Wellbeing outcomes of nature tourism: Mt Barney Lodge

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ABSTRACT

Nature-based tourism may provide a well-structured format to facilitate opportunities for wellness. This research collected in-depth data from 72 tourists to explore the holistic wellbeing outcomes of experiences at the Mt. Barney Lodge in Queensland, Australia. We found that the Lodge offers a multitude of benefits across wellbeing dimensions. Such research indicates that nature is a public health resource, and that nature-tourism enterprises have the potential to deliver nature therapies. Creating carefully planned packages that deliver both nature contact and connectedness, offer self-development and transformative impacts and are partnered with mechanisms to encourage consistent nature contact, may be integral to the lasting wellbeing of people and planet.

1. Introduction

Wellness tourism has become a rapidly emerging market segment. There are diverse wellness tourism options and destinations (e.g., various spa destinations, meditation and yoga camps, multi-day health and fitness excursions or luxury resorts, among others) to satisfy people with diverse motivations and values in terms of wellness benefits (Brymer & Lacaze, 2013; Pesonen, Laukkanen, & Komppula, 2011). Irrespective of what kinds or combination of wellness benefits tourists seek, nature-based environments offer some of the greatest benefit (Brymer & Lacaze, 2013; Pesonen et al., 2011; Pretty, Griffin, Sellens, & Pretty, 2003). In fact, a multitude of studies have demonstrated the salutary outcomes of nature-based tourism (e.g., Buckley, 2020; Croy, Myole, & Myole, 2020) and spending time in and reconnecting with nature more generally (e.g., Capaldi, Passmore, Nisbet, Zelenski, & Dopko, 2015; Kuo, 2015). This is particularly relevant for today where the COVID-19 pandemic, rapid urbanisation and devastating environmental crises have put human-nature relations into the spotlight (Morse, Gladkikh, Hackenburg, & Gould, 2020; Shanahan et al., 2016), reigniting nature’s role in wellbeing. It is in this context that nature-based tourism, despite not being specifically wellness-targeted but rather focused on our interactions with the natural world, provides a well-structured format, facilitating opportunities for wellness for people and the environment (Brymer & Lacaze, 2013; Buckley, 2020).

Although work on wellbeing across the social sciences has accelerated in response to changes in global conditions, new research priorities, improved data sources and more sophisticated concepts and methods, there remains no single concept or measure of wellbeing that is generally accepted over others (Clark & McGillivray, 2007). Broadly, human wellbeing encapsulates a holistic multidimensional notion that perceives an individual in terms of their journey towards optimal health and functioning. A range of theories have emerged that shed light on different aspects of wellbeing, including the basic human values approach, the intermediate needs approach, the universal psychological needs approach, the domains of subjective wellbeing approach, the capability approach and the central human capabilities approach (Clark & McGillivray, 2007).

Although it is outside the scope of this study to define wellbeing, this study understands that wellbeing is a multidimensional concept that embraces all aspects of human life. This study, therefore, looked broadly at the various dimensions of human life that, in various combinations, are said to enhance quality of life and capacities to contribute to society: social, mental, emotional, physical, intellectual, spiritual, and environmental (Brymer, Cuddihy, & Sharma-Brymer, 2010). Although occupational wellbeing is also a key dimension Brymer & Lacaze, 2013; Kaplan, 1993), this was less relevant to this study which focuses on wellbeing outcomes for visitors. Smith and Diekmann (2017) have put forward a model of ‘Integrative Wellbeing Tourism Experience’, which suggests that the ‘optimum’ form of wellbeing-enhancing tourism should combine three dimensions: 1) pleasure and hedonism (i.e.,
having fun), relaxation and rest, 2) meaningful experiences (e.g., education, self-development or self-fulfillment), and 3) altruistic activities and sustainability (i.e., being environmentally friendly or benefiting local communities). It is also important to note that the approach to wellbeing in this study is predominantly western-centric. Future studies should explore non-western notions in more depth (Smith & Diekmann, 2017).

This research explores the holistic wellbeing outcomes of the Mt. Barney Lodge in the Scenic Rim Region of Queensland, Australia, which offers opportunities to engage with nature through various nature-based activities. Relatively unique about this site is its accessibility and affordability to a diverse cohort. To date, there have been few studies of this nature conducted in Australia (see exceptions: Buckley, 2020; Qiu, Sha, & Utomo, 2020; Wolf, Stricker, & Hagenloh, 2014) and even fewer during the depths of the COVID-19 pandemic. This research is contextualized in a unique period – a product of COVID-19 – where Mt. Barney Lodge owners witnessed near capacity patronage not seen before and a new group of repeat visitor patronage as their popularity grew locally. Mt. Barney offered a popular localized respite, which was a product of government lockdowns, state borders shutting, restrictions on traveling far from home, and people’s heightened stress, social isolation, fear of social interaction and desire to connect with nature in the midst of COVID-19.

Our study builds on existing literature on the wellbeing outcomes of nature-based tourism by collecting in-depth descriptive data to define and explore the specific and nuanced kinds of holistic wellness benefits (beyond mental or emotional health) that emerge from specific nature-based activities in this context, while also providing insight into the sustainability of some of these benefits for visitors. Increased understanding in these areas will contribute further insight into the tourism - nature-wellbeing nexus and tourist motivations, expectations, behaviours, and levels of satisfaction (Brymer & Lacaze, 2013; Willis, 2015).

