

**Regular Paper**

## **Backpacking Veterans: Exploring Sense of Belonging, Happiness, and Stress-Coping**

**Guy Ilagan**

Zucker Family School of Education, The Citadel

**Jill Ilagan**

Psychology, Wellness Workshop, Charleston, SC

**Robin Jocius**

University of Texas Arlington

**Tara Hornor**

Zucker Family School of Education, The Citadel

**Todd Shealy**

Zucker Family School of Education, The Citadel

**Annie Simpson**

Medical University of South Carolina

**Greg Cavaliere**

Charleston, SC

**Brett Pollen**

Zucker Family School of Education, The Citadel

**Jesse Brooks**

Zucker Family School of Education, The Citadel

### **Abstract**

U.S. military veterans attend college in increasing numbers, yet, often without a sense of attachment to their university. This mixed-methods exploratory study examined sense of belonging, happiness, and stress-coping outcomes for student veterans ( $N = 9$ ) participating in a backpacking event. Results indicate the treatment group's happiness level improved significantly over the control group,  $t(7) = 2.80, p = .027$ . Treatment group scores also improved on stress-coping,  $t(7) = 1.56, p = .163$ , and sense of belonging,  $t(7) = 2.28, p = .056$ ; however, results were not statistically significant. The backpackers attributed increases in social belonging and happiness to the following elements of the trip: social support, stress coping, physical benefits, and camping skills.

Although further quantitative research is indicated using larger and more diverse participant groups, findings from this study support the use of outdoor programming with veteran college students.

KEYWORDS: *Veterans, college, backpacking, belonging, happiness*

## Introduction

Over two million veterans have graduated from U.S. colleges and universities since 2009 (Institute for Veterans and Military Families, 2019). Six percent of all undergraduate college students report current or previous military service, and over 96% of colleges and universities in the U.S. actively enroll student veterans (Hill et al., 2019; Institute for Veterans and Military Families, 2019). Military education benefits are commonly cited as a key motivation for joining military service, as 92% of veterans view higher education as central to their successful transition from military service military education (Buryk et al., 2015; Molina, 2015; Zoli et al., 2015). However, only 41% of veterans elect to utilize their earned military education benefits to pursue higher education (Cate et al., 2019; Cate, 2014; Zoli et al., 2015).

Veterans rated four factors as influential in their college attendance decisions, including preparation for a new career, anticipation of high financial returns, utilization of an earned benefit, and the desire to obtain a higher education credential (Hornor, 2021). Moreover, the student veterans who do utilize their benefits to pursue higher education are underrepresented in four-year public and private nonprofit institutions and over-represented in community colleges and for-profit institutions (Cate et al., 2017; Cate, 2014; Causey et al., 2020; Hill et al., 2019; Institute for Veterans and Military Families, 2019; Hussar et al., 2020; Zoli et al., 2015). Most veterans transitioning from the military who aspire to enroll in postsecondary education intend to enroll in community colleges, influenced by perception of cost and financial resources, academic program offerings, flexible scheduling, and advising received from military education counselors (Hornor, 2022).

Student veterans' maturity, leadership ability, resilience, diversity, and life experiences clearly enrich the educational environment (Cate et al., 2017; Institute for Veterans and Military Families, 2019; Student Veterans of America, 2017; Zoli et al., 2015). However, student veterans report a lower sense of belonging within higher education institutions as compared to other student populations, with over 53% of student veterans perceiving that colleges and universities do not recognize the value of their military service (Barry et al., 2021; Zoli et al., 2015). This gap presents a potential barrier to success because students' sense of belonging is a critically important factor in student achievement and retention in colleges and universities (Kuh et al., 2010).

In a recent qualitative research study examining student veterans' sense of belonging within higher education institutions, student veterans rated four factors as being influential in increasing their sense of belonging in higher education, including institutional acknowledgement and inclusion efforts, veteran peer support and established veterans' programs, engagement with program faculty, and perception of higher education as a pathway for continued service (Hornor & Brooks, 2022). Student veterans described four similar major factors as diminishing their sense of belonging in higher education. The factors associated with decreases in sense of belonging included the need for additional peer support as non-traditional aged students, differentiated instruction as adult learners, increased campus understanding of the knowledge of skills they gained through military service, and the need for increased institutional inclusion efforts (Hornor & Brooks, 2022).

