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## Article

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# Barriers and limitations to national park visitation by millennials: Perceptions from second-generation Australians

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## ABSTRACT

Recent studies have suggested a trend of slowing domestic visitation to national parks by younger generations on a per capita basis within developed countries. This has often been attributed to inter-generational differences such as increased cultural diversity, interest in other forms of entertainment and lack of free time. The research employs the hierarchical model of leisure constraints to define interpersonal, intrapersonal, and structural barriers to the visitation of national parks. The findings of 26 in-depth qualitative interviews suggest complex relationships with natural environments. It was established that second-generation Australians were less likely to engage with national parks during childhood. However, this did not translate to a significant difference in perceived value or visitation rates in adulthood.

## 1. Introduction

Understanding the connectivity between younger generations and natural environments and how this translates into visitation and appreciation of the natural world is vital for enhancing societal support for the longevity of national parks (Stevens, More, & Markowski-Lindsay, 2014). Due to their current age range, the millennial cohort is particularly valuable to the outlook of conservation and biocentric policy making. The preservation of Victoria's national parks depends on connections between tourism and changing views towards conservation (McNaughton, 2017). One of the most common traits of the millennial cohort is its high level of ethnic diversity when compared with previous generations (Licsandu & Cui, 2019). Due to differing cultural norms, first-generation non-Anglo-Celtic people are less likely to visit national parks (Croy & Glover, 2009) which can restrict visitation by their children. There is a paucity of research to suggest that limited childhood interactions with national parks continues into adulthood and that these areas are valued differently among culturally diverse Australians.

Defining visitation trends between urbanised millennials based on cultural heritage and how this relates to forming a sense of place within local national parks forms the basis of this research. Fostering stewardship of national parks among younger generations has been widely associated with enhanced environmentally responsible behaviour into adulthood and positive outcomes for sustainable management of

environmentally sensitive areas (Balmford et al., 2009; Cheng & Monroe, 2012; Hassell, Moore, & MacBeth, 2015; Weber & Anderson, 2010).

Previous research has demonstrated a downward trend in the number of local people visiting national parks within their states or regions in developed countries (Balmford et al., 2009; Eagles, 2007). Post-2020, the local population of Victoria, Australia is now visiting national parks at higher rates as people choose to vacation close to home as a result of the COVID-19 pandemic which lead to limitations on overseas travel (Parks Victoria, 2021). As the local management authority Parks Victoria endeavours to manage these sites for a more diversified audience, it must consider the implications of this phenomenon. This research seeks to understand the current relationship that the millennial generation holds with national parks to further understand long-term visitation trends and future management potentials for these areas.

### 1.1. Millennials defined

Major features of the millennial age group are high levels of cultural diversity, exposure to globalisation, and a growing connectedness to technology (Leask, Fyall, & Barron, 2013) When compared with previous generations, the Australian millennial cohort has significantly higher levels of education credentials and job insecurity (Australian Bureau of Statistics [ABS], 2021a, 2021b). Consumer practices, specifically those pertaining to tourism, see this cohort as holding a broadened

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variety of travel styles when compared to previous generations. This generation attributes a greater reliance on technology, additional pre-trip research and an expectation of cross-cultural interaction (Dae-Young & Sangwon, 2020). As these characteristics differ from previous generations, further analysis of how this translates into park visitation, expectations, and motivations is required.

There is a notable lack of consensus over the definition of the generation that is variously referred to as the millennials or Generation Y (ABS, 2021c; Ruiz, 2017; Weiler, Martin, Canosa, & Cutter-Mackenzie, 2018). Although a general agreement seems to exist that Millennials were born in the 1980s and the 1990s (British Broadcasting Commission Corporation. [BBC News], 2017; Oxford Dictionary, 2021), the specific dates vary (Rainer & Rainer, 2011; Ruiz, 2017), with some setting them from 1980 to the end of 1994 (Lyons, 2016), while others prefer 1980 to 1996 (Dimock, 2019), 1981–1996 (Kasasa, 2021.) The term millennials will be used in this paper to describe people born between 1981 and 1996 and ranging between the ages of 23–38 years at the time of the study.

The millennial generation represents 25% of the metropolitan population of the city of Melbourne in Victoria, Australia (Australian Bureau of Statistics ABS, 2022). The level of cultural diversity is also a prominent feature of the cohort. Over 51% of Victorian millennials identify as being from a non- Anglo-Celtic background (Australian Bureau of Statistics [ABS], 2021b, 2021c). Within Victoria over 180 languages are spoken and just under 33% of residents living in Melbourne speak a language other than English at home (Population Australia, 2019). Hence, there is a rich diversity of cultural backgrounds among residents.