2. Literature review

A growing body of research is indicating that, beyond the dependence of humanity on its fundamental resources, the natural world enhances perceptions of physiological, emotional, psychological, and spiritual health in ways that cannot be satisfied by other means. All types of contact with nature, whether incidental (i.e., neighbourhood green space), direct (i.e., visiting natural places) or indirect (i.e., watching/listening to nature programmes on TV/Radio) have been associated with diverse positive outcomes and pathways for health and wellbeing (Capaldi et al., 2015; Kuo, 2015; Martin et al., 2020; Richardson, Passmore, Lumber, Thomas, & Hunt, 2021; Shanahan et al., 2016), making it a good upstream health promotion intervention (Maller, Townsend, Pryor, Brown, & St Leger, 2006). The results are similar in the literature on the wellbeing impacts of nature-based and outdoor tourism (e.g., Buckley, 2019; Buckley, 2020; Lück & Aquino, 2021). The various wellbeing outcomes of nature contact and connection are briefly discussed below.

The benefits of nature engagement to mental wellbeing have been particularly clear. Well-documented are the benefits of nature to hedonic wellbeing, which are the subjective emotional or ‘feeling good’ components (Keyes & Annas, 2009). Direct contact with nature can boost moods and increase positive affect (Maller et al., 2006; Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009; Nisbet, Zelenksi, & Murphy, 2011), reduce mental fatigue (Maller et al., 2008), provide stress relief (Van Den Berg & Casters, 2011) and counteract depression and aggression (Barton, Bragg, & Pretty, 2009). The natural landscape has been described as an effective source for feeling restored and recharged, even just by looking at it (Bird, 2007; Kaplan & Kaplan, 1989).

Higher levels of connectedness with nature are also associated with a range of outcomes for happiness indicators such as positive affect and life satisfaction (Capaldi, Dopko, & Zelenksi, 2014). The results are similar in studies focused on nature-based and outdoor tourism, with a range of documented immediate emotional effects, including positive emotions (e.g., happiness, awe, and wonderment) and sense of recovery (e.g., escaping stress, regeneration, perceived attention restoration) (see e.g., Aquino, Schanzel, & Hyde, 2018; Buckley, 2019; Buckley, 2020; Croy et al., 2020; Curtin, 2009; Qiu, Sha, & Utomo, 2020; Willis, 2015).

Although less researched, studies are also documenting nature’s influence on mental wellbeing beyond ‘feeling good’ – that is, eudaimonic and the ‘functioning well’ components (Keyes & Annas, 2009). Nature immersion and connectedness can provide an important source of meaning (Flegg, Kramer, I’hoste, & Borasio, 2008; Steger et al., 2013), benefits for autonomy and improvements in personal growth, self-esteem, self-regulation, social competency (Norton & Watt, 2014; Pascarelli, Hall, & Anderson, 2010) and greater vitality (Capaldi et al., 2014; Nisbet & Zelenksi, 2011; Ryan et al., 2010). Various senses of mental clarity (e.g., greater perception and clarity of thought or outlook on life, improved sense of purpose and meaning in life or changed worldview) have also been documented in nature-based tourism studies (Buckley, 2019; Campón-Cerro, Di-Clemente, Mogollón, & Folgado-Fernández, 2020; Curtin, 2009; Hanna et al., 2019; Willis, 2015).

Nature can also provide ‘perspective’, allowing individuals engaged in nature to transcend personal problems, gain perspective on their place in the world, and find inner peace, gratitude, and humility (Fredrickson & Anderson, 1999; Gould & Lincoln, 2017). In this way, eudaimonic well-being is linked to spirituality (Van Dierendonck & Mohan, 2006). Several studies have demonstrated how nature-based tourism experiences can be a source of spiritual inspiration, development, and fulfillment (Curtin, 2009; Fredrickson & Anderson, 1999; Stringer & McAvoy, 1992; Willis, 2015).

Nature connectedness has also been associated with the extent to which people are flourishing in their public, social lives (Howell, Dopko, Passmore, & Buro, 2011; Keyes, 2005). There is a large body of studies that have tied greener settings to social variables, including stronger pro-social aspirations (Weinstein, Przybyski, & Ryan, 2009), greater shared use of common space and social interaction (Sullivan, Kuo, & Depoorter, 2004), and greater sense of integration, social ties, and sense of community (Kuo, Sullivan, Coley, & Brunson, 1998). Nature-based tourism studies have also identified a sense of togetherness between tourists and guides and each other in natural settings (Buckley, 2020; Parkiń, Filep, & Taylor, 2020; Mackenzie & Bynner, 2020).

In terms of physical health, many have indicated the medical benefits (e.g., improved immune function) (e.g., Kuo, 2015; Shanahan et al., 2016). Engaging with nature and being outdoors is a means of promoting positive health behaviour by supporting active lifestyles (Pretty et al., 2003; Shanahan et al., 2016). The specific activity of exercising in green space has been linked to other wellbeing outcomes, including improvements in social networking, feelings of connectivity and companionship, and a means of escape from modern life (Barton et al., 2009; Pretty et al., 2007). On top of this, others have documented how the physical challenge of wilderness recreation and nature-based tourism can inspire a reawakening to physical capabilities, renewed sense of an individual’s body and a sense of accomplishment which bolsters self-confidence and self-esteem (Campón-Cerro et al., 2020; Fredrickson & Anderson, 1999; Hanna et al., 2019; Roberts, Hinds, & Camic, 2020).

As a key pillar of ecotourism, several studies have also documented the interpretive and environmentally educative experiences of nature-based tourism (Croy et al., 2020; Lück, 2003, 2014). Gould and Lincoln (2017) build on this, proposing that nature ‘provide “life teaching” through encouraging or pushing people to develop and draw on personal values, continuously improve themselves and adapt to surroundings. The natural world can also inspire human ingenuity through inducing creative responses to challenges created by nature, thereby teaching self-reliance (Gould & Lincoln, 2017). Further, several studies demonstrate how nature experiences are facilitators of transformative personal change as people become environmentally and culturally aware, and mindful of the adverse impacts of their activities.

and lifestyles (Ardoin, Wheaton, Bowers, Hunt, & Durham, 2015; Hanna et al., 2019; Willis, 2015). Higher levels of nature connectedness and/or nature contact have been linked to a higher propensity to adopt pro-environmental attitudes and behaviours (Mackay & Schmitt, 2019) which not only benefits the natural world (i.e., environmental wellbeing) but also elevates emotional wellbeing (Amérgio Cuervo-Arango, Garcia Martin, & Sanchez Nunez, 2013).

