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Nature and Perspective on God: The Differential Impact of Long Versus Short Adventure Programming for College Students

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Nature and Perspective on God: The Differential Impact of Long Versus Short Adventure

Programming for College Students

by

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Presented to the Faculty of the
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George Fox University

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Nature and Perspective on God: The Differential Impact of Long Versus Short Adventure

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Abstract

This clinical dissertation focused on the shift in one's perception of God after time spent in nature in the context of a spiritual adventure program. There are studies that find spiritual adventure programs increase a participant's spirituality (Bobilya, 2011). However, there is a gap in the literature surrounding how spiritual outdoor programs, specifically the one in this study, influences a person's God-image. This dissertation aims to close the gap in research regarding spiritual adventure programs and shift in God-image by studying if a person's image of God shifts after time spent in nature, and if it shifts differently depending on if they spend one day or 12 days in nature. Two types of college-level trips will be studied: overnight hiking and camping trips through an adventure program class, and a 12-day backpacking trip. Students will be given questionnaires that contain the God-Image Inventory, a 72-question measure to identify how a person conceptualizes God. Data from the questionnaires was utilized in both a multivariate analysis of variance (MANOVA) and a multivariate analysis of covariance (MANCOVA). The results of the MANOVA indicate post-nature, participants believed God to be more traditionally present, more accepting, more providential, and less influential in their lives in general Wilks $\Lambda=0.89$, $F(6,149) = 2.98$, $p = .01$. The MANCOVA show that the interaction of time x group maintained significance observed in the first group of repeated measure MANOVAs, suggesting that God-image changes over time found in the MANOVA supersedes the comfortability in nature covariate. Recommendations for future research include performing the same study with a different sampling method, a different monotheistic religion, qualitative exit interview or in a period of time unaffected by COVID-19.

Keywords: nature, God-image, spiritual-adventure program, spiritual-perspective shift

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Nature and Perspective on God: The Differential Impact of Long Versus Short Adventure

Programming for College Students

Chapter 1

While many people may associate the study of nature with more traditional sciences such as biology or environmental chemistry, nature and psychology relate profoundly to one another. The link between psychology and nature, termed *ecopsychology*, is a relatively new area of study. The term *ecopsychology* was first used by Theodore Roszak in 1992 to explain the utilization of ecology in conjunction with psychology (Chaudhury & Banerjee, 2020). However, many psychologists discovered meaningful findings while studying the relationship between the mind and the outdoors. For example, DeRobertis (2015) attempted to explore the boundaries between humans and animals and their connection to the environment by reviewing existing literature. Given the sources DeRobertis found, he postulated, without the connection to the environment; someone may feel perpetual distress. While DeRobertis utilizes an existential approach to ecopsychology, many scientists have uncovered empirical data relating to the effects of the combination of nature and the human experience, such as Holloway et al. (2014), when they studied female students who took an ecopsychology course and deemed women to leave the course feeling empowered and less prone to impression management.

Psychological Benefits of Nature

Time in nature is linked to a variety of psychological concepts. The most common area of study within ecopsychology is the link between nature and mental health. Time spent outdoors has been associated with a surge in mental energy (Weinstein & Ryan, 2008). For example, mountain hiking is highly correlated with positive affective responses (Niedermeier, 2017). Hiking has been found to generate a more positive emotion than time spent on a treadmill

(Niedermeier, 2017). Also, general outside activity is associated with emotional health more than any indoor activity (Pasanen et al., 2014). Research states time spent in nature in the absence of exercise increases positive affect and energy (Fuegen & Breitenbecher, 2018), reduces stress (Kondo et al., 2018), and increases a sense of spirituality, even in those who do not identify as spiritual (Jirásek et al., 2017). An additional study addressed the effect of experiences in the outdoors on women's empowerment. Psychology graduate students completed readings, didactic presentations, discussions and learned wilderness skills in two weekend-long outdoor experiences (Holloway et al., 2014). After rating the outdoor course, the students reported growing trust in their abilities, an appreciation for ecofeminism, and increased self-confidence (Holloway et al., 2014).

Perspective Shift

If nature is capable of affecting someone's psychological well-being, a person might wonder if nature is capable of affecting other components of a person's worldview such as their perspective. *Perspective Shift* is defined as "the ability to reframe a problem, issue, challenge, or situation through multiple lenses" (Bolman & Deal, 2017). Minimal literature exists regarding the connection between nature and perspective shift. However, psychological studies solely studying perspective shift exist. For example, Negd et al. (2011) studied perspective shift in therapists with anxiety to understand how anxious therapists may be more effective in their field. The findings show that when a therapist engaged in perspective taking tasks in the context of a research study, they were more likely to exhibit empathy (Negd et al., 2011). Nature's impact on perspective change is significant because it is inherently difficult for humans to change their perspectives. People continually maintain their perspectives to solely focus on the object of their desires (Eagle, 1999). People repress aspects which keep them from their desires (Eagle, 1999). People also fear if they change their thought patterns they have in common with people they feel

close to, they will not be accepted by their communities or significant people in their life (Eagle, 1999). People decide to change perspective to keep their beliefs in harmony. If an individual's beliefs are dissonant with each other, they feel anxiety and stress. Therefore, one might wonder if the impact of extended time in the outdoors may yield shifts in belief within people.

Significance of Spirituality and Religiosity in Psychology

If nature has an impact on a person's worldview, someone may also question how time in nature might impact a person's spirituality or religiosity. Spirituality is a person's motivation to experience a connection to the sacred (Naor & Mayseless, 2020). Spirituality, like exposure to nature, is positively correlated with better psychological health. If someone perceives a relationship with God, they may have better coping skills and "mental balance" (Gall et al., 2005). According to a study done utilizing scales measuring exposure to nature, spirituality, and psychological well-being, people who are spiritual and spend more time in nature may have stronger psychological well-being (Kamitsis & Francis, 2013). In addition, higher spirituality reduces anxiety about challenging situations (Holbrooke et al., 2016). When people believe they have supernatural support, dangerous situations seem less formidable. People do not believe the dangerous situations will not happen; they believe they have protection, which eases their anxieties (Holbrooke et al., 2016). The idea of spirituality positively affecting psychological well-being is demonstrated through experimental/intervention studies as well. For instance, when researchers facilitated a spiritual and mindfulness-based program, the people who participated experienced less psychological distress than they had previously (Carmody et al., 2008).

While there have been numerous studies regarding nature and spirituality, there are fewer available studies addressing the effects of nature on religiosity. According to Bruce (2011), religion is defined as "beliefs, actions, and institutions which assume the existence of supernatural entities with powers of action, or impersonal powers or processes possessed of

moral purpose.” In other words, people’s actions and morals are influenced by a supernatural entity with power. Existing literature states people in areas with more favorable topography and weather participate in religious activities less frequently, but actively participate in spiritual activity (Ferguson & Tamburello, 2015). Also, other bodies of literature found that areas with fewer natural resources were more religious than areas with abundant natural resources (Snarey, 1996). Finally, the literature supports the idea that people are more religiously attuned in nature when they are with a community of people (Rosegrant, 1976). While religion and spirituality are often closely associated, the literature indicates the two concepts are affected differently by nature.

God-Image Overview

God-image is defined as the internal psychological model of God one has imagined (Lawrence, 1997). People can discern someone's highest priorities and deepest motivations through their God-image. God-image is universal and can unveil much about a person's desires in life (Gollnick et al., 2001). God-image may also be affected by a person’s extenuating circumstances. A person’s view of God exhibits the idea that a person’s outside experiences influence belief. For instance, the more concern about social conflict someone possesses, the more they tend to believe in a punitive God (Caluori et al., 2020). In other words, experiencing? conflict changes people's view of God.

Furthermore, God-image also reveals much about a person's personality. For instance, research studies suggest people with positive images of God have high empathy, but greater faith is not necessarily associated with higher empathy (Francis et al., 2012). Furthermore, the more judgmental a person believes God is, the less altruistic the person is likely to be (Mencken & Fitz, 2013). A person's God-image often speaks to their self-esteem. A loving God-image predicts an emotionally stable person, while a non-loving God-image does not enhance a

person's self-esteem (Smith et al., 2017). A God-image that emphasizes justice yields lower empathy, yet a God of mercy yields higher empathy (Francis et al., 2012).

