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# How New England Island Residents View the Influence of the Natural Environment in Their Lives

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## Abstract

*Although the multiple benefits of natural environments on individual's lives have been well noted, one population that is scarcely studied in current literature is adults who live on islands in the northeast region of the United States. This is an important population to study because these adults live in a geographical location highly immersed in natural landscapes and they are likely to have a high exposure to natural environments. This exploratory study uses participant questionnaire responses (N = 51) to gain insight into how they believe the natural environment influences their lives and offers guidance for future research. Residents identified benefits and challenges of being isolated on an island, expressed feelings of gratitude for living there, and shared concerns about the environment (as related to the island). Findings also show that the natural environment plays an essential role in these individuals' social, emotional, and physical health. Main themes that emerged from these responses were the natural environment (1) is the primary setting for physical exercise, (2) possesses therapeutic qualities, (3) improves mental health, and (4) supports a spiritual or reflective practice. Participants also believed that their levels of nature relatedness were mainly influenced by their childhood experiences, leisure activities, and lifestyle choices. These findings suggest that the natural environment plays a significantly vital role in the lives of New England island residents, providing an initial step in closing the*

*gap in the literature on this population and providing direction for further inquiry into this area of study.* Key Words: Natural environment—Island residents—Influence of nature.

## Introduction

Islands in New England, located in the northeast region of the United States, are common summer vacation destinations. Often these locations are bustling with tourists and summer residents seeking outdoor activities, beach access, and time spent with family and friends. Although populations swell during the summer months as people take advantage of the various natural settings that the islands offer, winter months can look quite different. Island populations substantially decrease during the winter months leaving the islands quieter and more isolated (Selevitch, 2015). Even though there are thousands of residents who live on the islands year-round, there is little to no research on how the natural environment influences their lives. It is imperative to gain insight into how the human–nature relationship influences different populations, thus gaining a deeper understanding of this meaningful and beneficial connection. The purpose of this exploratory study is to begin to develop an understanding of how the natural environment influences the lives of adult residents who live on these New England Islands year-round while providing direction for future research.

### *The human–nature relationship*

At the core of the field of ecopsychology is the connection between humans and the natural world (Roszak, 2001). Although the importance of the human–nature relationship is not a new idea, scholars are increasingly studying the multitude of benefits of the human–nature relationship to all areas of life. Some of these benefits include mental and physical health, cognitive functioning, well-being, and stress reduction (Berman, Jonides, & Kaplan, 2008; Finnicum &

Zeiger, 1998; Nisbet, Zelenski, & Murphy, 2011; Ottosson, & Grahn, 2005). It has been found that people with higher nature relatedness, described as “one’s appreciation for and understanding of our interconnectedness with all other living things on the earth” (Nisbet, Zelenski, & Murphy, 2009, p. 718), report fewer symptoms of depression, anxiety, and stress and experience better health overall (Dean et al., 2018). It has also been found that nature relatedness is positively correlated with positive affect, vitality, autonomy, personal growth, purpose in life (meaning), and life satisfaction (Nisbet et al., 2011). With the abundance of findings on the importance of the natural environment in our lives, it is crucial to further examine this human–nature relationship and continue to expand our knowledge in this area of study.

Research should not only look at identifying the benefits of spending time in natural settings, but should also seek to gain a deeper understanding of how the natural environment influences different populations. This study has been started in various ways with different populations such as with women (Thomas, 2015), Indigenous populations (Perez & Longboat, 2019), college students (Windhorst & Williams, 2016), and the elderly (Butler & Cohen, 2010), but also with populations in certain geographical areas such as those in urban (Soga, Gaston, Koyanagi, Kurisu, & Hanaki, 2016; Van Hooreweghe, 2016) and rural geographical locations (Juntunen et al., 2019). One population that has not been investigated is adults who live on islands in New England. These adults are immersed in natural landscapes and depend on the natural environment for transportation and for the receiving of goods. This exploratory study addresses this gap in the literature by asking three research questions:

- (1) How do the natural aspects of living on an island influence the lives of the island residents?
- (2) How does the natural environment influence island residents’ overall well-being, including their social and emotional and physical health?
- (3) How does the natural environment influence island residents’ spirituality?