The many different potential outcomes for wellbeing provided by nature are not covered in full in this paper, yet the overarching narrative is clear: connecting and having contact with nature supports human wellbeing and functioning. It is important to note, however, that outcomes and benefits on individual wellbeing are dependent on the nature-based tourism experience design (Luck & Aquino, 2021).

### 3. Study site and methods

The ecotourism certified Mt. Barney Lodge is in the beautiful Scenic Rim Region next to Mt. Barney National Park, about 120 km southwest of Brisbane and right at the base of Southeast Queensland’s second highest peak, Mt. Barney. Most of Mt. Barney National Park is in the Gondwana Rainforests of Australia’s World Heritage Area and it has a series of distinctive peaks that are the remains of the ancient Focal Peak Shield Volcano which erupted 24 million years ago (Queensland Government, 2021). The Park has varied vegetation – from open forests around the foothills of the peaks, subtropical rainforest above 600 m to montane heath shrublands towards the summits (Queensland Government, 2021). The nature-based tourism experience offered at Mt. Barney Lodge is low impact, including a range of accommodation options for a maximum occupancy of 120 people (from camping as the most common option, to glamping, cabins, and homesteads) and activities for both adults and children that are guided by qualified outdoors leaders with extensive knowledge on the local area, flora, and fauna (Table 1). The walks and hikes are also often undertaken independently by tourists.

An initial field visit in April 2021 was undertaken by three of the authors. Fieldwork immersion for 2 nights allowed the researchers to experience Mt. Barney Lodge firsthand and meet with the Lodge owners to further develop and refine the questionnaire and discuss the recruitment of participants. Participants were recruited via an information sheet and flyer placed in the Lodge reception, and incentives of two $100 vouchers to stay at Mt. Barney Lodge were advertised. A qualitative survey method was employed for several conceptual, design-related and practical reasons, including that they help collect rich data in an affordable and unobtrusive way from a geographically dispersed population, allow for a larger and more diverse sample to gain richer insights, and can facilitate participation and disclosure on sensitive topics such as emotional experiences (Braun, Clarke, Boulton, Davey, & McEvoy, 2021).

Between May to August 2021, visitors who had stayed at Mt. Barney Lodge and were interested in partaking in the study were asked to write their emails on a participation sheet that was left at the Lodge reception. The Lodge owners intermittently shared these emails with the authors so that more information about the study and the link to the online questionnaire, which was administered through RedCap, could be sent to potential participants. Upon clicking the link, participants could access more detailed information on the aim of the study, the approximate time the questionnaire would take, who was being asked to participate (i.e., visitors who stayed and participated in nature-based activities at Mt. Barney Lodge), the nature of the participation (i.e., anonymous and voluntary), the expected benefits of the research, any risks to the participants, as well as information on confidentiality and data security. After reviewing this information, the participants were asked to provide consent to participate. Ethical approval was granted by the Griffith University Human Research Ethics Committee (GU Ref No: 2021/084). In total, 72 completed questionnaires were collected between May and August 2021, and all participants except five completed the survey more than one week after their stay at the Mt. Barney Lodge, allowing for reflection and retrospective analysis.

In total, the questionnaire had 22 open-ended questions and several close-ended questions, including 8 interval scale questions, two yes/no questions and five nominal questions. Most interval scale questions were Likert scale questions on a five-point scale (e.g., not at all, not much, neutral, somewhat, and very much; strongly disagree, disagree, neutral, agree, strongly agree; not important, a little important, neutral, important, very important). The open-ended questions were critical for gaining rich, descriptive, and in-depth understandings of participants’ emotions and experiences without influence from the authors, while the Likert Scales were useful for measuring intensity, especially in terms of how strong participants values or motivations were, and how much they felt they benefited in terms of wellbeing. The questionnaire was structured by five key sections: 1) background on participants’ stays at Mt. Barney Lodge (e.g., number of nights stayed, activities undertaken, type of accommodation and previous visits to the Lodge), 2) motivations for visiting Mt. Barney Lodge and values of Mt. Barney National Park and nature more broadly, 3) assessing wellbeing outcomes from staying at Mt. Barney Lodge, 4) understanding participants’ values of nature-based tourism more broadly, and 5) final questions gaining background information on participants (e.g., age, gender, education level, ethnicity, area of work).

The descriptive data analysis using SPSS Software provided context to the qualitative analysis which was undertaken using NVivo and latent content analysis. Latent content analysis involved transforming findings, through coding and categorisation, into key ‘themes’ (Graneheim & Lundman, 2004). The language and sentiments related to these themes were then categorised under the wellbeing dimensions derived from existing literature (e.g., social, mental, emotional, intellectual, spiritual, and environmental). Due to its smaller sample size and subjective nature, it is important to note that the results from this study are not necessarily transferable or applicable to other tourist populations, yet it has internal validity as it accurately portrays the multiple social realities of our participants. The depth of qualitative enquiry enables insight into some of the core themes and experiences which future research can later build on and explore by testing in a wider population (Curtin, 2009).