Student veterans are often described in the research literature as nontraditional-aged students, more racially and socioeconomically diverse, and significantly influenced by the design of the military educational benefit system (Hornor, 2021; Institute for Veterans and Military Families, 2019; Student Veterans of America, 2017; Vaccaro, 2015). In fact, over 85% of veteran college students are between 24 to 40 years of age, and 62% of student veterans are first-generation students (Institute for Veterans and Military Families, 2019; U.S. Department of Veterans Affairs, 2020). Student veterans share similar higher education retention risk factors as other nontraditional students, including level of academic preparation, first-generation student status, and challenges associated with balancing work and family obligations. Student veterans also experience enrollment and achievement delays due to military duties and service-connected disabilities (Cate, 2014). However, findings from the Student Veterans of America's (SVA) Million Records Project and the National Veteran Education Success Tracker (NVEST) indicate that once enrolled in higher education, veterans demonstrate higher success outcomes than other types of non-traditional students (Cate, 2014; Cate et al., 2017), which is noteworthy because it suggests student veterans can overcome these challenges when provided with appropriate support resources.

### **Sense of Belonging**

The more college students feel a sense of belonging, the more likely they are to persist toward their academic goals (Hoffman et al., 2002). Hornor and Brooks (2022) reported 90% of student veteran participants described their time as a student as "lonely" or "left out." Student veterans consider four factors to be connected to their sense of belonging while in the military: bonding through unpleasant experiences, group inclusion, camaraderie, and pride in their service to the nation. In relation to higher education, student veterans considered institutional acknowledgement and inclusion, veteran peer support, veteran targeted programming, faculty engagement, and higher education as a pathway for continued service as the factors necessary for a sense of belonging (Hornor & Brooks, 2022).

In the same study by Hornor and Brooks (2022), 10 student veterans representing the United States Air Force (USAF), United States Army (USA), United States Navy (USN), and United States Marine Corps (USMC) were surveyed. The participants transitioned from active duty to college and represented diverse age and gender. Many were readily able to reference a time they had a sense of belonging while in the military but struggled while attempting to find one during their time in school. In a survey of 8,500 active duty, United States National Guard (USNG), and USA and USN Reserve service members currently enrolled in college, 53% did not believe their school recognized the value of the skills learned while in the military (Zoli et al., 2015). Also, student veterans developed a mindset of discipline and respect during their service that is often not exhibited within the campus community (Hornor & Brooks, 2022).

Osborne (2013) conducted a study with 14 student veterans ages 22 to 30, averaging 3.5 years in active duty, and all having been deployed to Afghanistan and/or Iraq who were asked about their experiences in school. Many student veterans expressed a disconnect from the traditional students, a lack of connection to the institution, and concern that others would make assumptions about their mental health if they disclosed their veteran status. Osborne found when student veterans connected with one another in informal settings such as lounges or organizations, a stable community was created.

### **Happiness**

Happiness, a variable of well-being, has become an outcome of interest in outdoor education and nature experience (Brooks et al., 2017; Nisbet et al., 2011). Seligman (2011), a pioneer in the study of happiness, explained that three components comprise happiness. The first is con-

sistent and frequent positive emotion. The second aspect is engagement, referring to participation in absorbing activities that lead to diminished self-consciousness and awareness of time, otherwise called “flow.” The third component is meaning, which means service to or belonging to something greater than oneself. Shellman and Hill (2017) reported that college students who participated in a 13-day outdoor program reported significant increases in subjective well-being. Examples of activities which can increase positive emotions and happiness include social activities, personal recreation, goal-oriented activities, and spiritual activities (Henricksen & Stephens, 2013).

Happiness is an important variable for college students. In a review of 225 papers including 293 samples from happiness studies and 275,000 participants, Lyubomirsky et al. (2005) reported that happiness is associated with and precedes numerous desirable outcomes, including improved mental and physical health, reduced suicide rates, and overall stress-coping. Most of the samples they reviewed did not include data about the gender composition of the participants. Also, Al Ansari and Stock (2010) found that among college student participants (195 male and 185 female), well-being was positively correlated with educational satisfaction and academic achievement. Outcomes did not differ between male and female students.

### **Stress-Coping**

Many factors can add stress to a student veteran’s experience in college. According to Zoli et al. (2015), 41% of respondents claimed adjusting to civilian culture as the most significant challenge, 23% said they discontinued attending college because of their wellness and/or disability. In attempts to manage stress in their lives, people cling to various coping mechanisms. Whiteman et al. (2011) conducted a study to determine student veterans coping mechanisms compared to their non-veteran counterparts. Their findings indicated that student veterans were using alcohol as a coping mechanism, and their drinking habits were categorized as “binge” or “problem drinking.” The study consisted of 252 students, 54% of which were current service members or veterans from each branch of the U.S. military.

There is limited research on the impact of outdoor adventures like backpacking or outdoor recreation activities on student veterans. However, there are studies on the positive impacts of outdoor recreation on college students’ stress-coping. Chang et al. (2019), studied the impact of a three-day outdoor trip and its impact on the stress level of college students. The study followed 33 participants across three activities: backpacking (16 participants), canoeing (9 participants), and kayaking (8 participants). The study utilized both self-reported stress levels and cortisol levels from saliva samples to determine levels of stress before, during, and after the three-day trip. It found that students reported less stress outdoors than in a classroom setting. The authors concluded that being away from daily hassles such as unwanted social activity, waiting in lines, or running late to obligations allowed them to refocus on themselves.