God Image as Related to Attachment Theory

In the psychological literature, God-image often appears as linked to attachment theory. According to one study performed in 2013 by Davis et al., there are four steps for someone to establish a God-image. The first step is for a child to attain human attachment figures (Davis et al., 2013). Second, the child develops relational schemas based upon their attachment they have to parental figures and learns how to interact with them (Davis et al., 2013). Third, the child applies this schema to their relationship with the divine (Davis et al., 2013). Fourth, the child uses their God-image implicitly through the way they see the world (Davis et al., 2013). In addition, secure attachment to God indicates better mental health (Leman et al., 2018). People who have a more secure attachment to God have a more secure attachment to others. One example includes the relationship people with severe mental illness have with their case managers. People who have quality working relationships with their case managers have stable impressions of themselves and others and a secure attachment to God (Dayringer & Oler, 2004). Another example involves a person's addiction to work. If someone has anxious attachment style in which they are consistently nervous about their relationships, they often believe in a controlling God. They fear disappointing God and others, and channel their anxiety into work. (Kézdy et al., 2013). The link between attachment and God-image is pertinent to this study as people have attachments to nature just as they have attachment to humans. *Place attachment* is defined as “the degree to which a person values a setting” and people tend to have significant place attachment to outdoor areas (Wynveen et al., 2021). Since human attachment and God-image are profoundly linked, someone may wonder if place attachment and God-image are profoundly linked as well. Moreover, in the context of this study, one may wonder if an

increased place attachment to an outdoor natural area after a specific amount of time may change a person's view of God.

Cultural and Psychological Implications of God-Image

People's cultural and personal history may lead them to adopt varying God images (Gollnick et al., 2001). People may gain an understanding of different demographic groups through their God-image. According to one study, some Americans view God as young, Caucasian, and loving (Jackson et al., 2018). Some people who are more liberal view God as feminine, African-American, and loving (Jackson et al., 2018). People who are conservative view God as older, intelligent, and powerful (Jackson et al., 2018). People tend to view God as similar to themselves in attractiveness, age, and race (Jackson et al., 2018). Women are more likely to view God as a female (Dayringer & Oler, 2004).

Spiritual and Religious Intervention in the Outdoors

Regarding the present research, studying spiritual intervention and perspective shift in nature is not new. According to a study by Heintzman in 2009, nature elicits spiritual experiences in three ways:

1. Nature elicits a sense of wonder (Heintzman, 2009).
2. Time in nature means someone is away from their everyday life without constraints. The freedom of nature can open people's minds to spirituality more (Heintzman, 2009).
3. Nature elicits spiritual experiences because people form connections to a specific place and create spiritual associations.

Interestingly, some types of recreation in the outdoors could inspire more spiritual intentionality than other modalities of recreation. While physical exercise already leads to a sense of well-being, outdoor foot travel activities lead to higher spirituality than other activities (Heintzman, 2009). Also, the more nature outings someone completes, the more significant their spirituality

may be (Heintzman, 2009). Since research suggests nature elicits spiritual experiences, many spiritual programs and religious schools spend time in nature to help deepen students' spiritual experiences. An example of this is when participants in an outdoor camp (traveling from urban areas) were studied, it was found that the experience of alone time in the outdoor camp enhanced their feelings of spirituality (Sweatman & Heintzman, 2004). Programs use nature-based learning to enhance overall well-being in physical, spiritual, psychological, and social spheres (Christian, 2017). Past studies also show the effectiveness of community and spiritual development within outdoor programs. Bobilya et al. (2011) discovered first years in college who completed a group excursion into the wilderness grew in their experience of community, stewardship, and spiritual development. With all the above data in mind, the present study seeks to replicate prior findings and support the idea that time spent in the outdoors can lead to a person shifting their view of God more favorably. The idea of performing research on the specific population used in the study to gauge spiritual experience is inspired by the original review of the program and its impact on spiritual growth completed by Dr. Anderson-Hanley (1997).

The Present Study

The present study examines the possibility of perspective shift in someone's view of God-image in the context of nature-based adventure programs. Ideally, this study will help people understand if faith-based adventure programs (designed to help students further their faith) aid in students deepening their spiritual lives by feeling more connected to a higher power. The present study intends to answer the following questions: Does time spent in nature, in the context of an outdoor spiritual experience, actually influence a person's view of God, and does the amount of time in nature influence how drastically a person's view of God shifts. Based on the research outlined above, the hypotheses for this study predict the following:

H1: Time in nature (in the context of a spiritually-based outdoor program) will result in a shift to a greater belief in the God-image subscales listed in the God-Image Inventory due to the consistent connection of nature to God throughout both the camping and backpacking trips.

H2: The 12-day backpacking trip will have a stronger positive influence on a person's view of God than the overnight hiking trip due to more time in nature.

Chapter 2

Methods

Participants

The institutional review board approved this study. Participants were drawn from a convenience sample of residential college students attending a Christian liberal arts college in the New England area of the northeastern United States. Within the college curriculum, students are required to participate in either a backpacking trip or an outdoor adventure class (which culminates in an overnight camping trip) to facilitate spiritual and personal growth. The programs include additional elements such as rock climbing, devotionals, ropes course-team building exercises, solo time to reflect spiritually, and outdoor skills training. Students choose which nature experience they want to complete. Once they decide on the experience, students are sent a form to fill out asking questions about their level of spirituality, fitness, and dates they would like to participate and experience in the outdoors. The leaders of the outdoor program select groups based on people who are likely to resonate with one another, have similar availability and have comparable fitness levels.

The backpacking group takes one day to rock climb outside and one day to participate in outdoor team-building exercises before they embark on their backpacking trip. On the trip,

students begin their day with devotionals and quiet time before hiking 3-7 miles per day through mountainous terrain to arrive at their campsites. Often, students will take day hikes during the day as well. In the evening, students participate in setting up camp and doing chores. By the end of the day, students share their life stories to understand each other's backgrounds. At the end of the backpacking trip, each student is escorted to a private pristine campsite in the wilderness, where they camp by themselves while fasting for two days. They are only allowed to bring a journal, bible, pen, sleeping supplies, and water. After the two days, groups share a meal, hike out of their sites, and join all of the other groups at base camp to celebrate the time they had together filled with a meal, singing, and many stories about their experiences. The next day, students run 9 miles together before getting on a bus to drive back to campus.

The outdoor adventure class group meets for a school quarter 2-3 times per week. The students begin their class period by walking to the ropes course in the woods on campus and doing a devotional. Then, they begin their team-building activity. After a few weeks pass, the group goes on an overnight camping trip to the mountains 1-3 hours away. They typically complete a day hike, set up camp, do devotionals, and share life stories on the trip. They also learn wilderness skills and do an hour of quiet solo time for reflection. After spending a night in the mountains, students drive back to campus.

Students who participate in the class have greater exposure to their group than the backpacking trip participants before they embark on their outdoor trip as the trip is often a capstone to weeks of engaging in outdoor activities on campus. Students in the backpacking group meet their fellow participants the day they embark into the outdoors. The participants were invited to participate through their adventure group leaders. Participants from each type of adventure program filled out questionnaires ($N= 220$; adventure class with overnight hiking trip

$n = 61$; backpacking trip $n = 151$). The leaders informed the participants that if they were interested, they could fill out the pre-test questionnaire (after the informed consent) before the 12-day canoeing or hiking backpacking trip or before the start of the adventure class outdoor hiking trip. The students were either freshman or sophomores at the school. Of the population, 162 students noted they were "college in progress," 74 % of the sample. Six students noted they had "college diplomas," which comprised 2 % of the sample. Twenty-four percent of college students noted they obtained a high school diploma, 52 students.

The students came from a variety of ethnic backgrounds. Eighteen of the students (8% of the population) said they identified as Asian. Fifteen students identified as Black (7% of the sample). One hundred sixty-one students identified as White (73 % of the sample). Nineteen students identified as Hispanic (9% of the sample). Seven students (3% of the sample) identified as "other."