## 1.2. Theoretical background

Hierarchical Leisure Constraints Theory originally defined by Crawford and Godbey (1987) is used to predict and measure movements in leisure behaviour. This three-dimensional model categorises barriers to visitation as either intrapersonal (lack of familiarity), interpersonal (lack of appropriate partner), or structural (cost, lack of transport) and has formed the dominant foundation for comparable explorations (Booth, 1987; Croy & Glover, 2009; Hung & Crompton, 2006; Yang & Tung, 2018; Zanon, Curtis, Lockstone-Binney and Hall, 2019). Additionally, motivations have been added as a supplementary measurement domain to gain an insight into how these areas are being valued (Godbey, Crawford, & Shen, 2010). Complex relationships between the notable forms of barriers affect visitation rates substantially and can relate to both intrinsic associations with national parks and qualities associated with lifestyle characteristics. This framework will be used to determine underlying barriers to visitation.

Constraints defined as intrapersonal represent personal preferences and are reflective of psychological states. Examples of intrapersonal barriers include kin or group attitudes relative to childhood socialisation which can be a result of cultural norms as displayed in Table 1. This can also be a reference to fear, low levels of perceived fitness or lack of knowledge. Interpersonal barriers are developed from intrapersonal themes but are a result of the individuals' relationship with others. An example would be a lack of travel partner, preference of different activities or lack of interest. Structural barriers represent environmental factors such as cost of entry, lack of transport, time, or distance (Hung & Crompton, 2006; Pennington-Gray & Blair, 2010).

## 1.3. Literature review

Whilst globally national parks have seen an increase in visitation due to international tourism demand, visitation by the local population had declined in some areas (Balmford et al., 2009; Eagles, 2007). Exploration into the phenomenon of low visitation by younger generations has predominantly occurred within North American literature (Hardiman & Burgin, 2011; Curtis & Zanon, 2010). Pergams and Zaradic (2006) identified a declining trend in visitation by young people to national

**Table 1**

Leisure constraints adapted from Crawford and Godbey (1987).

	Barrier	Motivation
Intrapersonal	Overcrowding Fear Price of travel Inexperience or unfamiliarity	Mental Health Physical Health Knowledge of parks Leave the city Place attachment Spiritual
Interpersonal	Lack of Travel Partner	Partner Friend Work Research or Higher Education
Structural	Lack of time Distance Weather Accessibility No equipment	Access to transport

parks in developed countries such as the United States, Canada, and Japan since 1988 through the analysis of compiled visitation data. Whitelaw, Cumming, and Narbondo (2007) suggest that increasing cultural diversity, changing work patterns, health awareness and the desire for convenient and safe experiences are further contributing to the shift in engagement in national parks by younger generations.

Findings by Zanon, Curtis, Lockstone-Binney, and Hall (2019) suggest that trends influencing park use are typically social and demographic in nature, namely relating to 'increased cultural diversity' or 'changing work patterns'. Moreover, 'independence and convenience' and 'health awareness' influenced leisure preferences. Barriers to visitation have been outlined by the state management body, Parks Victoria (2017), which suggests that people from culturally diverse communities are less likely to access parks. The millennial generation is clearly defining the recent shift in demographic heritage from a predominately European base to a more culturally diverse representation.

Within the literature there are prominent gaps concerning the decision of this cohort to visit or not visit Victorian national parks (Croy & Glover, 2009). Experience and perceptions of these areas and the role of cultural backgrounds in the decision to visit are prevalent. While these themes have been discussed within a North American context, little research surrounding the perceptions of urbanised millennials exists within an Australian context. Hence this paper aims to gain an insight into trends of engagement among a cohort of Australian millennials drawn from metropolitan Melbourne. Understanding the ways in which this cohort values Victorian national parks and how these values translate to visitation underpins this research. The exploration sheds light on the role of life experience and cultural influences on visitation to Victorian national parks. Furthermore, it identifies the barriers to parks visitation in order to provide recommendations to further improve engagement.