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**Table 1**

<table>
<thead>
<tr>
<th>Activity type</th>
<th>Overview of activities</th>
<th>Age groups and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock activities</td>
<td>Rock climbing and abseiling at different levels (beginner to advanced) and in different locations</td>
<td>Programs for 10+, 15+ and adults</td>
</tr>
<tr>
<td>Kids activities</td>
<td>Various workshops focused on using and learning about natural resources in the local area (e.g., fire lighting, lantern making, eco-boats)</td>
<td>Programs for kids 5-14</td>
</tr>
<tr>
<td>Hiking</td>
<td>Guided walks to various locations (including mountain summits, creeks, and waterfalls)</td>
<td>Some walks for 10+, 13+ and 15+ and ranging from 1.5 h to 6-7 h</td>
</tr>
<tr>
<td>Workshops</td>
<td>Navigation training for beginners or intermediates</td>
<td>For 15+, ranging from half day to 2.5-day workshops</td>
</tr>
</tbody>
</table>
4. Results

4.1. Background of participants and their stay at Mt Barney Lodge

The mean age of participants was 46 years old, with a range of 18 to 78 years old. Most participants were female (71.4%), followed by male (28.6%). The majority of participants self-identified as White (37.5%) or Australian (29.2%). While 12.5% of participants did not indicate their ethnicity, the remaining participants included those with dual heritage, for example Australian-Italian (2.8%), English-Malay (1.4%), Filipino-Australian (1.4%) or Filipino-British (1.4%), and those from New Zealand (2.8%), South Africa (2.8%), Europe (2.8%), Asia (1.4%) or the Middle East (1.4%). Only one participant indicated their Aboriginal and/or Torres Strait Islander heritage.

The majority of the 72 participants camped at Mt. Barney (69.4%), with only a small proportion of participants using the deluxe camper trailers (11.1%), rustic family cabins (11.1%) or homesteads (8.3%). The mean number of nights stayed at Mt. Barney was 2.44 nights, with a range of 1 (minimum) to 7 (maximum) nights. In terms of the number of people, in participants’ groups visiting Mt. Barney (including themselves), the mean was 4.38 people, with a range of 1 (minimum) to 17 (maximum) people. Most people were traveling in groups of friends and/or family. For close to half of participants, the questionnaire was filled out after their first visit to Mt. Barney (47.2%), followed by those who had visited 2–5 times (37.5%), 5–9 times (6.9%) and more than 10 times (8.3%). Just over a quarter of participants engaged in expeditions and long extended walks (26.4%), 12.5% of participants participated in formal overnight camps, 11.1% in rock activities and 9.7% in guided short walks. 16.7% of participants indicated that they had children participate in the provided activities for kids.

The participants had clear motivations for visiting Mt. Barney Lodge: natural aesthetics and rest. On a scale of 1 (not at all) through to 5 (very much), the top mean scoring motivation for visiting Mt. Barney was ‘natural aesthetics’ (mean = 4.86). Following closely was the motivation ‘to connect with the natural surroundings’ (mean = 4.83) and ‘to rest, relax and slow down’ (mean = 4.69). Clearly related to these motivations was the desire to disconnect from everyday life in cities and have a technology detox. The fourth highest motivation was activities, including bushwalks, swimming, and rock-climbing (mean = 4.66), which indicates a motivation to actively connect with natural surroundings. The least popular motivation was that ‘there was nowhere else to book, and it was convenient’ (mean = 1.71).

4.2. Mental and emotional health outcomes

Wellbeing outcomes from staying at Mt. Barney Lodge were diverse and many, albeit most discussed were those related to emotional and mental health outcomes. This can be summarised by the strong agreements with provided statements such as ‘I have positive emotional responses (e.g., happiness, joy, calm, content) from my Mt Barney Lodge experience’ (mean 4.71, where 1 = strongly disagree to 5 = strongly agree) and ‘When I visit Mt Barney, I feel a sense of catharsis or healing from the experience’ (mean 4.0). The core emotional wellbeing outcomes were related to relaxation, sense of awe, rejuvenation and vitality which will be explored in more detail below.

Most participants shared that, before they arrived at Mt. Barney, they were tired, worried, stressed and overwhelmed by work stresses and concerns over the COVID-19 pandemic which shaped their city existences: ‘I feel very stressed, anxious and weighed down with worry and pressure’ (participant #2). For some participants, the drive, camping set up and late arrival times to Mt. Barney Lodge also contributed to feelings of being tired, stressed, and anxious. Shortly after arriving at Mt. Barney, most participants expressed feelings of being ‘calm’, ‘healed’, ‘positive’, ‘relaxed’, ‘relieved’, ‘at peace’, ‘amazed’ and ‘in awe’: ‘I feel the stress of work melt away as I get closer and closer’ (participant #13).

The theme of feeling ‘relaxed’ was pertinent with many expressing that they felt ‘more relaxed and connected to my body and the world around me’ or that the experience had ‘quietened my mind and allowed [ed] me to settle away from the outside noise’ (participants #9 and #6). In general, ‘[c]onnecting with nature helps with reducing stress, [and] relaxing’ (participant #46), whether it be through simply ‘walking in, looking at and breathing in the natural beauty’, ‘sitting beside the creek and listening to and watching the running water’ or ‘just stand[ing] there for a minute or two just soaking up the quiet calm country environment’ (participants #2, #59 and #13). These simple engagements create a sense of peace, allowing participants to feel ‘calmer in my soul’ (participant #13).

The remoteness of the site, the cap on visitors and ability to disconnect from technology and the stresses of everyday life were also clear contributors to this ‘calming effect’ and were a key motivation for visiting Mt. Barney: ‘Overall, we wanted a circuit breaker from day-to-day life, in nature, to be able to explore, through walking, the area. Also, time to just chill and not be on devices’ (participant #61). People were able to have a ‘wi-fi detox’, ‘reset the[ir] neurocells in the brain’ and ‘heal the mind…[by] cleans[ing] away what is important and what is not’ (participants #2 and #15). As one participant highlighted, “Due to no internet connectivity I realised at the end of my stay that there were entire days where Covid and work didn’t cross my mind once (it wasn’t an active ‘don’t think about it’, it just didn’t happen)” (participant #1).