The students had a variety of age groups as well. One hundred five students were 18 years old (48%). Eighty-two students were 19 years old (37%). Twenty-three students were 20 years old (10%). Five students were 21 years old (2%). Two students were 22 years old, and 2 students were 23 (1% of the population each). One student was 26 years old (0.005%).

Regarding the Duke University Religion Index Scores, 0.5% of students reported "never" engaging in private religious activities; 1.8% of students reported engaging in private religious activities "once a year or less"; 4.6% of students reported engaging in private religious activities "a few times a year"; 12.3% of students reported engaging in private religious activities "a few times a month"; 46.4% of students reported engaging in private religious activities "once a week"; and 34.1% of students reported engaging in private religious activities "more than once a week." The remaining percentages of students did not respond. Among the students, 7.8%

reported "never" engaging in organized religious activities; 11.4% of students reported engaging in organized religious activities "a few times a month"; 11.6% of students reported engaging in organized religious activities "once a week"; 57.8% of students reported engaging in organized religious activities "more than once a week"; 11.4% of students reported engaging in organized religious activities "more than once a day." The remaining percentages of students did not respond. Of students that responded, 1.9% reported low intrinsic religiosity; 16.4% of students reported medium intrinsic religiosity and 81.8% of students reported high intrinsic religiosity.

Finally, the students possessed different gender identifications. Seventy-nine of the students identified as male (36%). One hundred thirty-seven of the students identified as female (63%). Three students identified as non-binary (0.005%) and 3 students did not respond.

Participants' ages ranged from 18-26 years ($M = 18.77$; $SD = 1.04$). The participants were given a demographic survey before filling out the questionnaire. The demographic survey and questionnaire took anywhere from twenty to thirty minutes to complete.

Exploring the God-Image Inventory

The God-Image Inventory (GII) is a psychometric instrument developed for clinical and pastoral purposes to measure a person's view of God according to a Christian world view using a Likert scale (Lawrence, 1997). The inventory in its classic form has eight scales and 156 items (Lawrence, 1997). The inventory in its shortened form (the form used in this study) has six scales and 72 items (Lawrence, 1997). A Likert scale was used to assess the different subscales of God Image in the present study. The Likert scale ranged from scores of 1-4 with 1 being "Strongly Agree" and 4 being "Strongly Disagree." Therefore, the lower the score a participant yields, the more they identify with the subscale. GII was standardized on a sample of 1580 American adults

recruited by a research firm. Sample items from the six subscales of the God-Image Inventory include:

- *Influence*- if someone believes they can control God. (e.g., *When I obey God's rules, God makes good things happen for me.*)
- *Providence*- if someone believes God can control them. (e.g., *The voice of God tells me what to do.*)
- *Presence*- if someone believes God is "there for them." (e.g., *I can talk to God on an intimate basis.*)
- *Challenge*- if someone believes God wants them to grow. (e.g., *God takes pleasure in my achievements.*)
- *Acceptance*- if someone feels loved by God. (e.g., *I get what I pray for.*)
- *Benevolence*- if someone believes God is good. (e.g., *I think of God as more compassionate than demanding.*)

In the order listed above, the reliability coefficient for each scale was 0.92, 0.92, 0.94, 0.86, 0.90, and 0.91. In the order listed above, the validity coefficient for each scale was 0.93, 0.92, 0.94, 0.85, 0.91, and 0.90.

Exploring the Duke University Religion Index

The Duke University Religion Index (DUREL) is a questionnaire that captures three different aspects of religiosity: (a) attendance at religious services (ORA), (b) frequency of private religious activities (NORA), and (c) intrinsic religiosity (IR). The first question on the DUREL addresses attendance at religious services by asking the participant to fill out a 6-point Likert scale regarding how often they attend organized religious services. The answer to the first question determines ORA. The second question addresses private religious activities by asking

the participant to fill out a 6-point Likert scale regarding how often they participate in private religious activity. The answer to the second question addresses NORA. The final three questions use a 5-point Likert scale for each question and ask questions about a participant's overall religiosity. The higher someone's score is on each aspect, the more they adhere to that aspect in their religious life. The final 3 questions are combined to create a subtest for IR.

The DUREL was developed by utilizing multiple factors. The first two items were on the National Institute of Health Study. Then, the researchers utilized the 10-item Hoge study and administered it to 455 patients in the Duke Hospital system. Then, after the data was collected, principal factor analysis was conducted to reveal the themes of intrinsic and extrinsic religiosity. Thus, the three items on the Hoge study that addressed intrinsic and extrinsic religiosity were combined with the first two questions to create the DUREL. Within three different samples, the internal validity has been from 0.78-0.91, and the convergent validity with other established measures of religiosity is between 0.71–0.86. The test-retest reliability is also high (intra-class correlation coefficient of 0.91). The DUREL was designed to measure religiosity in Western religions (e.g., Christianity, Judaism, and Islam) specifically.

Demographic Survey

As per American Psychological Association requirements, the questionnaire included a demographic survey. The survey addressed each participant's age, gender, ethnicity, and education level. Additional questions were included and asked about the trip itself, a person's relationship with the outdoors, and a person's response to COVID-19 since the answers to the questions may affect outcome. For instance, the adventure program may have been a participant's first time in a large group of people since the pandemic began. Additionally, someone who is not as comfortable with the outdoors may have a different experience than

someone who is experienced in the outdoors. The answers to the additional questions were considered for use as covariates for the study due to their theoretical links to outcomes.

Procedure

Initially, the principal researcher instructed the group leaders on how to introduce the forms to ensure there is no coercion involved. The researcher explained the importance of not forcing students to take the questionnaire and to emphasize the idea the questionnaire was optional. After the participants arrived at the base camp (in the case of the backpacking trip) or campsite (in the case of the adventure camping trip), the adventure program leader explained the study to the group in person. For the participants that were interested, the group leader gave the participants a large envelope with a number on it. The participants were instructed to write their names on the envelope. Inside the envelope, there were two smaller envelopes with identical numbers to the large envelope on them (without the participant's name). One envelope was labeled "PRE" and one envelope was labeled "POST." The PRE envelope contained an informed consent and a white questionnaire for the participant to fill out prior to the trip. After the expedition, the group leader gave the participants the same envelope, but they filled out the form in the envelope labeled POST. The POST envelope contained a blue questionnaire to be taken after the trip. Participants were also instructed to not write their names on the questionnaires. The above measures were performed both for the overnight trips of the Adventure Class and for the 12-day backpacking trips of the Wilderness Expeditions. After each set of trips, the Director of the two programs gathered the small envelopes from each bundle and discarded the outer envelopes. The data in the small envelopes was mailed to the principal researcher.

Method of Analysis

The primary focus of the data analysis was the effect of time spent in nature on a participant in an outdoor trip's view of God. Additionally, another focus of data analysis was the difference in God-image after time spent in nature between an adventure program camping trip and a 12-day backpacking trip. A multivariate analysis of variance (MANOVA) in SPSS was used to determine if time in nature had an effect on a person's God-image. A multivariate analysis of covariance in SPSS was used to determine if the importance of religion in a participant's life was a plausible covariant in the analysis of whether time in nature had an effect on a person's God-image. Supplemental analyses include a correlational analysis to identify relationships between covariates and God-Image Inventory elements, a cluster analysis to identify themes in the responses of participants, and a chi squared analysis to find associations between the cluster groups previously found and the loss in numerical value from a person's initial God-image and their God-image post time spent in nature. The supplemental data was also analyzed using SPSS.