Within the context of the State of Victoria, Australia, comparatively low levels of visitation by first-generation Australians have been linked with perceptions of safety and cultural norms (Croy & Glover, 2009; Townsend, Henderson-Wilson, Warner, & Weiss, 2015). Pearce, Page, Griffin, and Cooper (2014) note an absence of outdoor play in children of culturally diverse backgrounds, particularly those of lower socio-economic areas. This behaviour is linked to the perception of safety as well as cultural norms which potentially leads to a disconnect from the natural environment (Soderstrom et al., 2013). As this segment accounts for over 35% of the population within Victoria (Australian Bureau of Statistics [ABS], 2017), it is vital to gain further awareness of existing perceptions for parks to retain relevance for future generations (Ramkissoon, Smith, & Weiler, 2013; Weiler, Moore, & Moyle, 2013). Townsend et al. (2015) emphasise the gap in existing literature relating to interactions with national parks by people from culturally diverse backgrounds, which is attributed to the difficulty in measuring psychological and emotional concepts within the parameters of visitation.

Townsend et al. (2015) identified that residents of all age groups from multicultural backgrounds exhibit lower levels of activity within national parks. Zanon (2005) found that 90% of Victoria's park visitors spoke English at home, compared with only 79% of the state's broader population. Children in culturally diverse communities demonstrate a relative absence of outdoor play (Townsend et al., 2015), which contributes to a mounting disconnect between nature and local environments (Cheng & Monroe, 2012). Furthermore, the diverse-communities cohort has a lower perception of available park activities and facilities than other groups. Second-generation Australians of Chinese and Indian descent also expressed a preference for spending leisure time at indoor venues (Croy & Glover, 2009). This suggests that non-English speaking residents are the most under-represented segment of park visitors. It is, therefore, important to understand the motivations to visit national parks among this group. However, park visitation does increase among second and following-generation Australians from non-English-speaking backgrounds (Byrne & Goodall, 2013).

Byrne, et al., (2011) discuss the concept of Australian national park management as being managed in a non-culture-neutral manner. As national parks within Western countries have traditionally emerged from Anglo-Celtic regions such as North America (Low, Taplin, & Scheld, 2015), it has been suggested that these areas are not specifically developed for use by culturally diverse communities (Byrne & Goodall, 2013). According to Ford (2007), the prevalence of bushwalking, swimming, and sunbathing is deeply ingrained within the Australian psyche, which has carried into park usage and management by predominantly Anglo-Celtic Australians. Culturally diverse communities in Victoria, however, prefer to use park areas for large social and community gatherings rather than for hiking and relaxation (Croy & Glover, 2009; Curtis & Zanon, 2010).

The attributing barriers to visitation of urban parks by culturally diverse Australians were found to be lack of interest, perception of areas being unsafe, lack of time and unpredictable weather conditions (Croy & Glover, 2009). These findings were reflected in a study of Australian women from culturally diverse communities, with personal safety being of great concern to participants (Caperchione, Kolt, Tennent, & Mumery, 2011). Townsend et al. (2015) have found a lack of awareness of park activities to be a secondary cause of low perceptions and visitation to Parks within Victoria.

Exploration into the perceptions of and engagement by younger cohorts from diverse backgrounds has been widely conducted in the United States literature (Pergams & Zaradic, 2006). Further emergent research from Yang and Tung (2018) has demonstrated a demographic shift in travel behaviour by younger cohorts of solo travellers from multicultural backgrounds. The authors found that family dynamics were traditionally viewed as a barrier to visitation due to social expectations, activities and interests conveyed during childhood. The impact of family on a person varies greatly depending on their culture and depending on whether they are viewed from a Western or an Eastern perspective. The intersection of second-generation Australians and national park visitation has rarely been conveyed in Australian literature (Tsai & Coleman, 1999; Weiler et al., 2018), this paper aims to address this gap.

## 2. Methodology

This investigation was comprised of qualitative research and relied on a single source of data collected from 26 semi-structured interviews. The design was selected as it provided the overall findings with an in-depth insight into perceptions of national parks. Qualitative data were analysed through a theoretical lens using the concept of cultural diversity and childhood experiences as a measuring instrument as proposed by Creswell (2007). This form of data collection allowed for individual relationships to be analysed rather than providing overall population characteristics. The context of the research focused on regional national parks within Victoria and as such gave a greater

perspective of the perceptions and engagement levels within these areas.