In a mixed-methods study exploring the effects of a three-day backpacking among cadet women ( $N = 17$ ) at a U.S. military college, Ilagan et al. (2016) found that those who participated in the preparatory workshop series and backpacking event reported decreases in perceived stress ( $p < .05$ ), per pre- and post-test administration of the Perceived Stress Scale (PSS; Cohen et al., 1983; Cohen & Williamson, 1988). The cadets attributed decreases in perceived stress to interpersonal/intrapersonal factors labeled as social (41%), leading (18%), teamwork (12%), reflection (6%), and available help (6%). Decreased stress was also attributed to the wilderness backpacking experience, with comments labeled: physical challenge (24%) and skill acquisition (18%).

### **Outdoor Adventure**

Ribbe et al. (2016) reported that overnight outdoor adventure orientation programs assisted college students in their adaptation to college. Colleges are utilizing wilderness pro-

gramming in increasing numbers to bolster students' sense of connectedness to others and to assist in the transition to college (Bell et al., 2014; O'Connell et al., 2019). Happiness and stress-coping are also variables related to success and well-being in college and have been reported as bolstered among college students who engaged in wilderness backpacking events (Ilagan et al., 2016; Ilagan et al., 2019).

This study was guided and informed by Schlossberg's Transition Theory's 4S Model (situation, self, support, and strategies), which provides a robust framework for viewing student veterans' social support, happiness, and stress coping through a combination of important factors (Griffin & Gilbert, 2015; Schlossberg, 1995). The purpose of this exploratory study was to learn of possible gains in sense of belonging, happiness, and stress-coping for student veterans over a three-day wilderness backpacking event. We endeavored to address two research questions: 1) Following a three-day backpacking trip, will participants report increases in sense of belonging, happiness, and stress-coping at levels significantly greater than non-backpacking peers? 2) What aspects of the backpacking trip will participants attribute to any perceived gains in sense of belonging, happiness, and stress coping?

## Method

This mixed-methods exploratory study was an endeavor to learn of possible gains in sense of belonging, happiness, and stress coping for student veterans over a three-day backpacking trip. Quantitative data were collected via pre- and post-test surveys within 48 hours of the event. The three quantitative data collection instruments employed for pre-and post-trip administration were the Oxford Happiness Questionnaire (OHQ; Argyle et al., 1989), the Sense of Belonging Scale-Revised (SBS; Hoffman et al., 2002), and the Perceived Stress Scale (PSS; Cohen et al., 1983; Cohen & Williamson, 1988). In addition to the quantitative questionnaires, investigators posed nine qualitative prompts in a post-trip interview, within 72 hours of the trip, to better understand the aspects of the experiences that participants attributed to any gains in sense of belonging, happiness, and stress-coping scores.

The investigators received IRB approval from the research site university. Expenses for the backpacking trip were covered by funds administered by the research site institution. The research team did not receive compensation for the event.

The goal of this study was to systematically measure student veterans' self-reported changes in happiness, sense of belonging, and stress-coping, and to analyze participants' attributions of any gains in those variables according to their own categories of meaning. As Johnson and Onwuegbuzie (2004) argue, mixed-methods approaches should "use a method and philosophy that attempt to fit together the insights provided by qualitative and quantitative research into a workable solution" (p. 16). The investigators took a pragmatic approach to data collection and analysis and used mixed methods in order to fully answer each research question.

## Participants

Participants were nine male U.S. veterans who were students at a master's comprehensive granting institution in the southeastern United States. Participants were enrolled in undergraduate and graduate programs and ranged from ages 25 to 32. The participants in the control group (three male undergraduates and one male graduate student), who did not attend the backpacking trip, were selected to match the gender and college level of those in the experimental group (four male veteran undergraduates and one male graduate student).

Additional participant demographics are as follows. Of the nine male participants, eight identified as White and one as Hispanic. The seven undergraduate student veterans represented majors in social studies education, exercise science, computer science, mechanical engineering, business administration (2), and accounting. The two graduate student participants were study-

ing higher education leadership and cyber operations. All but two of the participants had been on either one or two deployments during their service. Before attending their present college, participants served in the USMC (4), USN (3), USA (1), and USNG (1). Their jobs while in the military were field wireman, combat marksman coach, hospital corpsman (2), automotive maintenance technician, aircraft mechanic, nuclear machinist mate, air and missile defense crew-member, crew chief, and senior sniper. Their ranks upon discharge were E-5 (6), E-4 (2), and E-3 (1). The backpacking group had minimal backpacking experience: Zero nights backpacking (3) and one night backpacking (2). Unlike the backpacking group, the control group reported a greater number of nights backpacking: Two nights (1), 15 nights (1), 20 nights (1), and >50 nights (1). When reporting qualitative data, investigators employed pseudonyms to preserve confidentiality.