## Methods

### Participants

Participants in this study were adults ( $N=51$ ) living year-round on one of three islands in the New England section of the northeast region of the United States. Male ( $n=14$ ) and female ( $n=36$ ) participants were >18 years of age and lived on an island for a mean of 23 years ( $SD=2.15$ ). Participants identified as non-Hispanic/white 96% ( $n=47$ ), black/African American 2% ( $n=1$ ), and Hispanic/Latino, 2% ( $n=1$ ).

### Procedure

An electronic invitation to participate in the study was sent by the main researcher to 80 publicly available e-mail addresses listed on government or organization websites (i.e., Chamber of Commerce, nonprofit organizations, museums, education centers, and libraries) on one of three researcher-selected islands in the New England region of the United States. These three islands were selected because of their larger year-round population size compared with other islands in the geographic region. In the e-mail, the researcher included a standardized invitation to take part in the study. This request included the requirements of the study, its purpose, expectations, and the link to the questionnaire. Utilizing a modified snowball sampling approach, potential participants were also asked for their assistance in forwarding the request to potential subjects who met the study criteria (Mertens, 2010). The questionnaire remained open for 3.5 weeks. Institutional review board approval was granted for this study.

Participants had to confirm that they were at least 18 years of age and had lived on an island in New England for a minimum of 1 year. All participants electronically agreed to the informed consent before they could begin the questionnaire. Participants were also informed that they could include their e-mail address at the end of the study to be entered in a drawing of one of \$25 Amazon gift cards. Participants were informed that their e-mail addresses would not be connected to their survey results. Four winners were randomly selected. The winners’ e-mail addresses were confirmed, and electronic gift cards were sent to them by the main researcher.

### Questionnaire

The researcher-designed questionnaire included: open-ended questions on how the natural environment influences various aspects of the participants’ lives, Likert scale questions on their perceived level of nature relatedness and how often they spend time in nature, and concluded with demographic questions (Table 1). Four of the open-ended questions (questions 3 through 6) inquired into how the natural environment influences the participants’ physical health, social and emotional health, spirituality, and their overall well-being. These questions were developed based on key areas of adult development and supported from the results of a previously conducted pilot study (Knight & Lee, 2009; Sinnott, 2001; Tehan & Isaacowitz, 2012).

Questions 1, 2, and 8 were previously piloted by the main researcher with undergraduate college students at a private liberal arts college in the northeast region of the United States. Results from the pilot study questions yielded a variety of responses including the influence of natural environment on the participants’ spirituality, leisure time activities, mental health, physical health, conservation

**Table 1. The Influence of the Natural Environment Questionnaire**

1. Nature relatedness is defined as a person's emotional, intellectual, and physical connection to the natural environment. How would you rate your current level of nature relatedness? (5-point Likert scale question ranging from low to high).
2. Please describe the factors or experiences that you believe have influenced your current level of nature relatedness. Provide as many specific examples to support your response as possible.
3. Please describe how, if at all, the natural environment influences your physical health.
4. Please describe how, if at all, the natural environment influences your social/emotional health.
5. Please describe how, if at all, the natural environment influences your spirituality.
6. Please describe, how, if at all, the natural environment influences your overall well-being.
7. Is there anything else you would like to add about how the natural aspects of living on an island influence your life?
8. On average, how often did you currently spend time in nature? (5-point Likert scale questions ranging from never to frequently).
9. How long have you lived on an island in New England?
10. Identified gender.
11. Identified race/ethnicity.

efforts, and overall well-being. Slight modifications to the wording of the questions were made before inclusion in this study to clarify the purpose of the questions. The questionnaire was created using Google Forms. It was anticipated that it would take participants ~ 15 min to complete the questionnaire.

