study design. Although quantitative analyses found no impact on quality of life or resilience measures, this may have been due to the study's sample size ($n = 26$) limiting its statistical power. Additionally, the study used a breast cancer specific quality-of-life measure which assessed items such as appetite change, weight gain, and distress to self and family from illness. This measure may have been too specific and therefore unable to detect more general aspects of wellbeing that might be expected to change from a fly-fishing retreat. Supporting these suggestions, qualitative findings from the study indicated participants benefited from peer support, immersion in nature, and learning a new skill. Although comparable research on *Reel Recovery* retreats has not been undertaken, Kelley et al. [15] investigated a fly-fishing retreat for male prostate cancer survivors that included other outdoor activities and group discussions. This study found that the most valuable parts of the retreat were meeting other survivors and contact with clinical staff [15]. Research from non-cancer contexts have found positive impacts of fly-fishing retreats. For instance, studies have found that for veterans with post-traumatic stress disorder (PTSD) fly-fishing can be an effective coping resource, improve sleep quality, reduce PTSD symptoms, and facilitate positive mood and healing [16,17]. Veterans who participated in fly-fishing interventions have reported valuing the camaraderie, reflection, gaining new skills and confidence, and the combination of nature and physical activity [18,19]. While evidence is limited, these studies suggest fly-fishing interventions may provide promising well-being benefits.

1.1. The current study

As little is known about the impact of immersive nature-based interventions in general, and fly-fishing retreats specifically, for cancer survivors more work is needed. The current study addresses this gap by providing insights into the experiences of cancer survivors attending *Casting for Recovery* and an adapted version of the *Reel Recovery* fly-fishing retreats in Australia run by the not-for-profit organisation 'Mending Casts.' Due to the limited existing research, a qualitative study design was chosen as it enables an in-depth exploration of participants' experiences, allowing a deeper insight into the value and meaning these programs may hold for cancer survivors [20]. To this end, the study aims to understand the experiences of women and men attending fly-fishing retreats and identify the psychosocial outcomes they associate with participation.

2. Materials and methods

2.1. Context

The project was conducted in partnership with 'Mending Casts' as part of an evaluation of their fly-fishing retreat programs: An outline of each retreat structure is provided in Supplementary File 1. In brief, the live-in retreats are conducted in rural locations and involve a mix of group discussions, structured activities, and guided instruction and practice in fly-fishing. Fly-fishing takes place in lakes or rivers near the retreat venue. Volunteers provide meals and ongoing support to participants throughout the retreat, and trained personnel facilitate the group-based activities. The current study focused on the experience of

attendees from retreats held in Victoria, Australia.

2.2. Design and recruitment

A qualitative, semi-structured interview study was undertaken from a critical realism perspective. Reporting follows the Consolidated Criteria for Reporting Qualitative Research [21]. 'Mending Casts' emailed all attendees from eight retreats held during 2022-2024 ($n = 80$) the study information and an invitation to participate on behalf of the authors' institution. The email included a link for interested participants to access an online consent form and book a single one-on-one interview with one of the researchers.

2.3. Data collection and study materials

Three researchers (LF, VW, AW) conducted and recorded the interviews via Zoom. Interviews were conducted between December 2023 and June 2024 and were between 20 and 60 min in duration. Although two participants, had a spouse present in the background for support, no data was collected from spouses and they did not participate in the interviews. No interviewer had an existing relationship with any participant.

A semi-structured interview guide was developed by the research team consisting of a broad open-ended question to elicit participants' experience of the retreat with a series of follow-up questions and probes to ensure all participants discussed perceived benefits and possible improvements (see Supplementary File 2 for interview guide). A narrative interview approach was used to allow participants to tell their story in chronological order and in their own words [22]. A recording of each interview was checked against the Zoom generated verbatim transcript for accuracy by two members of the research team (NR, GC). Transcripts were not provided to participants for review.