Chapter 3

Results

Repeated Measures MANOVA

Results from the repeated measures MANOVA indicated a significant effect of time in nature on participants' God-image. Participants were from two different groups: the 12-day backpacking trip group and the adventure program with a one-day camping trip group. Participants in the backpacking trip and camping trip had a numerical decrease in the God-image subscales relating to influence, benevolence, acceptance challenge and presence (see Tables A1 and A2 and Figures A1-A4). which means the participants largely identified more with the subscales after the adventure trips. The results mean post-nature, participants believed God to be

more traditionally present, more accepting, more providential, and less influential in their lives in general. The difference in the groups' change in God-image was statistically significant within the omnibus test, Wilks Lambda = 0.89, $F(6,149) = 2.98$, $p = .01$. Therefore, univariate tests were explored, and all subscales indicated significance except for Challenge and Benevolence, which each indicated no statistical significance, $p = .07$ (for both subscales). While both groups indicated a decrease in numerical value (or greater adherence to God-image subscales) related to God-image, the backpacking trip group that was in nature for 12 days indicated a more drastic shift in God-image.

Repeated Measures MANCOVA

To assess whether a participant's change in God-image over time was contingent upon a change in the measure of their perceived "comfortability in nature," a repeated measure MANCOVA was performed with the "comfortability in nature" score as a covariant. Results show that the interaction of time x group maintained significance observed in the first group of repeated measure MANOVAs, suggesting that God-image changes over time found in the MANOVA supersedes the comfortability in nature covariate, Wilks Lambda = .87, $F(6,148) = 3.52$, $p = .003$.

Pearson Correlation Analysis for Pre-Test Measures

There is a negative correlation between the importance of religion and a person's motivation level, $r(218) = -.15$, $p = .03$, a participant's belief God is influential, $r(218) = -.43$, $p = .00$, a person's belief God is benevolent $r(218) = -.33$, $p = .00$, a person's belief God is accepting, $r(218) = -.37$, $p = .00$, a person's belief God is present $r(218) = -.54$, $p = .00$, a participant's belief God is provident, $r(218) = -.59$, $p = .00$, a participant's belief God is challenging, $r(218) = -.30$, $p = .00$, a participant's involvement in organized religious activity,

$r(218) = -.45, p = .00$, a person's involvement in private religious activity, $r(218) = -.51, p = .00$, and a person's overall intrinsic religiosity, $r(218) = -.70, p = .00$. There is a positive correlation between a person's motivation level on the trip and enjoyment of nature, $r(218) = .31, p = .00$ and intrinsic religiosity $r(218) = .16, p = .02$. There is a negative correlation between a person's motivation level and their perceptions of God's benevolence $r(218) = -.16, p = .03$. Participant's shift in worldviews after COVID-19 were positively correlated with God's acceptance, $r(218) = -.17, p = .02$ and negatively correlated with a person's private participation in religious activity $r(218) = -.14, p = .04$. While many of the elements of the God-Image Inventory are positively correlated, for the purposes of this study, they will not be expanded upon in the Results section as it is not relevant to the present research. There is a negative correlation between a participant's perception of God's influence in their lives and their private religious activity $r(218) = -.31, p = .00$ and intrinsic religiosity $r(218) = -.57, p = .00$. There is a negative correlation between a participant's perception of God's benevolence in their lives and their private religious activity $r(218) = -.22, p = .00$ and intrinsic religiosity $r(218) = -.32, p = .00$. There is a negative correlation between a participant's perception of God's acceptance in their lives and their private religious activity $r(218) = -.19, p = .01$ and intrinsic religiosity $r(218) = -.36, p = .00$. There is a negative correlation between a participant's perception of God's presence in their lives and their private religious activity $r(218) = -.48, p = .00$ and intrinsic religiosity $r(218) = -.69, p = .00$. There is a negative correlation between a participant's perception of God's providence in their lives and their private religious activity $r(218) = -.41, p = .00$ and intrinsic religiosity $r(218) = -.61, p = .00$. There is a negative correlation between a participant's perception of God's challenge in their lives and their private religious activity $r(218) = -.35, p = .00$ and intrinsic religiosity $r(218) = -.42, p = .00$. While many of the elements of the Duke University Religion

Index are positively correlated, for the purposes of this study, they will not be expanded upon in the Results section as it is not relevant to the present research. For the visual representation of the correlation, see Table A3.

Pearson Correlation on Post-Test Results

There is a negative correlation between the importance of religion and a person's shift in worldview from COVID-19, $r(218) = -.15, p = .03$, a participant's belief God is influential, $r(218) = -.36, p = .00$, a person's belief God is benevolent $r(218) = -.24, p = .00$, a person's belief God is accepting, $r(218) = -.30, p = .00$, a person's belief God is present $r(218) = -.50, p = .00$, a participant's belief God is provident, $r(218) = -.41, p = .00$, a participant's belief God is challenging, $r(218) = -.22, p = .00$, a participant's involvement in organized religious activity, $r(218) = -.41, p = .00$, a person's involvement in private religious activity, $r(218) = -.51, p = .00$, and a person's overall intrinsic religiosity, $r(218) = -.64, p = .00$. There is a negative correlation between a person's motivation level on the trip and enjoyment of nature, $r(218) = .31, p = .00$, participation in private religious activity $r(218) = .14, p = .04$, and intrinsic religiosity, $r(218) = .15, p = .03$. There is a negative correlation between a person's motivation level and their perceptions of God's benevolence $r(218) = -.14, p = .04$ and providence $r(218) = -.22, p = .001$. While many of the elements of the God-Image Inventory are positively correlated, for the purposes of this study, they will not be expanded upon in the Results section as it is not relevant to the present research. There is a negative correlation between a participant's perception of God's influence in their lives and their private religious activity $r(218) = -.28, p = .00$ and intrinsic religiosity $r(218) = -.43, p = .00$. There is a negative correlation between a participant's perception of God's benevolence in their lives and their private religious activity $r(218) = -.16, p = .02$ and intrinsic religiosity $r(218) = -.33, p = .00$. There is a negative correlation between a

participant's perception of God's acceptance in their lives and their private religious activity $r(218) = -.17, p = .01$ and intrinsic religiosity $r(218) = -.33, p = .00$. There is a negative correlation between a participant's perception of God's presence in their lives and their private religious activity $r(218) = -.40, p = .00$ and intrinsic religiosity $r(218) = -.58, p = .00$. There is a negative correlation between a participant's perception of God's providence in their lives and their private religious activity $r(218) = -.32, p = .00$ and intrinsic religiosity $r(218) = -.52, p = .00$. There is a negative correlation between a participant's perception of God's challenge in their lives and their private religious activity $r(218) = -.22, p = .00$ and intrinsic religiosity $r(218) = -.33, p = .00$. While many of the elements of the Duke University Religion Index are positively correlated, for the purposes of this study, they will not be expanded upon in the Results section as it is not relevant to the present research. For the visual representation of the correlation, see Table A4.

Cluster Analysis

To supplement the MANOVA and MANCOVA analyses, a k-means cluster analysis was utilized to identify themes in response patterns (See tables A5, A6, and A7). Two main groups and one outlier group were determined through the analysis. Both clusters indicated lower numerical value in the God-Image Inventory items after time spent in nature (either on the adventure class overnight hiking trip or 12-day backpacking trip). The clusters further supported the notion that participants grew to conceptualize God as more involved overall after their time in the outdoors.

Chi-Squared Test of Association

A chi square test for association was conducted between the cluster groups previously found and the loss in numerical value from a person's initial God-image and their God-image

post time spent in nature. There was a statistically significant association between the cluster groups and loss in value in God-image, $X^2(2) = 10.26, p = .0$. The cluster analysis indicated people who did the 12-day backpacking trip had a greater numerical reduction in God-image than the people who did the overnight camping trip as a part of their adventure program (see Tables A8 and A9). The results further confirm people who spent more time in nature identified with the God-image subscales more than the people who spent less time in nature.

Chapter 4

Discussion

Exposure to nature and spiritually-focused adventure programming has an impact on one's perspective on God. In this study, the length of an adventure program, and thus time in nature, were examined for their impact on one's image of God. Two hundred twenty college students participated in one of two types of spiritually-oriented adventure programming: (a) long (12-day wilderness expedition) or (b) short (overnight camping capstone experience to an adventure class). Results revealed that on average, participants in the longer adventure program reported a greater shift in their image of God than those on the shorter outing. While both experiences yielded positive shifts in one's perspective on God, the trajectory of change was greater for the longer expedition for sub-components of one's God-image, including: Influence, Acceptance, Presence, and Providence.