## Results

Once the questionnaire data were extracted into an Excel spreadsheet, data analysis took several forms across several stages. Responses from the open-ended questions were analyzed following Nowell, Norris, White, and Moules's (2017) phases of thematic analysis. During the first phase, all open-ended responses were analyzed through multiple rounds of review and notes were made about first impressions and reflective thoughts. During the next phase, initial coding began based on statements and topics that emerged from the participants' responses. During this phase, a doctoral student who was previously unfamiliar with the data assisted with a peer

debriefing. The doctoral student completed the analysis independently and then discussions were held about the initial coding framework. Modifications to the organization of the framework were made. After all the data were initially coded, themes were identified taking an inductive approach. These themes were then color coded and categories were quantified (i.e., number of times participants' responses fit in to the derived categories). Thematic coding was used to combine, delete, and refine subthemes that developed for some of the open-ended questions. At this point, an additional peer debriefing was conducted to review themes for internal homogeneity and external heterogeneity to ensure there were strong connections among the responses within themes (Braun & Clarke, 2006). During the peer debriefing, the naming of the themes was also reviewed and discussion took place on how the various themes fit into the overall story on how island residents perceive the natural environment influences their lives. At the conclusion, 10 main themes were identified.

### *Factors influencing current level of nature relatedness*

After being provided with Nisbet et al. (2009) definition of nature relatedness, participants were asked to respond to a Likert-type question, *How would you rate your current level of nature relatedness?* The mean score for participants was 4.5 (SD = 0.08) with a score of 5 indicating a "high" level. Participants were then asked to *describe the factors or experiences that you believe have influenced your current level of nature relatedness* and to provide as many examples as possible. Ninety-four percent ( $n = 48$ ) of participants responded to this question, and their responses were categorized into three main themes: (1) childhood experiences, (2) leisure activities, and (3) influence on life choices.

*Childhood experiences.* Of the 48 responses, 31% of participants ( $n = 15$ ) shared that childhood experiences influenced their current levels of nature relatedness. These responses included recalling specific fond memories of spending time outdoors as a child, often with their families, to more general descriptions of spending time outdoors as children. The following are some examples:

Spending time outdoors amidst nature was a high priority for my family when I was growing up. Even in the dead of winter, my parents always opened my bedroom window a crack for "fresh air", which felt more like torture than a positive health move. When we traveled we spent time exploring the environment and taking in the scenery. Family walks in the woods were a major part of every Thanksgiving and Christmas. We were drawn to the

ocean and tide pools with creatures we could collect, observe, and release. My father built a simple box with a glass bottom which we floated in front of our rafts as we watched an underwater world pass by underneath. Our island abounds with opportunities for families to be outside enjoying nature from days at the beach, walks on the moors, birding, sailing, fishing, etc. My daughter, in college, now realizes what an extraordinary environment it is to grow up in. She often say "Mom, we live in a postcard!"

Due to childhood trauma and growing up in an unsafe household in a rural area, I took refuge in the natural world. The woods was the only safe place. I relied upon it for my well being. Spent as much time as possible outside, although I had to return home for food and shelter. From there I developed an intense curiosity in and reliance upon the natural world. At the time I was unaware of this correlation; it just happened organically.

Every time I drive by the ocean I feel my mood change for the better. Growing up, swimming in the ocean was a special treat, something rarely done on the occasional vacation. Now when I get to see it almost every day, even in winter, it brings back positive associations.

*Influence of life choices.* Forty-two percent of the 48 responses ( $n=20$ ) identified life choices that influence their current levels of nature relatedness. Responses included reflections on choices such as where to live, where to travel, career selection, and participating in advocacy (nature focused). Identified careers included farming, organic gardening, nature writing, conservation, wildlife biology, teaching gardening, and horticulture restoration. These careers were described as meaningful and connected to the natural environment. The following are additional examples of the influence of life choices on current nature relatedness:

My lifestyle. I have chosen to go car free which means I walk, bike and bus everywhere I go. The slowness of being car free allows me time to observe and the freedom to wander in my natural environment (i.e.: I don't have to stick to roads).

My housing. I live in a tiny house with sky lights and many windows. It is situated snugly in a forest. Due to these two factors I am very aware of both the weather and what local birds are up to. Additionally, the size of my house and its location encourages me to get outside often.

I live in a rare/endangered habitat, I grew up on a small working farm, I have been politically involved for over 20 years to preserve open space, wetlands and habitat and control development, I love to spend time out on the water (coastal ponds or ocean).