2.4. Ethical considerations

Participation was voluntary and confidential. Study consent and subsequent contact was only with the research team. Consent and permission to record the interview was reconfirmed verbally at the beginning of interviews. Data were deidentified and interview transcripts stored securely on a password-protected digital platform only accessible to the research team. The study received ethics approval from Deakin University's low risk Human Ethics Advisory Group [HEAG-H 176 2023].

2.5. Data analysis

Two members of the research team (NR, GC) completed the analysis using Microsoft Excel software. Data were analysed using Braun and Clarke's reflexive thematic analysis approach which is inductive, organic, and iterative [23]. This analytic approach conceptualises quality through analytic transparency, analytic depth and reflexive engagement [23,24].

Analytic transparency: Two researchers (NR, GC) independently and inductively coded an initial six transcripts, with initial codes developed through comparison and collaborative discussion that included the wider research team. The remaining transcripts were coded independently and inductively (NR, GC) then discussed. Interpretive analyses considered codes across the entire dataset to identify meaningful themes and subthemes, with themes refined through team discussion. Notes were kept to track the analytic process. Although reflexive thematic analysis does not require multiple coders [24], the collaborative approach enhanced trustworthiness as it allowed for discussion of bias and subjectivity, and consideration of alternative readings of the data. Participants did not provide feedback on the findings.

Depth and contextualisation: Interviews provided sufficient depth for coherent thematic development that captured shared patterns of

meaning. Themes and subthemes are illustrated with quotes, with filler words (e.g. 'yeah', 'sort of') removed. Participants were assigned a unique ID, that indicated which type of retreat they attended.

Reflexive engagement: The research team consisted of four females and one male. GC is an organisational psychologist and NR is a provisional psychologist, both have several years of extensive research experience. LF is an organisational psychologist with a PhD and more than 10 years research experience. LF has personal experience as a fly-fisher which contributed to an interest into the topic. AW is a psychologist with a PhD and over 20 years research experience. Author VW also has a PhD and more than 25 years of cancer control/supportive care research experience. All researchers have qualitative and quantitative research method experience. The research team discussions of codes, themes and subthemes allowed identification of assumptions and bias and stimulated different ways of considering data.

3. Results

Nineteen people (8 women, 11 men) participated in the study. The cancer diagnoses for study participants are outlined in Table 1.

Overall, participants' reflections of the program were positive. Four main themes were identified providing insight into participant experiences and impact of the retreat. Themes and subthemes are summarised in Table 2 along with supporting quotes. Themes were generally consistent across males and females.

3.1. Theme 1: Cancer experience as motivation for attending

Participants' experiences of their cancer care was isolating and disruptive and motivated their attendance at the retreat. Both male and female participants described feeling *isolated during treatment* (subtheme 1) because treatment during COVID restrictions reduced opportunities to connect with other patients during healthcare visits. The financial, mental, and emotional *disruption and burden of diagnosis* (subtheme 2) was reflected upon and provided some context for participants' seeking a wellness retreat. While female participants noted they were *seeking social connection* (subtheme 3) and mentioned their desire to have face-to-face contact with other women through the retreat, this was not a motivation for men.

3.2. Theme 2: A restorative escape

This theme reflects participants' positive and meaningful experiences of the retreat providing opportunities for wellbeing. *Mindfulness and immersion in nature* (subtheme 1) was noted by many participants, specifically the impactful sensory experience of being in nature, being by the water, and getting fresh air. Some described fly-fishing as a mindful and meditative experience requiring focus on the present moment. Males and females found the retreats provided a *meaningful experience* (subtheme 2), describing the retreat as life affirming, joyful and providing lasting memories. The opportunity for *reflection and learning*

Table 1
Participants' cancer diagnosis.