Discussion of the Initial Hypotheses

This study utilized a MANOVA analysis and a MANCOVA analysis to understand if a participant's view of God would shift towards a belief that God is more present, challenging, benevolent, and accepting after time spent in nature in the context of an outdoor spiritual program. After the analyses, the results primarily indicated that a person's view of God (within

the variables given on the God-Image Inventory) shifts to identify more with the subscales of the God-Image Inventory than prior to time in nature. However, challenge and benevolence were not significant, indicating participants did not have a significant shift in the way they perceived God to be “challenging” or “good.” When most of the God-Image Inventory variables shifted negatively, they indicated a shift toward a more traditional view of God. However, Influence measures how much a person believes they are in control of God. Since Influence shifted in a way that indicated someone identified more with the element of God-image, the participant believes they have more control over God than prior to the adventure program. While both groups indicated a decrease in numerical value related to God-image, the backpacking trip group that was in nature for 12 days indicated a more significant shift in God-image.

Discussion of Relationships between Variables

The God-Image Inventory subscale constructs were correlated with select covariates (Religiosity, COVID, Motivation, Nature, PRE Organized Religion, PRE Internalized religion, PRE Intrinsic religion) to clarify any relationship between the covariates and the variables. First, the Pre-Test GII variables and the covariates were examined in Table A3. The correlation indicated if someone believes God has less Influence in their lives, they perceive themselves to be more religious. However, if someone believes in a benevolent, accepting, present, and provident God, they perceive themselves to be more religious. In addition, people who ascribe to organized, private, and general religion consider themselves more religious. If someone believes they have more influence over their lives than God, they ascribe to more private religious practice and overall religiosity. If someone perceives themselves to be more religious, they believe in a more benevolent, present, and accepting God. If someone is involved in more

organized religious activity, they believe God is more present and provident. If someone believes in God's providence, they are more religious overall.

Next, the Post-Test GII variables and the covariates were examined. The correlation indicated if someone believes they are more religious, they believe they are more influential in their lives than God, God is perceived as more accepting, God is more present, and God is more provident. The analysis also indicated that the more religious someone perceives themselves, the more they adhere to organized, private, and general religious practices. It also indicated that a person is more motivated to participate in the trip if they like nature, participate in organized religion, and participate in general religious practices. If a person's worldview did not shift after COVID-19, they often viewed God as more accepting and tended to be more privately religious. The correlation results indicate that if someone perceives themselves as religious, they believe God has less Influence in their lives; God is perceived as more benevolent, more accepting, and more present. If someone has more organized religious practices, they often believe God is more present and provident. The results may indicate a student who considered themselves to be more religious and engaging in religious practices may adhere more to God-Image Inventory subscales than they adhered prior to the time in nature. The spiritual outdoor programs challenge students to experience God profoundly and intentionally outside of organizations, encouraging them to grow in their perception of God.

Discussion of Response Patterns and Associations

A k means cluster analysis was conducted to identify the common themes of response among the subjects concerning the items in the God-Image Inventory. Two groups were found (with group 3 being an outlier). After time spent in nature, subjects in both groups believed God has less Influence in their lives, and is more benevolent, accepting, present, provident, and

challenging. While the overall results were similar, one of the groups' difference margin was considerably smaller than the other group's margin of difference. A chi-squared test of association was conducted to understand more information about the two groups found in the cluster analysis, indicating that people who participated in the backpacking trip experienced a more significant shift in God-image than those who experienced the adventure program hiking trip.

Limitations

Multiple limitations arise in the present study. First, students in both groups had varying levels of exposure to their groups before their time in nature. The students in the outdoor camping trip group worked with their group for the duration of a school quarter and had a higher level of familiarity with their group. The students in the 12-day backpacking trip group only met their co-participants on the first day of the trip and, therefore, may have had a higher level of initial discomfort in nature due to their new community. The levels of exposure to the adventure groups could have feasibly affected study results.

A second limitation is regarding accounting for the programming of the adventure trips. There was time for solo spirituality, devotionals, and teamwork exercises within the adventure trips. It is feasible the programming could have enhanced someone's image of God in conjunction with nature, and the outdoors may not have been the sole influence on a person's God-image.

Another limitation is regarding the method of sampling. The sample used is a convenience sample. Therefore, the results only speak to the specific spiritual outdoor program the researcher had access to, rather than all people participating in college-level spiritual outdoor programs. In addition, since participants chose which adventure program they wanted to

participate in, their self-selection could imply other factors that are hard to control for in this study.

There are also limitations regarding the demographics of the population utilized. Most of the population is Caucasian and in the early stages of college. Therefore, any effects noted in this study cannot be presumed to generalize to students of backgrounds other than the majority culture.

A final limitation is regarding the motivation of participants. The participants all voluntarily participated in the survey, and therefore, they may be more motivated than those for whom surveys are mandatory. However, the survey was completed via pen and paper administration and was notably extensive, running the risk of survey fatigue and decreased capacity for completion after spending an extended period taking it. Therefore, the results may have been impacted by the length of the survey provided.

Implications

One notable difference between the overnight trip and the backpacking trip is the level of community the groups initially experienced. The participants on the backpacking trip meet their group the same day they embark on their backpacking trip. However, the participants in the overnight trip meet their group at the beginning of the term in the context of a spiritual outdoor class and often take their class camping trips closer to the end of the term. Therefore, even though participants have a singular night immersed in nature, they are familiar with their group. The idea that people's God-Image Inventory variables shifted to indicate they may believe in a more involved God after time in nature was expected, given students' descriptions of the programs as helping them feel closer to their conceptualization of God. However, given the structure of the programs, it is difficult to ascertain whether nature was the primary factor in

someone's shift to a more involved image of God. The results may also speak to the strength of the nature-spirituality combination, given how participants in the backpacking group experienced a shift in their God-image perspective without having a sense of community with their fellow group members prior to the trip.

The spiritual activities in the programs may have been a significant factor in a shift in someone's God-image. Both programs use group bonding activities and devotionals throughout their adventure experiences. In addition, students were encouraged to establish community with one another. Since all the students were challenged to think deeply, spiritually, and religiously, they may have been inspired by one another to shift their image of God.

Implications for other systems may arise from the findings of this study. The adventure programs created a shift in perspective for students. They utilized three main components: time in the outdoors, group bonding activities, and activities that helped students gain a broader awareness of their spirituality. Therefore, if a program wants to expand the perspective of its clients, employees, or students, they could follow a similar model that incorporates the three elements mentioned. In theory, a program does not necessarily need to incorporate a Christian viewpoint and could change the spiritual element to a new perspective on a different value a program endorses. Implications for a person's spirituality may also arise from the findings of this study. Some programs or people may want to continue the spiritual approach the programs in this study endorsed to expand their personal sense of spirituality. The elements in this study proved to be somewhat effective for spiritual development. Therefore, pieces of the spiritual approach could be incorporated into a person's spiritual experience. For instance, people could spend time investing in spiritual devotionals outside instead of indoors. In addition, people could find ways

to embark on day hikes with their spiritual communities to promote elements of community, spirituality, and belief in a shorter, day-long, experience.

It is important to note that the God-Image Inventory encapsulates a particular way of viewing God. The God-Image Inventory leans towards a structured, religious, and involved image of God. Therefore, few students that did not report a change in God-image towards the image of God the God-Image Inventory presents may not necessarily feel distant from God. A student could, in theory, emerge from their time on the adventure trips with a more spiritual and less religious view of God, especially since the programs encourage forming a relationship with God in an out-of-the-box and less structured manner. The God-Image Inventory does not account for students who experience more spiritual and less religious views of God. Therefore, someone should be mindful of the denomination of Christianity a participant ascribes to and not automatically assume that just because a person's scores indicate less adherence to the God-Image Inventory, they do not have a relationship with God.