*Leisure activities.* The majority of participants, 83% of the 48 responses ( $n=40$ ), indicated that their choice of leisure activities influences their current levels of nature relatedness. These responses included reference to leisure time activities that occur in nature such as walking their dogs, spending time at the beach, gardening, fishing, and sailing. For example, "Walking perimeter of island, nature hikes with children, berry picking, nature crafts with school kids, ecogardening, preserving tomatoes, garden veggies, berries and grape juice, hiking the moors looking for rare plants" and "It's more a question of, what of my choices hasn't influenced it?...Surfing, scalloping, kiteboarding, outrigger canoe paddling, sailing, fishing, beach walks and on and on..."

#### *Main influences of the natural environment on the lives of island residents*

Responses for questions 3 through 6 on the influence of the natural environment on physical health, social and emotional health, overall well-being, and spirituality were comprehensively analyzed to identify the ways that the natural environment influences the lives of island residents. The main themes that emerged were that the natural environment is the (1) setting for physical exercise, (2) possesses therapeutic qualities, (3) improves mental health, and (4) supports a spiritual or reflective practice (see Table 2 for thematic breakdowns per question).

*Setting for physical exercise.* Out of the total responses from questions 3 through 6 ( $n=189$ ), 30% of responses ( $n=57$ ) indicated the importance of the natural environment as a setting for physical exercise. Examples of responses include "it is extremely important, 90% or more of my exercise happens outside in nature," and "I walk daily in the woods. It's my favorite form of exercise and to not have nature to do that exercise in would mean I most likely would not do it. For example, if I had to walk in a gym or only on the bike paths, my exercise level would drop greatly." Responses in this category also often identified the specific outdoor activity that they enjoyed and frequently participated in such as hiking, walking, swimming, sailing, kayaking, fishing, and gardening. The natural environment was also frequently cited as the location for social interactions with others on the island. Participants indicate how they often spend time outdoors exercising with their family, friends, and pets.

*Possesses therapeutic qualities.* Thirty-nine percent ( $n=74$ ) of responses included the natural environment as providing some type of therapeutic benefit. Some responses mention a specific part of nature such as the ocean and waves as a source of comfort, "the ocean

Table 2. Frequency of Themes in Questions 3 Through 6

	SETTING FOR PHYSICAL EXERCISE	POSSESSES THERAPEUTIC QUALITIES	IMPROVES MENTAL HEALTH	SUPPORTS A SPIRITUAL OR REFLECTIVE PRACTICE
Question 3 (physical health)	29	18	6	2
Question 4 (social/emotional)	18	35	10	4
Question 5 (spirituality)	3	7	2	25
Question 6 (overall well-being)	7	14	7	3

refreshes and calms me,” and “swimming in the ocean in the warmer months is almost therapy for me,” and “makes me happy with all its beauty, piques my curiosity with its unexpected niches, soothes my troubled spirit with the rhythm of the waves.” One participant stated, “Anytime I’m sad (son died last spring) I go to the sea, walking along and hearing the waves soothes my soul.”

Other responses include a more general description of therapeutic qualities such as “being in the natural world is a balm for my soul,” and “The beauty it fills my body with stars and butterfly. It give me some comfort, happiness and a good clear mind. Is like it takes cares of me.” In addition, “Being outdoors is therapeutic for me. Not only does it help me to take a step back and reassess my daily life, but also it allows time to relax in a way I don’t think a person I am able to do indoors,” and “I agree with Japanese thoughts of forest bathing, my blood pressure goes down and I am most relaxed in forest, in fields in woods on trails around lakes and creeks and wetlands and the ocean.” In addition, one participant explains his/her preference for living on an island:

Overall I am where I should be because the island gives the maximum opportunity to calm myself through nature and environment. I don’t have to spend hours in car. I have lived other places and always feel most comfortable and peaceful on island. Overall it is best place for me. Some people feel trapped here but I feel comforted.

Fourteen percent ( $n=10$ ) of the responses in this theme made specific reference to nature causing happiness or being happy in nature. Some examples of this were “I’m happiest when I’m outside, as long as the weather isn’t terrible,” “Nothing makes me happier than spending Sunday at the beach,” “being out of doors is critical to my Happiness,” and “Sunshine makes me happy.”