## Quantitative Method

### *Oxford Happiness Questionnaire*

According to Hills and Argyle (2002), the Oxford Happiness Questionnaire (OHQ) offers a happiness score based on the users' personality traits, cognitive evaluations, and experiences of positive and negative affect. Specifically, the OHQ includes items pertaining to cognitive functions and traits such as sociability, cheerfulness, sense of control, empathy, positive cognition, mental alertness, self-esteem, optimism and physical fitness. While Kashdan (2004) criticized the OHQ for being too broad, the investigators selected the instrument because it was multifaceted and did not over focus on more stable characteristics such as personality factors. The OHQ consists of 29 single items that can be answered on a six-point Likert scale. These items may be easily incorporated into larger questionnaires in random order, and the opportunity has also been taken of reversing about half of the items. These changes from the previous version (OHI) were expected to reduce the probability of contextual and compliant answering (Hills & Argyle, 1998). Split-half reliability was used to examine internal consistency. According to Hills and Argyle (2002), the responses were split into high and low groups above and below the aggregated values for the OHI and OHQ, respectively. The difference between the means of individual item scores were then compared using independent t-tests with respect to the two groups. Statistically significant differences were found between the high and low groups for every item of the OHI and OHQ. Most were highly significant,  $p < .001$ , and all differences were in the same direction as the partitioned total scores. This indicates that all the items on both the OHI and the OHQ make a valid contribution to the measurement of overall happiness.

### *Sense of Belonging Scale*

The 26-item Sense of Belonging Scale (SBS; Hoffman et al., 2002) was used to measure the student veterans' sense of belonging in their college environment. Four subscales included perceived peer support (I have met with classmates outside of class to study for an exam), perceived classroom comfort (I felt comfortable asking a question in class), perceived isolation (I rarely talked to other students in my class), and perceived faculty support (I felt comfortable talking about a problem with faculty). Respondents rated these items using a scale that ranged from 1 to 5, with 1 indicating completely untrue and 5 completely true. Tovar and Simon (2010) conducted a confirmatory factor analysis and reported internal consistency for the three SBS scales and for the entire SBS. Cronbach's coefficients were as follows: Total Sense of Belonging scale = .90 (16 items), perceived faculty understanding/comfort scale = .89 (7 items), perceived peer support scale = .84 (6 items), perceived classroom comfort = .93 (3 items).

### *The Perceived Stress Scale*

The Perceived Stress Scale (PSS; Cohen et al., 1983; Cohen & Williamson, 1988) is a 14-item self-report questionnaire designed to assess the degree to which individuals assess their experiences as difficult to manage and overwhelming. The scale was designed for use among population samples with a minimum junior high school level education. Machulda et al. (1998) reported that the PSS has demonstrated good internal reliability ( $\alpha = 0.84 - 0.86$ , Cohen et al., 1983), as well as adequate concurrent validity correlating ( $r = 0.62$ ) with the Daily Stress Inventory. Persons who score higher on the PSS also tend to report poorer health practices, such as sleeping fewer hours, inadequate nutrition, and consuming greater quantities of alcohol (Cohen & Williamson, 1988).

Data were collected in the REDCap online platform, and descriptive and inferential statistics were computed using SAS version 9.4 (Cary, NC). The researchers were interested in learning if participants receiving the backpacking intervention (backpacking group) would report larger improvements in pre/post sense of belonging, happiness, and stress-coping at levels significantly greater than non-backpacking peers (control group). Therefore, to check for improvement on the three scales of interest—SPS, SBS, OHQ—the mean difference between pre- and post-test scores was computed for the backpacking and control groups. These between group mean pre-post differences between the backpacking and control groups were analyzed using independent samples *t*-tests to estimate 2-sided statistical significance at  $\alpha \leq 0.05$ .

## **Qualitative Method**

Following the backpacking trip, a semi-structured, depth interview format was employed to learn about the experimental group's experiences on the backpacking trip. Follow-up questions were used to probe further on the topics provided. Additional follow-up questions were generated based on participants' responses. Each interview was completed in 30-45 minutes and was conducted within 72 hours of the trip. Interviews were conducted via Zoom by a research team member with no affiliation to the student veterans. The interview questions were as follows:

### Backpacking Trip

1. Why did you choose to attend the backpacking trip?
2. What did you hope to get out of the trip?

### General Questions

3. How have your levels of happiness been influenced by your job throughout the current school year?
4. What have been the most distressing parts of your college experience as a Citadel undergraduate?
5. How would you describe the level of social support/social connectedness you experienced throughout the previous school year?

### Impact of Backpacking Trip

6. What did you like most about this experience?
7. Which elements of the experiences, if any, were most highly related to any changes in your level of happiness?
8. Which elements of the experiences, if any, were most highly related to any changes in your stress-coping?
9. Which elements of the experiences, if any, were most highly related to any changes in your level of social support?