Future Directions

There are many future directions the study could take. Future research could utilize a random sample across multiple types of spiritually- and nature-oriented adventure programs. In addition, the research could be performed across multiple age groups rather than merely college-aged students. Based on the multiple regression results, if the goal is to inspire people to challenge their view of God, it would be wise to utilize strategies that do not include organized religion and are perhaps more inclusive of personal spirituality. Based on the correlation results (the idea that high religiosity is correlated with a more negative view of God), someone may wonder if the results would be different in two years once the effects of COVID-19 have subsided study may be worth re-doing. It may also be meaningful to perform this study on a

population with a different God and religion and see if the results are similar. It would also be interesting to perform the same study with measures of spirituality instead of religiosity and examine how a person's spirituality is influenced by time spent in nature. In addition, the next time a similar study is performed, it may be helpful to have exit interviews to provide qualitative data regarding whether a students' perception of their time in the outdoors aligns with their empirical results.

Conclusion

This study examined the relationship between time in nature and God image among college students participating in an adventure program camping trip or a 12-day backpacking trip. In many spiritual and religious programs, nature is used to help promote a participant's relationship with a higher power. This is particularly relevant in the context of Christian colleges whose curriculum is structured around helping students foster a sense of religiosity or spirituality. This study adds to research on nature and God-image by providing additional knowledge about the effect of time spent in nature on a person's God-image. Understanding the connection between nature and God-image can work to help spiritual intervention programs help foster an even more intimate connection with the divine in the future. In addition, this study brings additional attention to topics that should be examined, such as performing the same study with participants from a different monotheistic religion, alternate sampling methods, or different amounts of time. In addition, the COVID-19 pandemic may have created feelings of temporary disorientation among participants, which could have influenced results, so it would be important to re-do the study after the effects of COVID-19 have settled.

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Appendix A

Table A1

12-Day Backpacking Trip Versus Overnight Camping Trip Outcomes

God-Image Inventory Label	Twelve-day backpacking trip						Overnight camping trip						<i>p</i>
	Pre-test results			Post-test results			Pre-test results			Post-test results			
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	
Influence	140	26.25	5.64	145	24.33	4.92	62	25.81	4.77	65	25.46	4.94	<i>.002</i>
Benevolence	141	19.29	4.73	143	18.91	4.77	62	20.95	14.28	67	19.19	.90	.07
Acceptance	140	18.71	5.79	143	18.71	5.12	63	19.80	5.45	64	19.13	4.94	<i>.02</i>
Presence	144	23.15	6.85	147	20.10	5.97	66	22.38	6.45	64	21	6.60	<i>.01</i>
Providence	142	25.78	5.24	146	24.87	4.75	63	26.11	4.26	62	26.24	4.59	<i>.04</i>
Challenge	144	20.48	4.40	149	19.08	4.01	65	21.06	4.07	65	20.66	4.23	.07

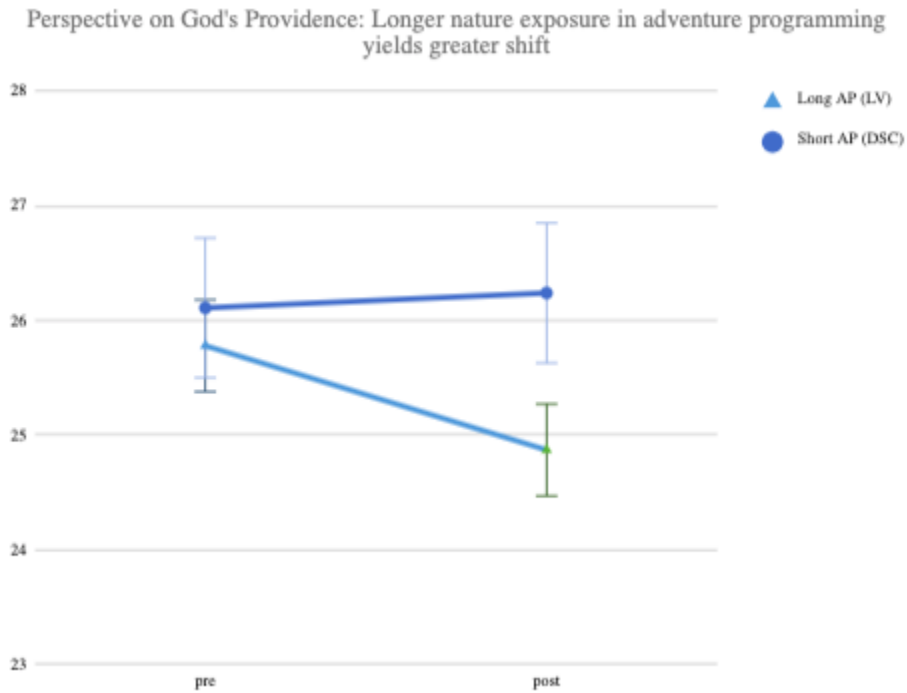
**p* value for univariate analysis of variance (ANOVA) (group x time); bolded-italics is significant ($p < .05$)

Table A2*Time*Group Within Subjects Contrasts*

Measure	<i>df</i>	<i>MS</i>	<i>F</i>	Sig	Partial η^2
Influence	1	28.71	4.30	.04	.03
Benevolence	1	48.47	6.81	.01	.04
Acceptance	1	53.65	9.78	.002	.06
Challenge	1	18.97	3.30	.07	.02
Providence	1	34.40	5.85	.02	.04
Presence	1	112.42	3.44	.07	.02

Figure A1

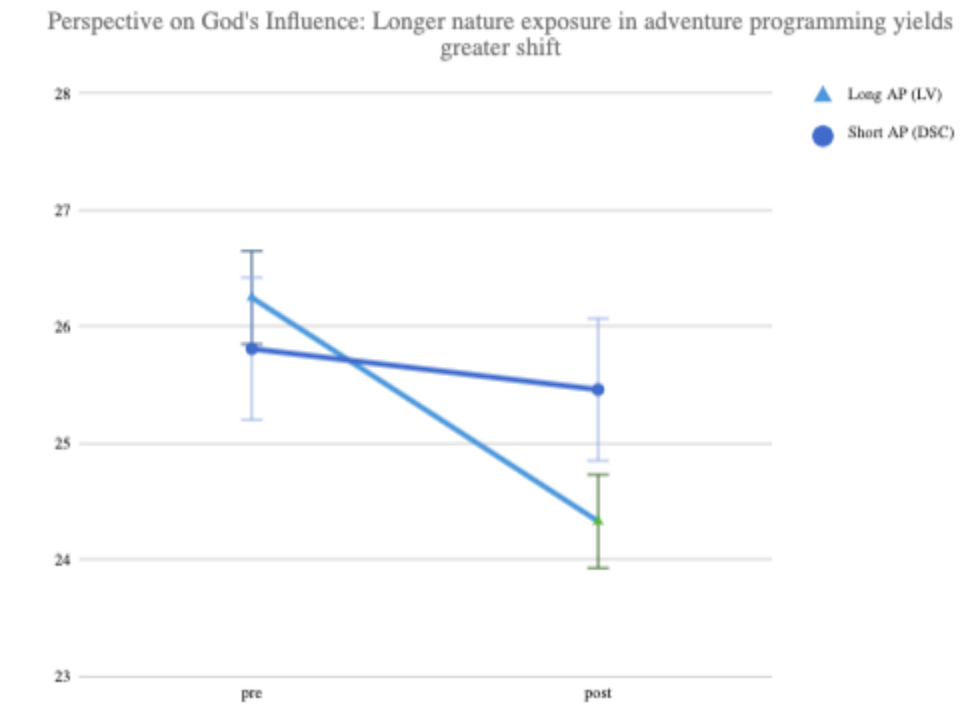
Estimated Marginal Means of Providence



Note. *p* values for the univariate ANOVAs can be found in Table A1 & A3; ANOVA = analysis of variance; AP = adventure programming; LV = long adventure programming (0.91); DSC = short adventure programming (-0.13).

Figure A2

Estimated Marginal Means of Influence



Note. AP = adventure programming; LV = long adventure programming (1.92); DSC = short adventure programming (-0.35).