*Improves mental health.* Thirteen percent of responses ( $n=25$ ) in this theme describe how the natural environment contributes positively

to their mental health or mental state. Some responses explicitly state how spending time in nature directly improves their mental health, such as “My daily walks are mandatory for my mental health. Being around the trees, in the quiet, with a soft breeze. Looking for birds and other creatures, noticing the change of seasons, taking pictures now and then. I don’t feel right if I’ve missed a few walks due to travel or weather” and “The XXX and Islands have a high rate of depression and anxiety and I suffer from both. Close observations of nature have helped me a lot. I swim from May–October and being in the ocean is a huge benefit to my mental health.” Another participant responded with the following, “If I didn’t have an outdoor outlet, I think depression and alcoholism wouldn’t be far behind. I say that tongue in cheek, but sometimes all I need is some sunshine, open space, and my dog, and everything falls into context.” One response simply stated, “I get crazy indoors and get well outdoors.”

*Supports a spiritual or reflective practice.* Eighteen percent of responses ( $n=34$ ) include mention on how the natural environment supports or is directly related to a spiritual or reflective practice. Statements such as “The beach is my church,” “Nature is my religion,” “No need to go to formal church services I see my God in nature,” “The natural world is the centerpiece of my spiritual life,” and “finding beauty and peace being immersed in the natural environment where everything is a miracle is my spirituality” support the relationship between nature and spirituality. One participant states, “Humans make me believe in no god. Nature makes me think there might be a god,” while similarly another participants states, “It’s the only thing that makes me even consider spiritual existence.”

Participants also shared reflective practices that often focused on the interconnectedness and impact that all living things have on each other. Some of the responses were related to how nature impacts them personally such as in the following examples, “I think it’s tied to emotional health above. But definitely gives one the feeling of being

ONE PART of nature and not the DOMINANT creature in nature. There is SUCH beauty and diversity if you just look,” “It relaxes me and makes me take a larger perspective on life and issues,” and “I feel closest to creation when I am amidst it. I find sitting on a rock near a stream, or atop a dune listening to the waves enhances my meditative states.” In addition, one participant writes:

I am not a spiritual person, but being in natural environments does help me feel connected to the world in a way nothing else does. We are not separate from the world we live in, and being outdoors makes this much easier to see and remember.

Although the following were not identified as main themes, there were some additional findings that are important to share to aid in understanding the influence of the natural environment on this population. Twenty-one percent ( $n=39$ ) mentioned walking outdoors in their responses, 16% of posts ( $n=30$ ) included reference to the beach or ocean, and 8% of responses ( $n=15$ ) included that the outdoors is where their social interactions take place with family and friends. In addition, 8% of responses ( $n=15$ ) stated that spending time outdoors is a daily occurrence.

#### *Influence of natural aspects of the island on residents' lives*

Thirty-seven participants ( $n=37$ ) responded to the question, *Is there anything you would like to share about how the natural aspects of living on an island influence your life?* Based on participant feedback to this open-ended question, some overall commonalities were identified. Responses fell into one of three main themes, (1) benefits and challenges of isolation, (2) gratitude for living on an island, and (3) concerns about the environment (as related to the island).

**Isolation.** The three islands in this study range in distance from the mainland, but on average are ~27.4 kilometers from land. Forty-six percent of responses ( $n=17$ ) mentioned the isolation of living on an island. Many participants clearly described this separation from the mainland with statements such as “a feeling of being remote from the rest of the world” or “Whenever I come back after being in ‘America.’” Responses about the physical isolation of living on an island had both positive and challenging aspects. Positively, residents noted that they valued the lack of commercialism on the island, and the strong sense of community. As one participant stated, “19.3 kilometers at sea we can’t depend on others so we have to depend on ourselves,” whereas another participant responded, “I take a lot of pleasure in feeling like we are adrift in the sea together here.”