Individual interviews were conducted, and audio recorded over the course of 40 to 60 min, this allowed for additional in-depth responses with minimal loss of data. The interview questions were open-ended, allowing for further comment by participants. As there are over 45 national parks within the state interviews were conducted with the accompaniment of photos of more popular and iconic areas to help with memory recall, as suggested by Byrne et al., (2011). As the study was inclusive of childhood association this technique stimulated memories which further aided in the recall of anecdotal information. Interactive maps were also used at the beginning of the interviews as this presented a greater spatial representation of the national parks.

The employed research philosophy was based on the theory of low visitation driven by cultural disconnect as outlined by Croy and Glover (2009). The characterisation of a cultural disconnect with nature and age specific traits as drivers of altered levels of engagement (Gardiner, Grace, & King, 2015; Hardiman & Burgin, 2011; Louv, 2011; Pergams & Zaradic, 2006) has been employed to form the research philosophy. This phenomenon was investigated in relation to Victorian millennials to gauge similar occurrences.

Using the snowball sampling technique, participants between the ages of 22 and 38 were chosen in order to represent the generational data that was made available by the Australian Bureau of Statistics. These participants resided in Melbourne's urban neighbourhoods. As the question set was open-ended, there was an opportunity to employ an emergent interview design as presented by Creswell (2007). Themes offered by the preliminary interview questions were expanded to achieve a greater understanding of issues presented by participants during the interview process. However, the initial themes existing in the interview set continued to be utilised to guide the course of the conversation.

On conclusion of the recorded interviews, audio was converted into text verbatim. These text files were then coded and categorised using NVivo™ software. Analysis of the interviews involved two sequential undertakings as suggested by Kastenholz and Lima (2011). A within-case analysis was conducted to identify specific themes which were then compared to find emergent patterns relating to the research questions.

## 3. Results

### 3.1. Participant demographics

Several themes emerged from the data which related to perceived value, introductions to parks, cultural upbringings, barriers to visitation and travel habits. Of the participants, all had visited national parks either within Australia or in Victoria as a child or as a teenager.

The average age of respondents was 30, with an even data distribution between ages. Cultural distribution of participants demonstrated a wide range of variability. Two thirds of the participants identified as being second generation Australian having at least one parent born overseas. The most prominent cultural backgrounds of interviewees were from Australia, Vietnam, Germany, and China.

Of those interviewed, half had access to natural areas or national parks as children and grew up in either peri-urban or in rural areas. While the remaining participants grew up in either suburban areas, inner-city, or regional Victorian cities. Two thirds of participants were originally from Victoria, while the remainder had migrated from interstate.

### 3.2. Barriers to visitation

Research into a cohort of millennial participants was conducted to explore the barriers and motivations to visiting Victorian national parks through the employment of the Hierarchy of Leisure Constraints model (Crawford & Godbey, 1987). It was found that all of the interviewees

enjoyed the experience of being in a national park and would like to visit more often. Table 2 demonstrates that the greatest barriers to visitation were structural in nature; of those interviewed an over whelming number attributed lack of time as the main prohibitor of visitation. Further barriers most commonly mentioned were the overcrowding of areas (intrapersonal) followed by fear, price of travel and lack of knowledge of national parks.

The most common motivations for visitation to national parks were intrapersonal, as many of the participants desired to visit these areas as they saw it as beneficial to their mental health as well as physical health. Of those who travelled to national parks, they were often motivated by a partner or friend.

### 3.3. The role of cultural backgrounds in decision making

The role of cultural backgrounds in decision making about parks visitation revealed a multidimensional range of responses. Overall, participants had quite diverse childhood experiences in national parks which some (n = 12) attributed to cultural backgrounds. Many of those participants who did not visit national parks for the purpose of family holidays primarily accredited this to intrapersonal barriers either being cultural differences, perceived fear, or lack of free time of their parents. Another described barriers to visitation as lack of knowledge and non-familiarity with national parks.

I think because [my parents] were both immigrants here, they didn't know the places that well and I think they just weren't into nature. My parents, they took us to the beach. But definitely not to national parks. [P13].

A participant of a Malaysian cultural background identified fear of the Australian landscape by her parents as a barrier to childhood visitation. Her family did not visit national parks for leisure activities or under social circumstances in the past, however, they have since become accustomed to the landscape.

We have so much hype about Australian animals, that people refuse to go into national parks because they don't want to die...back then ...I think there was a lot of fear about... the unknown for new immigrants because the climate was so different compared to where they came from. [P12].