Figure A3

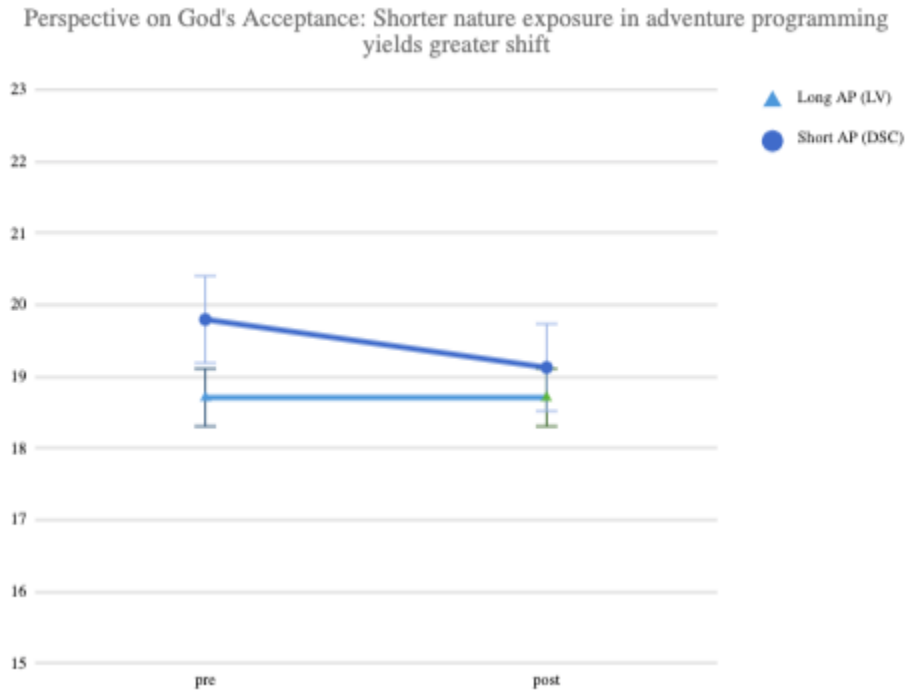
Estimated Marginal Means of Presence



Note. AP = adventure programming; LV = long adventure programming (-3.05); DSC = short adventure programming (-138).

Figure A4

Estimated Marginal Means of Acceptance



Note. AP = adventure programming; LV = long adventure programming (0) ; DSC = short adventure programming (-0.67).

Table A3

Correlation Analysis of Affinity for Nature, Motivation, COVID-19 Worldview Shift, Religiosity and Pre-test Information

	REL	MOTIV	NATURE	COVID	PREINF	PREBEN	PREACC	PREPRES	PREPROV	PRECHAL	PREORA	PRENORA	PREIR
REL	1	X	X	-.15	-.43	-.33	-.37	-.54	-.59	-.30	0.45	.051	.70
MOTIV		1	.31	X	X	-.16	X	X	X	X	X	X	.16
NATURE			1	X	X	-.20	X	X	X	X	X	X	X
COVID				1	X	X	.48	X	X	X	X	-.14	X
PREINF					1	.21	.48	.72	.63	.41	X	-.31	-.57
PREBEN						1	.33	.37	.33	.39	X	-.22	-.32
PREACC							1	.48	X	.45	-.15	-.19	-.36
PREPRES								1	X	.57	-.23	-.47	-.69
PREPROV									1	.42	-.30	-.41	-.62
PRECHAL										1	X	-.35	-.42
PRE-ORGANIZED RELIGION											1	.34	.40
PRE-INTERNALIZED RELIGION												1	.58
PRE-INTRINSIC RELIGIOSITY													1

Note. REL = Religion; MOTIV = Motivation; PREINF = Pre-Influence; PREBEN = Pre- Benevolence; PREACC = Pre-Acceptance; PREPRES = Pre-Presence; PREPROV = Pre-Providence; PRECHAL = Pre-Challenge; PREORA = Pre- Organized Religion; PRENORA = Pre-Non-Organized Religion; PREIR = Pre-Intrinsic Religiosity

Table A4

Correlation Analysis of Affinity for Nature, Motivation, COVID-19 Worldview Shift, Religiosity and Post-test Information

	REL	MOTIV	NATURE	COVID	POSTINF	POSTBEN	POSACC	POSPRES	POSPROV	POSCHAL	POSORA	POSNORA	POSTIR
REL	1	X	X	-.15	-.36	-.25	-.30	-.49	-.41	-.22	.41	.51	.64
MOTIV		1	.31	X	X	-.14	X	X	-.22	X	X	.14	.15
NATURE			1	X	X	X	X	X	X	X	X	X	X
COVID				1	X	X	.X	X	X	X	X	X	X
POSINFLUENCE					1	.37	.43	.73	.54	.47	X	-.28	-.43
POS-BENEVOLENCE						1	.66	.52	.39	.57	X	-.16	-.33
POSACCEPTANCE							1	.64	.43	.49	X	-.12	-.33
POSPRESENCE								1	.64	.54	X	-.40	-.58
POSPROVIDENCE									1	.40	X	-.32	-.52
POSCHALLENGE										1	X	-.22	-.33
POS-ORGANIZED RELIGION											1	.36	.41
POS-INTERNALIZED RELIGION												1	.51
POS-INTRINSIC RELIGIOSITY													1

Note. REL = Religion; MOTIV = Motivation; POSINF = Pre-Influence; POSBEN = Pre- Benevolence; POSACC = Pre-Acceptance; POSPRES = Pre-Presence; POSPROV = Pre-Providence; POSCHAL = Pre-Challenge; POSORA = Pre- Organized Religion; POSNORA = Pre-Non-Organized Religion; POSIR = Pre-Intrinsic Religiosity

Table A5*Cluster Analysis*

	Cluster 1	Cluster 2	Cluster 3
DIFINFLUENCE	-.34	-4.12	0
DIFBENEVOLENCE	-.10	-1.53	-96
DIFACCEPTANCE	-.19	-4.66	1
DIFPRESENCE	-.84	-6.35	2
DIFPROVIDENCE	.89	-3.42	2
DIFCHALLENGE	-.34	-2.77	-2

Note. DIFINFLUENCE = Difference in Influence; DIFBENEVOLENCE = Difference in Benevolence;
 DIFACCEPTANCE = Difference in Acceptance; DIFPRESENCE = Difference in Presence; DIFPROVIDENCE =
 Difference in Providence; DIFCHALLENGE= Difference in Challenge

Table A6*Number of Cases in Each Cluster*

Cluster Label	<i>N</i>
Cluster 1	103
Cluster 2	52
Cluster 3	1
Valid	156
Missing	64

Table A7*Cluster Analysis Anova*

	Cluster <i>MS</i>	Cluster <i>df</i>	Error <i>MS</i>	Error <i>df</i>	<i>F</i>	Sig
DIFINFLUENCE	248.20	2	8.50	153	29.19	<.001
DIFBENEVOLENCE	4558.42	2	7.77	153	586.63	<.001
DIFACCEPTANCE	348.71	2	7.73	153	45.12	<.001
DIFPRESENCE	533.86	2	7.99	153	66.85	<.001
DIFPROVIDENCE	324.41	2	9.57	153	33.90	<.001
DIFCHALLENGE	101.92	2	10.50	153	9.71	<.001

Note. ANOVA = analysis of variance. DIFINFLUENCE = Difference in Influence; DIFBENEVOLENCE = Difference in Benevolence; DIFACCEPTANCE = Difference in Acceptance; DIFPRESENCE = Difference in Presence; DIFPROVIDENCE = Difference in Providence; DIFCHALLENGE = Difference in Challenge

Table A8*Chi Squared Analysis Groups*

	One-week trip	One-day trip	Total
Cluster 1,2,3			
Small loss	66	37	103
Big loss	45	7	52
Missing data	40	25	65
Total	151	69	220

Table A9*Chi Squared Analysis*

	Value	<i>df</i>	Asymptotic Significance
Pearson χ^2	10.26	2	.01
Likelihood ratio	11.46	2	.003
Linear by Linear Association	.00	1	.99
<i>N</i> Valid Cases	220		

Appendix B

Pre- and Post-Test Handouts

Informed Consent

You are voluntarily agreeing to participate in a survey designed to analyze the View of God in students at Gordon College. This study is conducted by Alexandra Heinle, MA. These questionnaires should take around 15-25 minutes to complete. You may withdraw from this survey at any time; if you decide to withdraw from this survey after you have completed the assignment, your answers will be taken out of the survey and removed. Your identity and answers will be kept confidential and used for survey purposes only. Your name will not be collected to ensure anonymity. Due to the sensitivity of the topic, you may also feel uncomfortable regarding the personal and religious questions asked. This study may provide valuable insights in the effect of nature on views of God. The researchers are acting in accordance with legal and ethical standards. Extreme caution will be used to protect your privacy. By signing this document, you have indicated you are 18 years of age or older, have read and understand the above, and consent to participate in the survey. Please contact Alexandra Heinle at aheinle19@georgefox.edu or Dr. Amber Nelson at nelsona@georgefox.edu for any questions or concern.