The researchers utilized qualitative case study methods for analyzing interview data ( $n = 5$  participants). Qualitative case study methods allow for analysis of a bounded system that serves as the focus of investigation (Merriam, 1998). Using grounded theory techniques (Strauss & Corbin, 1998), data were analyzed in two coding cycles. In the first coding cycle, or initial cod-

ing of data (Saldaña, 2013), members of the research team first re-read the transcripts. As part of this process, interviews were divided into meaning units (Gee, 2011), so that each unit contained only one unique idea. Members of the research team met to discuss the division of data and to refine the meaning units. In total, there were 101 meaning units across the five interviews. Using descriptive coding (Saldaña, 2013), we identified emergent themes. As we reviewed the data, constant comparative methods (Strauss & Corbin, 1998) enabled us to confirm previously coded themes and to create new codes when new themes emerged. In the second cycle of coding, which involves reorganizing and reanalyzing data to create a systematic understanding of a phenomenon (Saldaña, 2013), axial coding (Strauss & Corbin, 1998) was used to identify the dominant codes, reorganize the data set, and relate themes to sub-themes.

Throughout both coding cycles, members of the research team met to develop a codebook, review agreement on meaning units and codes, refine themes and sub-themes, and code the data in recursive cycles to ensure saturation and that themes were representative of the data. We used several methods to ensure trustworthiness (Elo et al., 2014). Both coding cycles involved multiple members of the research team, including the leader of the backpacking trip, as well as researchers who were not involved in the trips themselves. All researchers engaged in reflection to consider their own positionality, a strategy that can minimize the potential for bias. Finally, in order to provide a thick and rich description of data, a hallmark of qualitative research, participants' voices are included throughout the findings section.

## Procedure

Recruitment for the study occurred after IRB approval and at the beginning of the 2021 summer terms. Invitations for participation were composed by the lead researcher and the veterans services coordinator at the research site institution. Invitations to currently enrolled students were sent via email from the campus' veteran student success center (VSSC). The veterans services coordinator extended a personal invitation to the veterans who visited the VSSC and re-sent the invitation every two weeks. When students responded affirmatively to the invitation, they were placed in the experimental group and enrolled in a brief online course with modules covering (a) gear and packing, (b) outdoor ethics, (c) nutrition and hydration, (d) safety and health, and (e) location and travel logistics. The modules featured ongoing discussion with the two guides who developed the modules. The control group was composed of student veterans who responded to campus email requests to complete the surveys before and after the weekend of the trip.

Staffing for the backpacking trip included two guides with experience leading beginner backpacking excursions who had knowledge of the area for the event. The lead guide was a graduate faculty member at the research site institution, male, was part of the research team for the study, and was not a veteran. Participants were aware that the lead guide was a member of the research team. The lead guide was not involved in survey administration, post-trip interviews, or data analysis. The second guide was a male, USN veteran, who was not on the research team, and was selected by the lead guide based on their previous partnered guiding experiences. Both guides were approximately 25-30 years older than the participants, volunteered for the event, and did not receive compensation.

The backpacking trip required a four-and-a-half-hour drive by van to a primitive back-country area in western North Carolina (NC). The first day of the trip involved hiking 6 miles on moderate to difficult terrain to the designated campsite. Day two included 8 miles of hiking moderate to difficult terrain to a different campsite, and then exploring a system of waterfalls on very difficult terrain. Day three comprised a 2.5-mile hike on easy to moderate terrain to the staged vehicles, a stop for lunch, and a four-and-a-half-hour drive back to campus.



The quantitative instruments were administered via paper on two occasions for experimental and control groups. Both groups completed the electronic pretest materials within 48 hours before departing for the trip. Electronic post-tests were completed within 48 hours after the trip. Qualitative data were gathered via 30- to 40-minute post-trip interviews with the experimental group, conducted within 72 hours of the trip.

## Results

### Quantitative Results

Homogeneity of variance was verified using the Folded F method for all three scales, confirming the use of parametric statistics. Both the backpacking group (-5.00) and control group (-0.25) showed a reduction in perceived stress (PSS) (see Table 1), though an independent samples *t*-test revealed group score differences were not statistically significant,  $t(7) = 1.56$ ,  $p = .163$ . Likewise, on the Sense of Belonging Scale, the backpacking group's score improved (+.35), while the control group's score decreased (-.21); however, these results were not statistically significant,  $t(7) = 2.28$ ,  $p = .056$ . On the other hand, *t*-test results on the Oxford Happiness Questionnaire were statistically significant at  $p < .05$  (see Table 2), indicating the backpacking group's happiness level improved significantly (+.70) as compared to that of the control group, whose score decreased (-.09) over the same period,  $t(7) = 2.80$ ,  $p = .027$ .