Cancer Diagnosis	n	
	Female	Male
Breast cancer	8	
Multiple myeloma		3
Prostate cancer		1
Bowel cancer		1
Mycosis fungoides		1
Tongue, lung, suspected kidney cancer		1
Suspected prostate cancer diagnosis at the time of retreat registration		1
Not disclosed		3
Total	8	11

Table 2

Themes, subthemes, numbers of men and women expressing each subtheme, and illustrative quotes.

Subtheme	Participant n		Example Quotes
	Female	Male	
Theme 1: Cancer Experience as Motivation for Attending			
Isolated during treatment	3	4	“At the [healthcare] centre ... I didn't build any connections ... it would be this10 min chat before you got bloods ... I was feeling really isolated” (F5) “When I was sick [with cancer] there wasn't a lot of support, cause it was through Covidthey had no courses or no support network, only counselling. It was one of the hardest things that I had to go through” (M6)
Disruption and burden of diagnosis	3	1	“The first thing that hits your mind is why me? And why now?. What have I done? And the answer is, nobody knows” (M2) “Look treatment is expensive ... There's drugs, and ... for some women, they don't want to leave the house if they don't have hair ... so a wig is imperative to them. They're not cheap ... There's a lot of cost that comes with treatment. And there's a lot of loss of income that comes with treatment” (F2)
Seeking social connection	4	0	“[Going on the retreat] was a, it was an exercise in, socialising and ... getting back out there ... So that was the first big step” (F8)
Theme 2: A Restorative Escape			
Mindfulness and immersion in nature	5	7	“[The retreat] just takes you to a better place ... Just the wilderness was nice, just to get some clear air and clear your head a bit, instead of looking at the same four walls every day” (M6) “I found, because you have to concentrate on the fly-fishing, I can be in that zone, and my head's not doing 100 million miles an hour on anything else, which is what it normally does. So for me it was a really meditative, really great escape from my brain ... It's kind of the perfect outdoor thing for me ... which obviously is good for our mental health anyway” (F2)
Meaningful experience	5	6	“I just will remember this [the retreat] forever. It is something that I'll always remember forever” (F4) “But I guess those three days [at the retreat are] indelible on my mind, and they will always be very special. I'm sure they're very special to everybody that went and to those who buddied and organised it. Overall, just a marvellous thing” (M11)
Reflection and learning	2	7	“I thoroughly enjoyed [the retreat] ... just listening to other people's stories. I just found it quite interesting overall and came away with a broader understanding of maybe the different type of cancers that are out there as well as my own” (M3) “[The facilitated conversations] allow [ed] me to narrate some of my experience ... to say this reminds me of that part of the journey ... in ways that I hadn't considered before” (F1)
Break from the day-to-day	2	5	“It was a good break from the mundane which has been for the last12 months for me, just weekly doctors, weekly treatments, all of that.” (M5) “As a mother, you tend to have to organise everything, and just to go there [to the retreat] and just do nothing ...

(continued on next page)

Table 2 (continued)