The most often noted challenge of the physical isolation of the island is that they are “at the mercy of mother nature.” One partici-

pant responded, “Weather is always a topic of conversation; how’s the sea today, which direction is the wind coming from, are the boats gonna run on time. There’s both a hyper-awareness of the weather and the sea and also a laid back attitude, well, we can’t get the paper today cause the boats didn’t run, oh well.” Another participant responded, “The weather has the capability of causing boat and plane cancellations which can affect my ability to get off island. I feel as if I take the Icelandic approach to this and just take things as they come—Þetta reddast.” Some participants noted conflicting views on the physical isolation of the island, as the following demonstrates:

I am grateful that so much of the island is protected and will never be built up. The isolation is sometimes welcomed or can be very inconvenient. I like that we are hard to reach from the rest of the country, which means the commercialism and constant sensory overload is limited. However, in January, sometimes you just want more connection.

**Gratitude.** Participants feel a profound sense of gratitude and appreciation of being able to live on an island. Thirty-five percent ( $n=13$ ) of responses included statements of gratitude for example, “Grateful for the vast number of spaces I have to explore” and “It’s pretty much the biggest reason for me being here. Unlimited access to one of the most beautiful spots on earth,” “being surrounded by so much open conservation land to spend time in is one of the main reasons that I live here, being isolated from the mainland and surrounded by the ocean is humbling,” and “Living on island with a large amount of natural landscapes is a true blessing.” These responses also yielded mention of certain aspects of the natural environment that touch their lives such as the sound of waves, stargazing at night, the deer running, the beach, and the movement of the trees.

**Concerns about the environment.** Some participants, 27% ( $n=10$ ), showed concerns about the environment as related to the island. The following are some examples.

There is a frustration level with visitors who do not understand how special the Island is and that it needs to be cared for, not treated as a waste receptacle (on land and water including soils). The island is being over promoted/exploited for \$\$ and overpopulated. Maxed out. Almost to the point of no return. So sad.

...But as I have touched on, my concerns about the natural environment as I know it in the midst of this climate crisis sometimes overtake me. Sometimes I feel like I am documenting the final days of a civilization. Maybe that is extreme. I’m trying to

make the choice to be as present as I can be in the natural world around me and not worry about the crushing future. I'm 32 and I don't know if I am going to have children because I can't imagine bringing them into this world. But then I can't imagine not teaching a child how to swim, how to pick blueberries, beach plums, and wild grapes. This is a wild time to be alive.

## Discussion

This exploratory study shares insight into a population that is scarcely studied in this context. Findings provide an initial understanding of the influence of the natural environment on these adults' lives while also providing guidance for future research. Overall, residents enjoy the isolation that living on an island brings, even with challenges of weather, transportation, and, at times, social isolation. Living on an island provides them a sense of community and the pleasure of limited commercialism and preserved natural spaces. Residents expressed intense gratitude and appreciation for being able to have access to the natural aspects of the island, while also sharing environmental concerns. Findings show that the natural environment influences many aspects of their lives.

Four main themes emerged from responses to questions on the influence of the natural environment on different areas of their lives. One identified theme, the natural environment as the setting for physical exercise, was mentioned in over a quarter of the responses. Participants shared that the natural environment is the setting where the majority of their exercise takes place. Walking was commonly mentioned as a choice for outdoor exercise. Several participants indicated that outdoor exercise occurs frequently and is an essential part of their lives. This finding raises some questions that need further exploration. *Do island residents participate in outdoor exercise more than nonisland residents? If so, are island residents more likely to exercise outside because it is easily accessible or because of other factors? Is socializing with others while exercising part of island culture (based on information provided in responses)?*

The most commonly found theme was the therapeutic benefits of the natural environment. Island residents seek the natural environment, especially the beach, to provide them comfort and a way to disconnect. Descriptions of the natural environment such as "calming," "soothing," "refreshing," "therapeutic," and "brings happiness" help in understanding some of the benefits that this natural environment provides to these residents. Happiness as a benefit of the natural environments is supported by similar findings from previous studies (Ferrer-i-Carbonell & Gowdy, 2007; Lambin, 2009; Nisbet et al., 2011) as well as supports the field of ecotherapy,

showing that time spent in nature can be therapeutic and healing (Davis, & Atkins, 2009; Sackett, 2010).