Related to relaxation was the sense of being ‘restored’, ‘energised’, ‘rejuvenated’ or ‘invigorated’: ‘Every time I connect with nature, I always feel a sense of empowerment because I feel like I’m getting a well-deserved recharge’ (participant #58). Mt. Barney enabled participants to have a “restorative time”, “recharge my batteries” and feel “ready to face the world again” (participants #62, #6 and #18). One participant who works in natural therapy explained that “nature holds a key for resetting the vibrations within our bodies” and that “Mount Barney has a resonance that resets any feelings of stress” (participant #12). This meant that as some participants returned home, they felt “more energetic and focused” and “ready to face the next week at work” (participant #61 and #18). Agreement to the statement ‘My experience at Mt Barney was an opportunity to reset from the general stress and seriousness affecting the world’ was extremely high at 4.62 (where 1 = strongly disagree and 5 = strongly agree).

4.3. Spiritual outcomes

Some participants also benefited from enhanced spiritual wellbeing through increased nature connectedness, particularly through hiking (whether independently or guided): “Being in nature always gives me a sense of spiritual coherence and connection with the natural world, particularly when I have done an intense hike into nature, and particularly when there are mountains involved” (participant #36). In terms of rejuvenation and personal growth, this was also deeply spiritual for some participants, including for the only First Peoples participant who, after completing a 6–7-h hike, shared:

“I felt the spirit of Mt. Maroon and from the surrounding peaks whilst on the summit. I was in awe of the landscape. When I returned, I had a dream about two snakes kissing, one was dying and withering away and the other was getting stronger. A symbol of a new way of life, a stronger, more connected life taking the place of an overworked, under-joyed experience (participant #18).

For many participants with diverse experiences at Mt. Barney Lodge, rejuvenation included feeling a deeper connection to nature and Earth and a renewed sense of identity, which “brings your soul back to focus”, “reminds me of who I am” and helped many feel ‘centered’ or achieve “inner peace” (participants #32, #29 and #52). Others highlighted how just spending time in nature helped them to gain “a fresh perspective on life and what is important in life just by stopping and having a rest by looking at the view” (participant #2) and transcend personal problems: “It is satisfying spending time in nature because the more I spend there the better I feel and the more connected to nature I feel. It makes me
forget about my other problems and makes them seem smaller which is cathartic” (participant #4). Another participant who experienced an extremely cold night while staying in a camper trailer explained how they “felt completely disarmed and at the mercy of the elements... stripped of my sense of naïve indestructibility”, but that this inspired “a new respect for the ‘world’” and the need “to respect ‘life’ and my presence on this earth” (participant #60).

4.4. Physical outcomes tied with mental outcomes

For many, engaging with nature at Mt. Barney Lodge involved ‘conquering’ a physical challenge and was an opportunity to test and work on fitness and endurance. The various expeditions and hiking tracks (whether guided or independent) that participants took part in were “great challenges physically” and was an opportunity to “climb a route up the mountain I would not be able to do alone” (participants #44 and #66).

In terms of benefits, many participants tended to emphasise the psychological outcomes that were tied to physical activities. One participant, for example, explained their experience with ‘track trance’, whereby “[c]limbing and walking is often strenuous but at the same time incredibly relaxing...the daily problems of life are replaced with a feeling of comfort and joy” (participant #71). Others highlighted how completing strenuous activities (hiking and rock climbing) led to a sense of achievement, resilience, and empowerment when the challenge was overcome. For one participant who undertook a guided expedition up Mt. Barney, it was a test of ‘mental strength’ and ‘endurance’, which led to the “belief that I can climb some of the more challenging parts of Mt Barney” (participant #54). Another participant highlighted how after undertaking a guided expedition on a previous trip, they then brought their partner to do the same walk which led to a sense of accomplishment:

“The experience of assisting her and her own accomplishment of overcoming the challenges of the hike gave a lot of self-worth” (participant #56).

Some parents also felt this sense of resilience and empowerment within their family unit and for their children who participated in nature-based activities (i.e., hiking and rock climbing). Parents emphasised how the “activities are really important in my child’s overall personal development” (participant #2). In the same way it manifested for adults, the physical challenges of engaging with nature “required the children to build resilience, show courage and go out of their comfort zone by hik[ing] up a mountain”, and also meant that children “gained knowledge about rock climbing and persistence, resilience [and] to keep trying even when it seemed too hard” (participants #2 and #12).

4.5. Social outcomes

Although less discussed, it was also clear that the Mt. Barney Lodge provided an opportunity and space for social interaction and “connect [ing] people” (participant #42). Many participants travelled with friends or family to the lodge, where the remoteness and ability to “escape technology” meant they could then “spend family time”, “un-wind with friends”, “actually talk and engage in conversation” and “bond together over an activity” (participants #15, #39, #58, #15 and #2). For many, this opportunity for socialising “with good friends in the beauty of nature always brings important perspective” and meant that people “[g]ot to know my friends that much better” or “reconnect with my partner”, reminding participants “of the importance and fun of family time together” (participants #13, #70, #18 and #39). Another participant highlighted how “I feel calm about being around other persons who are like-minded people who like camping, being in the outdoors and being around down to earth local country people” (participant #2).