Subtheme	Participant n		Example Quotes
	Female	Male	
			have meals in front of you ... so the ability just to do nothing ... it was quite nice" (F3)
Theme 3: Growth and Empowerment			
Connection through shared experiences	7	8	"I was a little bit nervous [about] what stages of recovery people were in, but ... there was sort of a real sense of camaraderie, for lack of a better term. Having known that we'd all been through something that was really hard and come out the other side" (F1) "Yeah it [the group conversation] was really helpful, because they could relate to everything ... I could talk to friends, [but] they don't really understand it ... But when someone's gone through it and understands the pain or difficulty ... it was helpful to feel not alone ... it's a shared experience" (M4)
Achievement and pride	8	9	"[It] doesn't matter at all [if you don't have fly-fishing experience]. To be honest, it probably would be a bigger benefit if they didn't. Because they're learning something new. And in that moment, when they're learning something new ... It takes their mind away from the struggles. Yeah, in that environment, whether it's for an hour, for a day or two days" (M8) "The confidence of being able to do it [fly-fish] because hubby had bought a fly rod and stuff. But I'd always looked at it as something I couldn't do ... So there was that pride of oh, my gosh! I can do this, and of course, then you catch a fish, and you're like, wow! I can do this" (F5)
Support to allow vulnerability	6	8	"The fly-fishing side of it is also a massive part of it, because you're in an environment that you don't even realise that you're opening up and that's what you're doing. But at the same time you're in that environment where, if you're on a river, there's those different beats and you all get back together, and you have a bit of a chat. And oh, how'd you go, you know, and then that kicks off the rest of the conversation" (M8) "I didn't know what to expect. It was pretty, it was a bit overwhelming at some points of the thing [retreat], just obviously with other stories from other people, the other guys" (M6)
Theme 4: Building Connections, Competence and Joy Going Forward			
Sustained social connections	5	6	"Us ladies [from the retreat] have started a Facebook group ... So I had a bone infusion yesterday, and I was discussing that with the ladies ... We're sharing information, and we're sharing how we feel ... So the friendship aspect was massive" (F4) "I made some new friends, I still hang out with a few of the guys now. Which is good. We all have a chat together, go out for lunch and do a bit of fishing together" (M6)
New skills and experiences	3	6	"Learning the basics of a new skill was really important ... I think exposing people to a new skill, or for some developing an existing skill, and getting some of that passion that people that are really into it have, imparted on to them while they're learning it (M1)"

Table 2 (continued)

Subtheme	Participant n		Example Quotes
	Female	Male	
			"[The retreat gives] you another hobby or skill that you could then pursue further, and it's not something that you need to do with a whole lot of other people ... I'm not saying by yourself necessarily, because I think it's nice to have somebody there with you, but something you can just get up ... find yourself a beautiful spot and sit and do this." (F6)
Improved wellbeing	4	5	"I didn't have expectations to start with, which it blew me away how much I got out of it [the retreat], and how it helped me mentally and physically, I suppose. [It] got me sort of moving a bit more. And just makes you bit more positive. And yeah, something to look forward to" (M6) "My immediate mood and state of mind became more positive. I am, I was just a happier person, and being able to relive the excitement of landing those fish ... transports me back to that moment over and over again ... I'm able to relive that excitement and that happiness" (F1)
A new perspective	3	6	"[A benefit of the retreat was] the realisation that you're not alone, I guess ... I mean your mental state at any one point is terrible during the cancer journey. So, it gives you hope, I think. It really does give you hope" (F8) "After I got the diagnosis I was kind of like, oh, sh*t, I don't wanna [sic] do this [deal with cancer] ... I'm not sure what's going on. And after the retreat I'm, for want of a better term, Stop! F*k this. I'm out there. I'm doing what I want to do. I'm not gonna [sic] be afraid of what might be. That that was the biggest thing I got out of it" (M8)
Shared enjoyment	3	2	"My family, especially my husband, are thrilled to see me have a positive experience ... And to have found something that will be a positive thing in my life that ... gets me out into nature, that gets me moving and that I enjoy cause I don't really have any hobbies ... But he's thrilled to see me find something that I enjoy" (F2) "These days, when I do go out [fishing], my wife will come with me ... I also look upon them as creating memories. So if the day does come that I drop off the perch before her, hopefully I've left her with some good memories" (M3)

(subtheme 3) was noted, with participants appreciating the ability to share their own experience, learn from others, and see their experience in relation to others. Five male participants noted that listening to others' stories helped them to process their own diagnosis and cancer journey. Most participants who appreciated the retreats as providing a break from the day-to-day (subtheme 4) were male. They described the experience as a change from the mundane nature of medical treatment. Two females also noted the value of having everything organised with no expectations of them which enabled them to truly relax and disconnect.