**Table 1**  
*Mean Pre-Post Score Difference*

	PSS	SBS	OHQ
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Backpacking Group	-5.00 (5.83)	+.35 (.25)	+.70 (.45)
Control Group	-0.25 (1.71)	-.21 (.47)	-.09 (.38)

*For SBS and OHQ higher is better; for PSS lower is better.*

**Table 2**  
*Independent Samples *t*-tests on between Group Pre-Post Difference*

	<i>df</i>	<i>t</i>	<i>p</i>	<i>d</i>
PSS	7	1.56	.163	1.11
SBS	7	2.28	.056	1.47
OHQ	7	2.80	.027*	1.90

\*Significant at  $p < .05$

## Qualitative Findings

Qualitative analysis showed that backpackers attributed increases in social belonging and happiness to the following elements of the trip: social support, stress coping, physical benefits, and the development of camping skills. The remarks most frequently recorded were around the themes of belonging (bonding, networked knowledge, and emotional support – “camaraderie”) and stress coping (“I just started turning my phone on do not disturb”). Findings are organized into three themes: motivation for attending the backpacking trip, impact of the backpacking trip, and experiences as veteran students (see Table 3).

**Table 3**  
*Themes from Qualitative Interview Analysis*

Theme	Sub-theme	Percentage of Responses ( <i>n</i> = 101)
Trip Motivation	Camping Skills Social Support Stress Coping	12.9% ( <i>n</i> = 13)
Trip Impact	Social Support Stress Coping Physical Benefits Camping Skills	47.5% ( <i>n</i> = 48)
Experiences as a Veteran Student	Lack of Social Support Social Support Adjustment to Civilian Life Academics Balance of Responsibilities	39.6% ( <i>n</i> = 40)

### *Trip Motivation*

The results showed that 12.9% (*n* = 13) of the interview responses related to participants' motivations for attending the backpacking trip. Three participants (Dave, JJ, and Mike) expressed a desire to learn more camping skills and to gain “more of an understanding of where we can go camping around this area.” Both Dave and Mike had never been camping before and saw the backpacking trip as an opportunity to learn new skills; as Dave said, “I’ve never been camping before, though, you know. It was just a unique experience for me and I will take it.”

Dave, JJ, and Mike also described obtaining social support as an additional motivation for attending the trip. Dave hoped to “gain a few, at least one or two friends out of it—people that I can do things with in the future. Like go on more camping trips in the future.” JJ, the veteran services coordinator at the college, expressed the desire to build relationships with other veteran students:

I haven't become closer friends with the veterans, other than just being the guy that helped certify their benefits. You know we all kind of have that unique bond with each other. If you put two random vets in a room, I feel—they'll become best friends. So, this was being able to spend that time outside of a professional setting.

The other two participants, Kyle and Carson, noted that their motivation for attending the backpacking trip was the need for stress coping. Carson saw the trip as a “wake-up call”; as he said, “I need to calm down, I need to let my ego go and just focus on enjoying the trip and not

the destination. It's about the journey." Kyle, a new father, said that the trip represented an opportunity for him to deal with the stress of being a new parent:

I just needed some way of getting out right now. I just had a baby about four months ago and it's been kind of hard for us to leave the house. And I talked to my wife about it and she said, "Yeah, you know you need to go out, you need to go get some fresh air." I'm just going to enjoy myself—just get outside and get some fresh air, go camping, go hiking, just be out doing the outdoors basically.

### ***Trip Impact***

Among the interview responses, 47.5% ( $n = 48$ ) focused on the impact of the backpacking trip in relation to the following sub-themes: social support, stress coping, physical benefits, and camping skills. All five participants described social support as a benefit of the trip. Dave described some initial hesitation about attending, but said he was surprised at how much he and the other participants had in common:

I was really worried about it because I've met other veterans before and a lot of them are—not a lot of them, but the ones that I have met—they don't like to do a lot of the things that I'd like to do. I think I was really surprised with the people that went. Everybody was just really excited to go and have the same kind of reasoning, because they wanted to meet other people. I was meeting new people and then also meeting new people with different sets of skills.

Similarly, JJ reflected, "Looking back at the whole trip, I know it was certainly better, for me, you know just to kind of get away from everything and hang out with like-minded people and just enjoy that company."

Three participants (Ethan, JJ, and Carson) specifically referenced social support in terms of getting to know other veterans. As JJ said,

It almost felt like kind of being back in the service with us as far as the camaraderie. We're just ragging on each other, giving each other a hard time. I hurt my knee and you know they helped pick up my slack.

Carson agreed:

I just felt like we were a unit, an absolute unit. We're just a total package together, I mean. We all came together for each other, the next morning like we're sharing meals with each other. All my shirts were wet and so I was depending on the group. Mike gave me his shirt, a dry shirt. When we came together just gave each other, like support—whatever need came up.