Many of those not participating in national park activities with families during their childhood were from South-East Asian

**Table 2**  
Barriers and Motivations to national parks in Victoria (n = 26).

	Barrier	Occurrence	Motivation	Occurrence
Intrapersonal	Overcrowding	20	Mental Health	22
	Fear	6	Physical Health	21
	Price of travel	6	Knowledge of parks	18
	Inexperience or unfamiliarity	6	Leave the city	14
			Place attachment	12
			Spiritual	6
Interpersonal	Lack of Travel Partner	5	Partner	17
			Friend	16
			Work	10
			Research or Higher Education	8
Structural	Lack of time	23	Access to transport	22
	Distance	12		
	Weather	10		
	Accessibility	7		
	No equipment	6		

backgrounds. For those that did visit, national parks were primarily visited for social or family gatherings and occasionally for activities such as fishing. It appears that familiarisation with the landscape by recent migrants was most frequently instigated by people of similar backgrounds, adopting parks as trans-national areas for socialising.

Usually when we would go it would be with other family and friends. Parks were used for social reasons, and we would go with other Vietnamese families. Mum and her friends would sit around and cook up big pots of noodles over a big makeshift fire. [P15].

Of these participants, introductions to national parks occurred through either school camps or through social groups at a later point in life. The perceptions of these areas by people from a South-East Asian background presented a combination of positive and negative associations. It was found that three of the participants had inherited a perception of national parks as dirty. These negative associations with wilderness rendered national parks unattractive.

A number (n = 9) of these participants disclosed that these associations were in part because of their family's perspectives on activities in the natural environment. Those who had grown fonder of national parks later in life had been introduced via social networks and felt as though they had missed out on these activities in their childhoods, which drove them to be more curious when coming into adulthood.

"I feel like we've missed out on our childhood because we never [went to national parks] and I think that's why we're doing it now. We just never had the opportunity. Actually, I went [to national parks] last year, and I was like 'I wish we did this when I was a kid'". [P10].

The contrast in views between participants from multicultural backgrounds demonstrates inconsistencies between how first-generation Australians perceive the natural environment and how these sentiments are imparted to their children. Overall, those born to Australian or European parents appeared to visit national parks more often, however, there were no significant findings to suggest that national parks are valued differently by millennials of distinctive cultural backgrounds.

One participant of South-East Asian descent describes his lack of family engagement with national parks and that it was not until adolescence that his experiences with these areas permeated into higher perceived values of the natural environment, which eventually translated into a career dedicated to these areas.

I had never gone to a national park [as a child]. I never went camping or hiking with my family. It wasn't until I was in high school, and I did outdoor education as a subject, that's when I got my first experience in hiking, this kind of confirmed it for me; that this is what I want to do... I want to work outdoors and see more nature. [P9].

A majority of the participants had quite positive memories of national parks (n = 22), through experienced them in varying ways. Introductions into national parks to those who did not historically visit for recreational purposes came from many sources, either through school camps, research trips through university courses, work or most commonly through a love interest. As one second-generation participant explains, it was not until she visited a national park in a romantic capacity that she became interested:

I went there on a date and [thought] 'this is amazing!' and I've done the same treks ever since, it sort of sparked my interest in national parks and trekking. I had no interest before then and it just lit me up inside [...] The relationship has changed the way in which I use national parks. I loved going to these areas previously but now I go even more. [P2].

This sentiment was repeated by another participant. He did not frequent national parks until he too was in a relationship.

I suppose I've got a fondness for national parks from my parents, which was pretty awesome. And now with my current girlfriend, she absolutely loves being out in the wilderness, so she probably builds up a sense of wonder in me. [P20].

Another participant of Malaysian descent works in national parks as an aspiring botanist. He explained that his outlook was driven by his own intrinsic values rather than through relationships: "[I] always wanted to be either a park ranger or a vet when I was little. So, I've always had that kind of goal to either work with animals or work with nature." [P9].

This participant described his lack of family engagement with national parks, and that it was not until adolescence that his experiences with these areas permeated into higher perceived values of the natural environment, which eventually translated into a career dedicated to these areas.

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#### 4. Discussion

The research was established on a global finding of decreased visitation to national parks within developed countries by younger generations (Balmford et al., 2009; Hardiman & Burgin, 2011; Pergams & Zaradic, 2006). While visitation figures pertaining to national park visitation in Victoria were not able to be aggregated to definite statistics, similarities in perceptions were determined. This phenomenon presents issues relating to the continuation of environmental advocacy founded on exposure to natural environments, while further maintaining areas for domestic and international tourism.