3.3. Theme 3: Growth and empowerment

During the retreat, participants experienced personal growth and empowerment. Many described a feeling of connection through shared experiences (subtheme 1) with others which they noted helped them feel

less alone. A strong bond was formed through having similar lived experiences and a common understanding of the challenges of cancer. This was beneficial as friends and family could not relate to the experience in the same way as other cancer survivors. *Achievement and Pride* (subtheme 2), including the novelty of trying something new, provided opportunity to refocus the mind away from daily challenges. Many felt the one-on-one support from their buddy was crucial for helping them build confidence when learning a new skill. Three female participants specifically noted feeling pride, excitement, and a sense of achievement when fly-fishing. Two male and two female participants who were already passionate about fishing described the enjoyable nature of fly-fishing. Participants commented that the relaxed environment and social connections created a space where they felt safe and there was support to allow vulnerability (subtheme 3). The friendship and social connection that naturally developed with buddies were valued by both males and females. However, some male participants found it difficult to be vulnerable and hear others talk bluntly about their future and their challenging stories, commenting that this aspect of the retreats was emotionally confronting.

3.4. Theme 4: Building connections, competence and joy going forward

This theme reflects the positive outcomes participants experienced following the retreat. Many mentioned *sustained social connections* (subtheme 1) with program attendees and organisers, describing ongoing support and an increased circle of friends. Some participants left the program with *new skills and experiences* (subtheme 2) or a reignited passion giving them something active to do and look forward to. Others enjoyed the process of learning a new skill and having something positive to focus on. Almost half described *improved wellbeing* (subtheme 3) such as returning to life recharged, experiencing a brightened mood, more positive state of mind, and increased happiness and strength. Some participants reported gaining a *new perspective* (subtheme 4) after hearing others' experiences. Others expressed a sense of gratitude, and a realisation that they are not alone and could still enjoy life despite their cancer diagnosis. Some male participants described increased feelings of self-acceptance, self-confidence, and self-worth while others noted the experience was important for getting a sense of themselves back. Participants described a *shared enjoyment* (subtheme 5) where family members were happy that the participants could have this experience. Some continued fly-fishing with their family and noted the joy of creating memories together.

4. Discussion

This study aimed to understand cancer survivors' experiences of a cancer-focused fly-fishing retreat and identify the key outcomes from these programs. The themes and subthemes identified from our interview data demonstrated that the retreats provided opportunities, for both men and woman attendees, to enhance their wellbeing through the mindful experience of fly-fishing in nature. Additionally, personal growth and empowerment was enabled through peer support, connecting over shared experiences, and achieving a new skill. Participants valued the immersion in nature offered by the live-in retreat. Previous research has found wellbeing benefits of exposure to nature [7–9]. However, nature-based interventions for cancer survivors is an emerging research area [10]. The present study adds to the evidence-base examining a nature-based intervention for cancer survivors, with benefits including sustained social connections, skill acquisition, enhanced wellbeing, and perspective shifts. The isolating and disruptive burden of cancer and its treatment provided context for the realised value of the retreat experiences.

Consistent with previous research exploring the Casting for Recovery retreat [14] and fly-fishing interventions for veterans [18,19], participants in the current study valued the opportunity for reflection and learning through the facilitated peer discussions. This was reflected in

the themes “growth and empowerment” and “building connections, competence and joy going forward.” More males than females appreciated space to reflect on their cancer experience and learn from others. This finding may reflect differences in retreat structure as males participated in six facilitated conversations while females participated in only one. However it may also reflect gender differences in seeking support when navigating life challenges with previous research showing that women are more active in giving and receiving social support, tend to have larger support networks, and perceive more quality in their social support [25,26]. Furthermore, traditional masculine norms related to self-reliance, strength, and stoicism may reduce the likelihood of males seeking mental health support [27]. These norms and tendencies may limit the emotional support males receive while navigating the multifaceted impact of cancer, which may explain why they benefited from having a dedicated space to share and process their experiences during the retreat. Our finding that only female cancer survivors expressed the desire for social connection as a reason for attending the retreat (Theme 1, subtheme “seeking social connection”) may provide some support for gender differences in support seeking.