JJ also described how the therapeutic benefits of the trip in relation to his previous experiences:

I guess almost four years now, I had checked myself into the hospital. Before ideation and then getting help on and off. Just talking with these guys—it's like, yeah you know... You connected with someone who has maybe been there as well. It's like, okay, you know you're not alone in this fight. So just having those one-on-ones, we're talking after the first night at like five in the morning, we're getting a fire going, and we're just talking about life. It's just sharing those stories with someone that you really don't know. It brings me comfort. It's like you can't judge me, have this preempted thought about me. Just having that openness and then they kind of reciprocate that with you is—to me, that's therapeutic.

All five participants also referenced benefits of the trip in relation to stress coping. Dave said that leaving his phone at home during the trip helped him "disconnect" socially and was a strategy he began to use after the trip to deal with stress: "I just started turning my phone on do

not disturb and like taking the time to like exercise and stuff but just basically turn my phone off.” Mike agreed: “I think that I would go and do a backpacking trip again. The disconnect is nice—not having to worry about the cell phone and answering any calls or text messages or emails. That is indirectly good for stress.” Similarly, Kyle mentioned that the trip made him recall positive memories of his experience in the military: “It definitely reminded me of my experience in the Marines being able to build a field and just not have a phone on. Just kind of destressing a little bit.”

Four participants (Dave, JJ, Mike, and Kyle) referenced the physical benefits of the trip, including exercise, fresh air, mood, and energy levels. JJ said he could “breathe because we were up in the mountains,” while Mike said that “it felt like my mood and energy levels were not being bogged down.” Dave also noted increases in his energy and said that during the trip, he would “wake up with a little more energy,” which increased his motivation to “exercise more.”

Dave and JJ said that the trip helped them develop camping skills, including techniques and knowledge about camping locations. Both referenced the “wealth of information” shared by both the trip leader and participants, while JJ described the differences between previous camping experiences and the backpacking trip:

I’ve been before, but I didn’t know where to go—to just walk into the woods, instead I ended up staying in like an RV park in a tent. Like, these are the places that you can just walk in and set up a camp and just sleep at night.

### *Experiences as Veteran Students*

Results indicated that 39.6% ( $n = 40$ ) of the interview responses focused on participants’ experiences as veteran students in relation to the following sub-themes: lack of social support, the availability of social support, adjustment to civilian life, academics, and balance of responsibilities. All five backpacking participants reported experiencing moments where they felt a lack of social support during their time at the college. Some specifically noted a disconnect between their experiences as veterans and the experiences of the other students. As Dave said,

I’ve been going to [school name] for two years now. I’ve been trying to find other people with similar interests at the school and getting to know some of the cadets is a little hard because I’m 30 years old, not like 19–20.

Kyle mentioned that the backpacking trip was his “first interaction with veterans from the school,” and that “it can be kind of hard to have any sort of a social support system.”

Four participants (Dave, JJ, Carson, and Mike) described the availability of social support at the college, including clubs, getting to know other students and faculty in classes, and tutoring opportunities. As Carson said, “I’m very close to a lot of the students that are in the computer science department through the cybersecurity club. I’ve been able to meet quite a few of those guys.” Mike also referenced the military environment of the college as being a support:

Since it is a military college, at least a handful of the cadets are going to go. Once they find out, you know either talking to myself or seeing them interact with other veterans, once they kind of find that out, they like to pick our brains, which is good. I enjoy giving them advice and I’m sure the other vets do as well. It’s almost like a mentor type of interaction.

Dave had previously attended another college and said that his choice to attend [school name] related to both the structure and the social support available at the college:

I was going to try it before and it was kind of demotivating since some of the classes were online. Then I went to [school name], where there’s more discipline... It’s one of the biggest things that I’ve missed about the military. I wouldn’t have stayed in, but if I were, that would have been the reason. That social group.

Dave, Carson, and Mike saw the college's military environment as a transition for their adjustments to civilian life. As Carson said,

[School name] is a good little middle ground between getting a job in the workforce and coming out of the military. Doing that transition was hard, but...I wasn't leaving the military entirely. I have this kind of, like a transition bridge to civilian life.

Mike also referenced having "structure" for meeting "tangible" goals as playing a role in his decision to attend the college.

Three participants (Carson, Kyle, and Mike) described their experiences with the academic environment of the college, including relationships with faculty and coursework. As Carson said, "I think the instructors treat veteran students with respect. But, also, that's a double-edged sword, because they don't baby you." Kyle, JJ, and Dave also mentioned their difficulties with learning to balance multiple responsibilities. As Kyle said,

My wife is currently active duty in the Navy right now. It comes down to me watching our baby for the majority of the time, and so, trying to squeeze in being able to study and do homework and such. You know, it can be kind of challenging.