The findings supported previous research which suggests the difference in visitation throughout childhood by participants of varying cultural backgrounds. It was found that many of the participants coming from South-East Asian backgrounds had differing experiences in national parks to those identifying as being from Anglo-Celtic or European backgrounds. This was in relation to both spending time within the parameters of national parks and the overall perceptions of the Australian environment. This aligns with findings from Croy and Glover (2009) and their research into perceptions of second-generation Australians towards urban national parks.

According to the findings, non-European first-generation Australians were less likely to visit national parks overall. This was consistent with Bryne & Goodall (2013), who found that new migrants often carry perceptions related to cultural norms surrounding the natural environment which were formed in their place of origin. First-generation Australian parents within the study cohort were commonly using national parks for social and family gatherings and employed the experience to reconnect with kin and to extend community ties whilst becoming acquainted with the Australian landscape.

Additionally, perceptions of national parks were found to be formed in either adolescence or adulthood, these were shaped through both visitation as well as an overall concern for environmentally sensitive areas. Motivations and barriers to visitation were determined by lifestyle. It was found that parks were highly valued by participants, and many were motivated to travel due to health benefits, however, were impeded by lack of time which aligns with findings by Zanon, Doucouliagos, Hall, & Lockstone-Binney (2013).

The most common activities by the second-generation cohort involved social events inclusive of picnics rather than immersive

activities such as camping and bushwalking. Those families which did not interact with national parks often had a preconceived fear of Australian fauna as well as the threat of bushfires. Apprehension towards engagement in national parks was a common theme among first-generation Australians. However, there were no significant findings that implied that low levels of childhood visitation from people of culturally diverse backgrounds demonstrated dissimilar perceptions to millennials who engaged prominently throughout childhood. This observation was in line with findings by Harmon (2017) who suggests that relationships and place attachment are cultivated through the visitor experience, rather than through cultural norms.

There was a significant connection between participants who had spent more time in national parks and the overall value placed on local natural areas. The role of childhood visitation was not a significant factor in shaping perceptions. Relationships, whether romantic, social, or familial, frequently served as catalysts for heightened commitment to parks. However, there was no association between life phases and the enhancement of attachment in participants.

#### 5. Limitations and future research

Future predictions of increased urbanisation and cultural diversity highlight the need for a greater understanding of a heterogeneous society and how its interactions with national parks will shape further decision-making. Maintaining relevance through education and socialised visitation is a major influencer in sustaining and building advocacy for biodiversity in the face of continuous environmental degradation. Notably, Ramkissoon (2020) asserts that the recent impact of COVID-19 travel restrictions has transformed the way in which populations are interacting with national parks. Due to the continuation of international border closures, visitation to national parks has become a primary leisure activity both globally and in Australia (Geng, Innes, Wu, & Wang, 2021). This raises the possibility that this psychological shock event might transform perceptions of natural and wilderness areas in Australia, creating a greater and ongoing willingness of millennials to engage with national and state parks and protected areas (Cheung, Takashima, Choi, Yang, & Tung, 2021).

It is possible that perceptions of the safety of such areas might be substantially altered in a positive manner, and that the health benefits of parks might be further enhanced. There would certainly appear to be a marketing and management opportunity to attract the younger cohorts to parks and wilderness areas, hopefully creating an ongoing desire to visit and protect such areas. Whether this might be sustained in a post-COVID-19 setting, in which travel might be more normalised, is of course, yet to be seen, further research should be conducted to test any change in perceptions, attitudes and behaviours arising from the pandemic.

As a qualitative study, this research cannot be generalised to the broader millennial population in Australia or beyond. While prior studies have suggested that women are less likely to visit national parks and wilderness/protected areas, particularly for reasons of safety and a lower propensity for engaging in physical exercise (Derose, Han, Williamson, & Cohen, 2018; Kaczynski, Wilhelm Stanis, HastmanWalch, & Besenyi, 2011), the high proportion of women in the current study's sample might present a sample bias making the results less indicative of men's attitudes, perceptions, and behaviours.

This study does not account for the COVID-19 pandemic's recent onset and its effects on travel as potential influencing factors in perception development. To see whether the same cohort's opinions of national parks have changed in a post-covid climate, additional research is required.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.annale.2022.100074>.

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