Our study found that the retreat's activities, including opportunities for people to share their cancer experiences, helped the formation of strong connections between retreat attendees. The support provided by retreat attendees to each other was seen as distinct to the support provided by friends and family who have not experienced cancer. This finding is consistent with previous research examining the impact of peer support for men with prostate cancer [15]. The findings also support research showing that support from others with lived experience of cancer fosters a unique sense of connection and understanding, as well as being a source of knowledge about the cancer experience [28,29]. An additional layer of social support was provided through the connection developed with the fly-fishing buddies. In some cases, the buddies were also cancer survivors. Although not explicitly stated by all participants, this may have provided an additional element of support through their shared experiences.

Past research has demonstrated an association between social support and emotional wellbeing for cancer survivors [30]. In the current study, the retreats enabled fulfilling and enduring social connections to form between attendees. Some males noted they found parts of the retreat emotionally confronting, particularly with respect to being vulnerable and hearing others' challenging experiences. Research examining gendered dimensions of men's peer support is emerging [31], however the current study's findings may be explained by masculine ideals of independence and self-sufficiency which may lead to avoidance of sharing personal difficulties and emotional disclosure [27]. In the current study, no female participants described the retreat as emotionally confronting. While females had less facilitated peer conversation than males, this finding may suggest that females were not inhibited by negative perceptions of emotional disclosure and were more comfortable with vulnerability compared to males. Despite some male participants feeling emotionally overwhelmed, they still noted the value of the connection with their peers, which is consistent with the growing evidence that men's peer support can be valuable when navigating mental health challenges [31]. Furthermore, male participants may have been more likely to note the benefits of a dedicated space to share and connect if they had not previously experienced this, compared to females who more actively seek and provide social support [25,26]. Further research is needed to understand preferences for men with cancer when participating in peer support activities, to enable connection and reduce emotional overwhelm.

Our study suggests that the retreats provide a ‘restorative escape.’ Fly-fishing was described as mindful and meditative, requiring focus on the present. Mindfulness has been associated with wellbeing benefits for cancer survivors [32]. Losing oneself in the experience of fly-fishing may be likened to entering flow, a positive state characterised by total absorption, effort-less control, and intrinsic reward [33]. Flow has been linked to enhanced wellbeing, positive emotions, physical and mental

health, achievement, and increased motivation [33]. Numerous benefits have been associated with experiencing flow for cancer survivors, including happiness, increased self-esteem, and a sense of control around self-care activities [34]. Across all retreats, learning the new skill of fly-fishing fostered a sense of achievement. Engaging in activities that build self-efficacy, include immediate feedback, and where an individual feels optimally challenged and capable, are considered antecedents for flow [33]. The one-on-one fly-fishing support provided by the buddies may have helped to create the conditions for flow to occur as they supported skill development and provided feedback helping to build confidence and reduce potential frustration and disengagement. Although further research is needed to confirm our findings, our study suggests that the mindful act of fly-fishing and experiencing a flow-like state may be key contributors to enhanced wellbeing experienced by retreat participants.

Fly-fishing involves physical activity which is encouraged for cancer survivors to improve physical and mental health [35]. In contrast to general physical activity interventions for cancer survivors that emphasise daily steps, walking programs, or gym based activity [36,37], the fly-fishing retreats offered a more holistic approach to activity that combined time in nature, peer support, and opportunities for mindfulness and flow through learning fly-fishing. Participants in the current study were at various stages of cancer treatment and recovery, with some needing to manage varying levels of fatigue and pain. Accommodations were made to address these issues ensuring fly-fishing was achievable for all.