4.6. Intellectual outcomes

Another important area of wellbeing outcomes were the benefits of Mt. Barney Lodge as a space for learning: “It’s a beautiful location that is environmentally aware and a positive space to be in and to learn” (participant #5). From guided walks and expeditions, posters, murals and flyers, participants explained that they “learned more about the local flora and fauna... the history of the area” including the “disasters that QLD has [had]”, the “ancient formation of Mt Barney and surrounding mountain[s]”, and about “ecological systems in the local area” (participants #63, #11, #2 and #6). This helped participants to get “to know a little pocket of my backyard” (participant #61). Through the provided workshops and guided expeditions, other participants more specifically indicated that they had gained knowledge and skills in bushwalking, navigation, and “how to read the terrain and a compass” (participants #22). Through a kid’s workshop, children also gained experience in fire lighting which was deemed as resilience building and provided a sense of achievement:

“My daughter participated in the fire lighting with flint and steel workshops... I encouraged my kids to light our campfires from then on using the flint and steel and surrounding sticks/cotton plant/paperbark. My kids had to learn about the different properties of these elements and why fire is started so well with them. It really gave us a wonderful sense of achievement and connected us to our surroundings” (participant #60).

Mental stimulation in the form of problem solving and overcoming challenges that the nature-based experience presented also resulted in a sense of accomplishment and self-efficacy for some participants. The participant that experienced extreme cold while staying in a camper trailer, for example, shared that adapting to and better preparing for the conditions on the second night of stay meant that “Upon leaving [Mt Barney Lodge], I felt like I had definitely survived” (participant #60). Another participant similarly shared a sense of achievement in adapting to a camping challenge: “[I was] [t]hinking how clever I was for improvising when I forgot the tent poles for my fly – used my trekking poles instead... [gave me] confidence that I can get by without things if I forget them” (participant #31).

4.7. Environmental outcomes

Many participants expressed that they gained insight into sustainability-oriented behaviours such as recycling, composting, reducing plastic waste and low water urinal solutions through their stay at Mt. Barney Lodge. More transformational, however, was that their experience ‘inspired’ or ‘urged’ people to protect nature and have “a better appreciation for our resources” (participant #60), indicating the influence on pro-environmental attitudes and motivations as well as a sense of stewardship. In this way, Mt. Barney Lodge was also clearly a space for strengthening ecological attitudes, reconnecting with nature, and learning about or recognising the need to protect it:

“Places like Mt Barney, O’Reilly’s and Binna Burra are places that give you a direct window into nature at its rawest. These areas should be protected and used to educate people in addition to connecting people with nature” (participant #56).

“...having a place where you can take advantage of a guide to help reduce the impact on these places but allow responsible tourism is important so people can learn to appreciate what we have and be inspired to protect” (participant #6).

“...when we stop and just reflect and be present in our surroundings in nature or in the country, the importance of nature is highlighted and there is a higher realisation that it needs to be protected more, and free of rubbish, litter and elements that may destroy nature” (participant #2).

For those who appeared to already be ecologically minded and active, visiting places like Mt. Barney Lodge and learning or observing pro-environmental behaviours were considered a reminder and
motivator to continue: “If we don’t see the places, we forget what we’re fighting for, and we’re more likely to get burned out trying to protect the world” (participant #9).

4.8. Sustainability of wellbeing

When asked about the sustainability of wellbeing outcomes, participants tended to discuss the sustainability of their mental/ emotional states with mixed results. For many, enhanced emotional wellbeing was a “temporary feeling” (participant #16). Upon returning home, some participants shared that they already felt ‘disconnected’, ‘tired’, ‘deﬂated’ and ‘sad at having to leave’: “I hate coming home after time spent in nature. The contrast between those experiences and the stress and superﬁciality of everyday life is much more stark in those moments when you ﬁrst get home” (participant #13). Another participant claimed that they felt “depressed about having to return to the real world and work” (participant #55). For others, it was a week before the stress and busyness of everyday life had returned to different extents. They were “back to normal and the effects of being there had worn off a bit” as “commitments of life are hard to ignore” and the “normality of life clouds over what you embraced out in nature” (participants #4, #13 and #22). Another participant emphasised that it was at the 2-week mark that “I start to feel anxiety rising…if I haven’t been out in nature” (participant #6).

For a few, the improved emotional states were sustained, with participants highlighting how they were still tapping into memories, looking through photographs and talking about the experience with others: “Good to have the memories, to stimulate the same enjoyment” (participant #69). Others lived in nature-rich settings which allowed them to continue to enjoy the therapeutic effects of their nature-based visit: “[After a week, I was] at home, savouring the relaxing surroundings of trees at Mt Coota, the soaring birds in the sky, the birds singing, squawking to warn of predator… and enjoying the therapeutic sight of sunrise from my veranda rain or shine” (participant #41). For participants that had visited Mt. Barney or other nature-based tourism sites more frequently, beneﬁts were also better sustained. One person who had stayed at Mt. Barney more than ten times highlighted the role of nature connectedness in sustaining wellness, especially through the seeking of more nature-based activities: “The more you connect with nature the more you try and maintain this healing feeling. I ﬁnd I stop myself in my daily life and breath and walk outside to feel the day” (participant #22).

5. Discussion

It became evident that Mt. Barney Lodge, as an experience offering nature-based and ecotourism activities, is a single means and well-structured format to access nature and engage with it in various ways, as well as the three dimensions of the ‘Integrative Wellbeing Tourism Experience’ (Smith & Diekmann, 2017). This supports an expanding body of research that outlines the diverse wellbeing outcomes from nature-based tourism (e.g., Aquino et al., 2018; Buckley, 2020; Groy et al., 2020; Willis, 2015) and nature engagement more generally (e.g., Brymer et al., 2010; Shahanah et al., 2016; Kuo, 2015; Richardson et al., 2021; Capaldi et al., 2015). Such research indicates that nature is a public health resource and highlights the potential of nature tourism enterprises to deliver nature therapies, either themselves or as eﬀicacious partners, to improve overall wellbeing (Buckley, 2019). In the midst of past COVID-19 lockdowns and restrictions, the increasing awareness of how we are ‘nature’ and desires to ‘be’, ‘sit’ in, and ‘experience’ nature are apparent.