Another main theme that was identified is that the natural environment improves mental health. Although the influence of the natural environment on mental health was not directly asked of participants, it was included in some responses to all four questions on the physical, social/emotional, spiritual, and overall well-being. Although residents described how the natural environment is therapeutic for them, the majority of the responses in this theme specifically mentioned how the natural environment prevents or helps a specific mental disorder including depression, anxiety, and substance abuse. Stress reduction, in relation to mental health, was also cited. This finding has also been supported by other studies (Dean et al., 2018; Korpela & Kinnunen, 2011; Largo-Wight, 2011; Mutz & Müller, 2016), demonstrating that mental health and therapeutic benefits of the natural environment are an important area that needs further exploration. With nearly one in five adults in the United States living with a mental disorder (National Institute of Mental Health, 2020), there is a need to offer ecotherapy-based treatment options for individuals. Although multiple benefits of ecotherapy have been identified, this is still an understudied treatment option (Sackett, 2010; Summers & Vivian, 2018).

Some areas for further exploration considering the last two main themes are comparing mental health statistics of island residents with nonisland residents, further exploration on identifying what it is about natural environments that people find therapeutic and beneficial to their mental health, and whether adults are drawn to living on the island because of their perceived therapeutic benefits of nature. Future research should also look at depression rates of people who live on an island and have high nature relatedness compared with people who live on an island with lower nature relatedness.

It was also found that the natural environment plays a key role in spiritual or reflective practice, a relationship that has been explored in different ways (Heintzman, 2009; Shibley, 2011). Responses ranged from "nature is my religion" to more general statements about how nature makes them reflect on the interconnectedness of all living things. Results prompt further exploration into the participants' origin of the influence of natural environment on their spirituality, and whether they believe this influence would be different if they lived somewhere else.

On average, residents report that they frequently spend time outdoors and that they are high in nature relatedness. The island residents believe that their current levels of nature relatedness are influenced by three main areas: childhood experiences, leisure activities, and influence on life choices. Participants shared experiences

from when they were growing up that shaped their relationship with the natural environment today. This connection has also been made in previous research (Jensen & Olsen, 2019). In addition, participants believe that their leisure activities and lifestyle choices such as travel, career selection, and participating in advocacy (nature focused) also influence their nature relatedness. With close to half of participants indicating that their lifestyle choices influence their nature relatedness, it will be important to ask whether it is their nature relatedness that influences their lifestyle choices. Comparison of scores on Nisbet et al.'s (2009) Nature Relatedness Scale between island residents and nonisland residents will also be an area to explore.

### Limitations

There are some limitations to this study. Although steps were followed to ensure the validity and reliability of the study, it is important to acknowledge that the authors hold the personal belief in the multiple benefits of spending time in nature and the strong influence of the natural environment in their own lives. Steps were taken to address any author assumptions that may have influenced findings such as sharing the detailed process-implemented coding data, utilizing peer debriefing, and providing multiple participants' perspectives on the subject (Creswell, 2014).

Another limitation is that the majority of participants identified as white/non-Hispanic and female. Future research should keep this sample limitation in mind when designing recruitment methods. Participants who acknowledge the importance of the natural environment in their lives may have also been more inclined to complete a questionnaire about the influence of the natural environment. In addition, social desirability may lead participants to answer in ways that will be viewed favorably. Participants for this study were also recruited through a snowball sampling technique that provides the potential to recruit a large number of participants, but the researcher had limited control over the identification of participants.

### Future research

Although the findings from this exploratory study support prior research on the multitude of benefits of the human-nature relationship, they also lead to questions of further exploration. The discussion section identified questions that arose from these findings as suggestions for the next step in this research process. In addition to those areas of investigation, future studies with this population should also investigate the influence the natural environment has on adults who have lived on an island all their lives as compared with the influence the natural environment has on those who decided to

relocate to an island. Exploration on how the influence of the natural environment changed, if at all, for those who moved to an island should also be investigated.

### Conclusion

The initial findings from this study describe the overwhelming strong influence of the natural environment on the lives of island residents. Participants shared how strongly it influences their physical, mental, and social and emotional health. They described how it influences their overall well-being and their spirituality. Examples were provided on how the isolation of island living can be both challenging and positive, while residents also expressed gratitude and environmental concerns. The purpose of this exploratory study was to provide an initial understanding of the influence of the natural environment on these adults' lives while also providing guidance for future research. Several questions emerged from the data that will guide future work in this area.

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