One nature-based physical activity examined in the literature is dragon boat racing, a team sport with demonstrated physical, mental, and social benefits for women who have experienced breast cancer [38,39]. Our findings suggest fly-fishing retreats can produce similar mental wellbeing and social benefits. Dragon boat racing has also been linked to enhanced physical strength, and participants report building confidence and a feeling of control [38]. Although fly-fishing within the retreat setting is less physically strenuous, female participants in the present study experienced pride, excitement, and achievement. Further research could seek to understand the similarities and differences in experiences and outcomes of fly-fishing retreats and dragon boat racing.

4.1. Implications

Nature-based interventions are a promising mode of support for the wellbeing of cancer survivors. The current study's qualitative approach has provided deep insight into the experiences of participants of one type of nature-based intervention-fly-fishing retreats. Our findings highlight the value of these retreats through the connection they allow attendees to build with other cancer survivors, as well as through development of a new skill. Our study, contributes to the growing evidence that fly-fishing as a nature-based intervention can provide numerous social and wellbeing benefits for cancer survivors. The opportunities for mindfulness, physical activity, immersion in nature, achievement, flow-like experiences, and peer support provided by the retreats may contribute to improved wellbeing. Wellbeing support programs for cancer survivors could consider a multifaceted approach incorporating elements identified through the current study, and fly-fishing retreats could be explored as part of holistic cancer care programs. Considering the cost of conducting live-in retreats, future research could examine options for scaled back or lower-cost fly-fishing interventions that include the most impactful elements for wellbeing. As virtual reality (VR) is emerging as a way to deliver nature experiences for cancer survivors [40,41], research could also explore whether a VR fly-fishing experience can achieve beneficial outcomes, similar to those found for a real-world experience. If outcomes were the same or similar, VR may provide a mechanism for allowing greater participation in fly-fishing interventions. The current study extends on previous research by examining differences in the experiences of males and females at their respective retreats. The influence of gender norms for support

seeking and experiencing vulnerability should be considered in the design of nature-based interventions. Future research should examine the perspectives of male cancer survivors in nature-based peer support contexts and the potential impact of gender norms on their experience.

4.2. Strengths and limitations

The study has several strengths including its focus on an intervention for cancer survivors that has received little attention in the literature, the inclusion of both males and females that enabled an exploration of experiences based on gender and the use of a qualitative methodology that enabled insights into the experience of attendees at the fly-fishing retreats. However, several limitations should be noted. Findings related to social and wellbeing benefits are subjective, based on participant perceptions. Future research could evaluate the retreats quantitatively using validated measures of wellbeing with pre-post study designs or if possible randomised trials. Sampling bias may be present if those with more positive retreat experience were more likely to volunteer for the study. Nonetheless, the findings align with emerging research supporting the benefits of nature-based interventions and fly-fishing [7–9,14,15]. The current study focused exclusively on experiences of retreat participants. Previous research has found that those providing peer support experience personal growth, self-empowerment, and positive perspectives on life [42]. Future research could explore the experiences and impact of the retreats on the “buddies” who provide training in fly-fishing and peer support.

5. Conclusion

Findings from this study suggest that fly-fishing retreats provide meaningful experiences and numerous wellbeing benefits for cancer survivors. Retreats may support wellbeing through time in nature, mindfulness, peer support, social connection, flow-like experiences, and learning a new skill. Further research should build on these qualitative findings and quantitatively measure the impact and value of the fly-fishing retreats.

CRedit authorship contribution statement

Loch Forsyth: Writing – review & editing, Supervision, Project administration, Methodology, Investigation. **Nicky Robinson:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation. **Grace Claringbold:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation. **Arlene Walker:** Writing – review & editing, Validation, Supervision, Methodology, Investigation, Conceptualization. **Victoria White:** Writing – review & editing, Validation, Supervision, Methodology, Investigation, Conceptualization.

Data availability statement

Data sharing is not available for this article due to the personal and sensitive nature of the research and for ethical reasons.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the authors used ChatGPT in order to brainstorm the report title. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Declaration of interest

None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ctcp.2026.102055>.

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