Although we do not intend to over-inflate the associations between speciﬁc aspects of the ecotourism experience and wellbeing beneﬁts, our study provides preliminary insights into the variables that may be influencing different outcomes from the consumer’s perspective. Although the outcomes across wellbeing dimensions (and across the three dimensions of the ‘Integrative Wellbeing Tourism Experience’ model) are not likely to emerge for all visitors within one trip, it is clear that the Mt. Barney Lodge experience encapsulates the kinds of activities that can provide beneﬁts across the board, meaning creating a carefully planned package with some of the factors discussed below may be highly beneﬁcial (Smith & Diekmann, 2017). It is, however, important to consider the diﬀerent needs and capacities of diﬀerent tourists which are dependent on numerous factors (e.g., time, money, life-stage) (Smith & Diekmann, 2017).

The beneﬁts for pleasure and hedonic wellbeing (dimension 1 in the ‘Integrative Wellbeing Tourism Experience’ model) were clear and reﬂected existing literature that has documented the reduced stress, relaxation and boosted moods from nature (e.g., Mayer et al., 2009; Van Den Berg & Cutters, 2011) and nature-based tourism (e.g., Buckley, 2020; Curtin, 2009). Positive emotions, such as a sense of awe, relief and relaxation were almost immediate for many participants and were derived through simple engagements (e.g., sitting beside the creek or looking at the natural beauty), demonstrating the instant beneﬁts of direct and ‘softer’ contact with nature surroundings like that of Mt. Barney. It was also clear that relaxation and stress reduction beneﬁts emerged from exposure to a variety of Mt. Barney’s ‘active ingredients’, such as nature images (e.g., view of Mt. Barney), nature sounds (e.g., stillness and quiet or running creek water) and fresh air (Kuo, 2015), reminding us that it is not just the visual aspects of nature that are an important wellness resource (Qu, Sha, & Utomo, 2020). The design of the experience, through the remoteness of the site, a cap on visitors and disconnect from technology supported these ‘relaxed’ and ‘calming’ effects.

Relevant to aspects of eudaimonic wellbeing and spirituality (dimension 2 in the ‘Integrative Wellbeing Tourism Experience’ model), the Mt. Barney Lodge experience oﬀered a strong sense of vitality and rejuvenation (see also Curtin, 2009; Nisbet & Zelenski, 2011; Ryan et al., 2010) but also a clarity of outlook on life and a rethinking of human-nature relationships to gain ‘perspective’ (Buckley, 2020; Gould & Lincoln, 2017; Hanna et al., 2019). Another notable theme related to eudaimonic wellbeing was the beneﬁt of a sense of accomplishment, the realisation of capabilities and personal growth, which arose from various activities and across dimensions (i.e., physical, and intellectual). For example, it was clear that Mt. Barney’s nature-based setting promoted positive health behaviour by encouraging strenuous physical activity (e.g., hiking and rock activities) (Pretty et al., 2003; Shahanah et al., 2016), yet the wellbeing beneﬁts did not stop there as participants highlighted how overcoming the physical and mental challenge of these strenuous activities in nature led to a sense of accomplishment, and bolstered self- worth and self-conﬁdence in capabilities for both adults and children (Fredrickson & Anderson, 1999; Roberts et al., 2020).

The sense of fulﬁlment or accomplishment from physical activities in nature-based tourism has been documented elsewhere (Campon-Cerro et al., 2020; Hanna et al., 2019), yet our study demonstrated how this perceived wellbeing outcome was also linked to less physically strenuous activities such as camping or trailer camping (which presented challenges that required adaptation and problem solving) and intellec- tual outcomes from workshops on ﬁre lighting (through which parents felt the sense of accomplishment from a child’s intellectual outcome). Aspects of these outcomes lend to the ‘life teaching’ and ‘ingenuity’ beneﬁts of nature outlined in Gould and Lincoln (2017), whereby nature acts as a ‘personal trainer’ (i.e., encouraging and pushing people to develop and draw on personal values, improve themselves and adapt to surroundings) or as inspiration for creative and innovative approaches and ideas in response to a particular challenge. These beneﬁts were less immediate than hedonic wellbeing outcomes for participants, and tended to arise from ‘harder’, longer-term, or more active activities and engagements with nature (e.g., through hiking, rock climbing, workshops, or camping). This ﬁnding also demonstrates how different
activities and pathways (e.g., through physical and intellectual dimensions of wellbeing) can result in similar benefits for psychological (eudaimonic) wellbeing.

For some participants, the appeal of this nature-based and ecotourism setting had as much to do with the interpersonal interactions as with the appeal of nature itself and this played a part in interpretations of the derived wellbeing benefits (Fredrickson & Anderson, 1999). As in other nature-based tourism studies, a sense of strengthened togetherness and social connectedness emerged from staying at Mt. Barney Lodge, albeit this tended to be between family members and friends as opposed to strangers or with guides (as seen in Farkic et al., 2020; Fredrickson & Anderson, 1999; Mackenzie & Brymer, 2020). This may be because of the experience design (e.g., private campsites and ‘family’ hikes) and motivations of tourists who visited Mt. Barney Lodge to reconnect and spend time with friends or family. These kinds of enhanced social ties can contribute significantly to mental health (Cohen, 2004; Keyes, 1998).