X_____

Participant Signature and Date

Demographic Survey

What is your highest education level?

1. High school diploma
2. College in progress
3. College diploma
4. Graduate school
5. Graduate diploma

What ethnicity do you identify as? (Circle one)

1. Asian/Asian American
2. Black/African American
3. White/European American
4. Hispanic/Latine
5. Native American or Alaskan Native
6. Native Hawaiian or Pacific Islander
7. Other

What is your age?

What gender do you identify as? (Circle one)

On a scale from 1-5, how important is religion to you?

(1: I have no religion; 5: Religion is the center of my life)

Rate your perception of the importance each of the components of your trip:

(1: Irrelevant; 2: A little bit important; 3: Important; 4: Of utmost importance)

- _____Hiking
- _____Outdoor skills
- _____Solo time
- _____Ropes/Rocks

- ____Life stories
- ____Devotionals

On a scale from 1-5, what was your motivation level regarding this trip?

(1: I wouldn't be here if it weren't required; 5: I am extraordinarily excited about this trip)

On a scale from 1-5, how comfortable are you in outdoor situations?

(1: the most uncomfortable; 5: the most comfortable)

On a scale from 1-5, what is your level of affinity for nature?

(1: I dislike nature greatly; 5: Nature always excites me)

On a scale from 1-5, how has your worldview been affected by COVID-19?

(1: Not at all ; 5: All of my viewpoints have changed)

God-Image Inventory

You are being asked to complete an instrument to help gain an understanding of your image of God. There are no right or wrong answers. We just want to know how you honestly feel. Your answers will be completely confidential. Please respond to each statement by circling the response that comes closest to describing your feeling: SA, for Strongly Agree, if the statement is a particularly good way of describing how you feel about God. A, for Agree, if the statement just adequately describes your feelings about God. D, for Disagree, if the statement does not adequately describe your feelings about God. SD, for Strongly Disagree, if the statement is a particularly bad way of describing your feelings about God.

1. When I obey God's rules, God makes good things happen for me. SA A D SD
2. I imagine God to be rather formal, almost standoffish. SA A D SD
3. I am sometimes anxious about whether God still loves me. SA A D SD
4. Asking God for help rarely does me any good. SA A D SD
5. I am confident of God's love for me. SA A D SD
6. God does not answer when I call. SA A D SD
7. I know I'm not perfect, but God loves me anyway. SA A D SD
8. The voice of God tells me what to do. SA A D SD
9. I have sometimes felt that I have committed the unforgivable sin. SA A D SD
10. Even when I mess things up, I know God will straighten them out. SA A D SD
11. God never challenges me. SA A D SD
12. Thinking too much could endanger my faith. SA A D SD
13. I think of God as more compassionate than demanding. SA A D SD
14. I get what I pray for. SA A D SD
15. I can feel God deep inside of me. SA A D SD
16. God's love for me has no strings attached. SA A D SD
17. God doesn't feel very personal to me. SA A D SD
18. No matter how hard I pray, it doesn't do me any good. SA A D SD
19. Even when I do bad things, I know God still loves me. SA A D SD
20. I can talk to God on an intimate basis. SA A D SD

21. What happens in my life is largely a result of decisions I make. SA A D SD
22. I think God even loves atheists. SA A D SD
23. God nurtures me. SA A D SD
24. I get no feeling of closeness to God, even in prayer. SA A D SD
25. God loves me only when I perform perfectly. SA A D SD
26. Accce God loves me regardless. SA A D SD
27. God takes pleasure in my achievements. SA A D SD
28. I can't imagine anyone God couldn't love. SA A D SD
29. God keeps asking me to try harder. SA A D SD
30. God is always there for me. SA A D SD
31. I get no help from God even if I pray for it. SA A D SD
32. Being close to God and being active in the world don't mix. SA A D SD
33. God can easily be provoked by disobedience. SA A D SD
34. I often worry about whether God can love me. SA A D SD
35. God is in control of my life. SA A D SD
36. God wants me to achieve all I can in life. SA A D SD
37. I am a very powerful person because of God. SA A D SD
38. God will always provide for me. SA A D SD
39. I think God mostly leaves people free. SA A D SD
40. If God listens to prayers, you couldn't prove it by me. SA A D SD
41. God is looking for a chance to get even with me. SA A D SD
42. God's mercy is for everyone. SA A D SD
43. God's love for me is unconditional. SA A D SD
44. I know what to do to get God to listen to me. SA A D SD
45. God asks me to keep growing as a person. SA A D SD
46. I think God only loves certain people. SA A D SD
47. God almost always answers my prayers. SA A D SD
48. God doesn't want me to ask too many questions. SA A D SD

49. God does not do much to determine the outcome of my life. SA A D SD
50. God lets the world run by its own laws. SA A D SD
51. Even if my beliefs about God were wrong, God would still love me. SA A D SD
52. I am not good enough for God to love. SA A D SD
53. God's compassion knows no religious boundaries. SA A D SD
54. I sometimes feel cradled in God's arms. SA A D SD
55. God has never asked me to do hard things. SA A D SD
56. Running the world is more important to God than caring about people. SA A D SD
57. I often feel that I am in the hands of God. SA A D SD
58. I don't think my faith gives me any special influence with God. SA A D SD
59. Mostly, I have to provide for myself. SA A D SD
60. 60 Prov I am particularly drawn to the image of God as a shepherd. SA A D SD
61. God feels distant to me. SA A D SD
62. I think human achievements are a delight to God. SA A D SD
63. I rarely feel that God is with me. SA A D SD
64. I feel warm inside when I pray. SA A D SD
65. I am pretty much responsible for my own life. SA A D SD
66. God rarely if ever seems to give me what I ask for. SA A D SD
67. I think God must enjoy getting even with us when we deserve it. SA A D SD
68. God encourages me to go forward on the journey of life. SA A D SD
69. God sometimes intervenes at my request. SA A D SD
70. God never reaches out to me. SA A D SD
71. God doesn't mind if I don't grow very much. SA A D SD
72. I sometimes think that not even God could love me. SA A D SD

Duke University Religion Index**(1) How often do you attend church or other religious meetings?**

1 - Never; 2 - Once a year or less; 3 - A few times a year; 4 - A few times a month; 5 - Once a week; 6 - More than once/week

(2) How often do you spend time in private religious activities, such as prayer, meditation or Bible study?

1 - Rarely or never; 2 - A few times a month; 3 - Once a week; 4 - Two or more times/week; 5 - Daily; 6 - More than once a day

The following section contains 3 statements about religious belief or experience. Please mark the extent to which each statement is true or not true for you.

(3) In my life, I experience the presence of the Divine (i.e., God)

1 - Definitely not true; 2 - Tends not to be true; 3 - Unsure; 4 - Tends to be true; 5 - Definitely true of me

(4) My religious beliefs are what really lie behind my whole approach to life

Definitely not true; 2 - Tends not to be true; 3 - Unsure; 4 - Tends to be true; 5 - Definitely true of me

(5) I try hard to carry my religion over into all other dealings in life

1 - Definitely not true; 2 - Tends not to be true; 3 - Unsure; 4 - Tends to be true; 5 - Definitely true of me