Another key theme that emerged across several dimensions (e.g., mental, spiritual, intellectual, and environmental) was the sense of nature connectedness. Although the specific pathways through which this connectedness has mediated or influenced wellbeing outcomes were not articulated in depth, it was clear that enhanced connectedness was a key outcome from the Mt. Barney Lodge experience. The benefit of deepening connectedness, as expressed by some participants, were twofold: 1) it presents benefits for wellbeing itself (Capaldi et al., 2014); and 2) it can lead to people seeking out more nature experience and contact, facilitating further and longer-term positive effects on wellbeing (Martin et al., 2020). Martin et al. (2020) have suggested that interventions increasing both contact with, and connection to nature, will be needed to achieve synergistic improvements to human and planetary health, and this study demonstrates how nature-based experiences like that of Mt. Barney may be a valuable format for this. This is illustrated by the diverse possible wellbeing benefits but also through the strengthened pro-environmental attitudes and sense of stewardship among many participants (dimension 3 in the ‘Integrative Wellbeing Tourism Experience’ model), the latter of which has been a documented transformational benefit in other nature-based tourism studies (e.g., Ardoin et al., 2015; Hanna et al., 2019).

Although Mt. Barney Lodge and its activities provide clear wellbeing benefits, emotional and hedonic wellbeing outcomes were not always sustained (see also Smith & Diekmann, 2017), especially for those who did not return to homes surrounded by nature or connect with and contact nature more frequently. This suggests that the Mt. Barney Lodge experience played a critical role in bolstering emotional wellbeing, but that for sustained emotional wellbeing, this may need to be partnered with consistent nature contact, whether that be through more frequent direct contact (i.e., visits to the Lodge and other nature-based experiences), incidental contact (i.e., green space around homes), or indirect contact (i.e., photographs or videos taken on the trip). The wellbeing benefits of indirect contact, in particular, is a growing area of research (e.g., Mostajeran, Križkawski, Steinicke, & Kühn, 2021), and was highlighted as critical by one participant for sustaining their sense of wellbeing post-trip through evoking memories and positive emotions attached to the specific place. Hedonic outcomes (i.e., to escape, relax and recover) are integral, but because these tend to be short-lived, it is critical that nature-based tourism experiences offer longer-term, self-development or transformational outcomes that support the path to true or lasting wellbeing (Smith & Diekmann, 2017).

6. Conclusion

Although this study’s findings cannot be generalised too broadly, it does provide reasons to be optimistic about the distinct potential of nature-based tourism and ecotourism experiences like those of Mt. Barney Lodge to enrich wellbeing of people and environment, particularly through its promotion of nature contact and connectedness (Brymer & Lacaze, 2013). There are several key takeaway for industry and policy from this study. The ecotourism and nature-based tourism industry is well-placed to tap into the wellness tourism market which is a rapidly emerging market segment, particularly in the face of and recovery from COVID-19. Nature-based and ecotourism enterprises like Mt. Barney Lodge could construct, deliver and market carefully planned courses of ‘nature therapy’ (either themselves or as partners) that are insurable healthcare products, funded by health insurance and government healthcare systems (Buckley, 2019). These courses could leverage the various activities and pathways for psychological wellbeing (e.g., from active to soft engagements with nature or independent to collective activities) to attract a range of visitors with different motivations and capacities. Similarly, policies that increase accessibility and incentivise visitation to settings such as Mt. Barney Lodge are likely to play a critical role in achieving health and sustainability objectives through fostering increased contact with, and a sense of connectedness to, nature.

To support lasting wellbeing and environmental stewardship, however, there is a need to encourage and incentivise repeated visits, implement other complementary pro-active efforts in other areas (e.g., urban green designs) and focus on nurturing the longer-term, self-development or transformational outcomes (Richardson et al., 2021; Smith & Diekmann, 2017). For example, nature-based tourism enterprises that offer maintained indirect contact (e.g., through sending photos or videos) may support longer-term emotional outcomes, while having incentives for tourists to undertake series tours (e.g., Mt. Barney Lodge’s ‘Mountain Fit Program’) may also encourage repeated participation and the accrual of benefits over time (Wolf et al., 2014). The wellbeing benefits of nature-based tourism can and should also be leveraged in existing policies and assistance/support packages. For example, the localized ‘holiday dollars’ which were introduced as a policy leaver in Queensland had the overarching objective to maximise support for the tourism sector which was struggling in the face of COVID-19, yet integrated targeted approaches of nature-based activities may have simultaneously maximised this support package’s wellbeing impacts. Future research is required to determine how the insights from this study can be tied into planning and managing different environments to promote maximum benefits (Willis, 2015).

7. Limitations and future directions

There are also several limitations to this study that should be unpacked in future research. First, results are based on self-report data which, although there is some evidence that self-reported health and wellbeing correlates with objective indices (Kyllinx, Goldacre and Gill, 2004), the ability to identify immediate causes of emotions, especially multiple emotions and contributing causes occurring simultaneously, is not always reliable. We should also be especially cautious about self-reported pro-environmental claims (Kormos & Gifford, 2014). Exploring person-specific factors in human-nature interactions was also beyond the scope of this study. This is important, as we cannot assume that contact with nature and outcomes from nature-based tourism are uniform for all tourism consumers, necessitating further and more nuanced research into how other factors (such as age, gender, culture, level of connectedness to nature and so on) affect wellbeing outcomes, pro-environmental attitudes and behaviour (Martin et al., 2020; Nisbet et al., 2011). This study was also limited in its examination of moderating and mediating mechanisms of the relationship between activities, nature, and wellbeing. To make the best use of the opportunities that are presenting themselves, future studies should further refine, unpack, and build on the types of wellbeing benefits that can emerge from various nature-based tourism activities and settings, and identify more clearly how often visitors need to return or how long for to optimally maintain or bolster wellbeing for people and planet (Brymer & Lacaze, 2013).
Declaration of Competing Interest

The authors declare that they have no known competing financial interests that could have appeared to influence the work reported in this paper. Westoby and Karen McNamara are married.

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References


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