He also mentioned commuting as being a challenge:

When I go up to the school, I drive an hour and a half. Yeah, it's only twice a week, but it's still something that I have to think about because I got to make sure everything's okay here, you know if I have enough time to get up there, get enough time to come back here. It does bring a little bit of stress to me.

## Discussion

Compared to the control group, the student veterans in the backpacking group scored higher (+.70) on happiness as compared to the control group, whose scores decreased slightly (-.09). Results were significant at  $p < .05$ . Backpacking group scores also improved on stress-coping and sense of belonging; however, results were not statistically significant as compared to the control group. Qualitative analysis indicated that the backpackers attributed the increases in social belonging and happiness to the following elements of the trip: social support, stress coping, physical benefits, and camping skills.

The happiness and stress-coping findings from this study are corroborated by two studies that showed that self-reported happiness and stress-coping were bolstered among college students who engaged in three-day wilderness backpacking trips (Ilagan et al., 2016; Ilagan et al., 2019). Those studies employed the same measures (OHQ and PSS) as the present study. The aforementioned findings were from a sample of backpackers at a U.S. military college. However, the studies reported on the experiences of women students, who were not veterans. A study by Chang et al. (2019) also showed that following overnight campus-supported outdoor recreation trips, college students reported decreased stress levels compared to the general stress of campus life.

The findings from the present study also support the results found by Lundberg et al. (2016), who explored the effects of an outdoor recreation program on female U.S. military veterans' stress levels, well-being, and sense of interconnectedness. Those researchers found that outdoor activity provided distraction, redirection, and relief from stress and observed that along with positive emotions, the participants experienced purposeful bonding and a strong sense of connection with each other. College students' sense of well-being is positively associated with educational satisfaction and academic achievement (Al Ansari & Stock, 2010). Happiness, a component of well-being, is positively associated with desirable outcomes like, improved mental and physical health, reduced suicide rates, and overall stress-coping (Lyubomirsky et al., 2005).

As reported by Hornor and Brooks (2022), student veterans frequently report low sense of belonging. This disconnect from other students and the institution can lead to lower rates of educational persistence (Hoffman et al., 2002). Findings from the present study fill an important gap in ways to bolster veteran students' sense of belonging in college. While the literature reveals a lack of studies on using outdoor experience to bolster student veterans' sense of belonging in college, the present study corroborates effectiveness of a study reporting on a five-day outdoor recreation on enhancing the social bonding for a group of female veterans (Lundberg et al., 2016). Also, Ilagan, et al. (2016) found increases in social belonging with a study of women backpackers at a military college.

## Limitations

The applicability of this exploratory study is limited by the small number of participants. A larger sample size would better substantiate our assertion that the student veterans' backing experience contributed to gains in sense of belonging, happiness, and stress-coping. A larger sample size would bolster the statistical power to find differences in quantitative findings. The small sample size could be a function of the COVID-19 pandemic during which the backpacking trip occurred. The sample size may also be related to the study being conducted in the summer semester, when fewer students are enrolled and using their campus email.

Another possible confounding issue is that the experimental group had less backpacking experience than the control group, which could account for their self-selection for the trip. Thus, announcements for a school-sponsored backpacking may be more attractive to those with less or no backpacking experience. The lack of diversity in the sample further compromised generalizability of this study and its contribution to the knowledge base about student veterans and outdoor experience. Finally, the guides speculated that some of the gains from the backpacking experience could be attributed to the nine-hour road trip to and from the backpacking site. The road trip was marked by informal social time with fellow student veterans and included casual conversation, sharing of stories, and enjoying refreshments. Learning about the specific value gained from the road trip, apart from the time in the woods, may yield valuable information about the influence of such experiences on sense of belonging, happiness, and stress-coping.

## Implications for Further Research

The guides and researchers for this project are curious about the dose effects of different trip durations. The nearest mountainous backpacking is four and half hours from the lead researcher's campus. Due to the typical Monday through Friday class schedules of university students, the amount of travel time required makes the trip time-prohibitive for many, since the trip requires missing classes on a Friday and returning late on Sunday. While some researchers have observed and reported benefits from outdoor experiences for college students occurring within 1–50 minutes (Meredith et al, 2020), the literature shows most college outdoor programs being one day or 2–10 days (Andre et al., 2017; Fang et al, 2021).

Another consideration of the dose effects of backpacking trips is the length of time the effects of the excursions are experienced by the participants. Razani et al. (2018), in a randomized trial, found stress reduction benefits declining three months after their participants' forest exposure. Whittington et al. (2016) reported that female participants in outdoor education programs have shown enhanced resiliency for one month after participation. Additional studies on dose effects for outdoor experience would help campus recreation leaders in allocating resources and influencing policies towards outdoor recreation opportunities that are locally based. For instance, engaging in paddle sports and other water-based recreation opportunities near the research site campus.

The investigators of this study also suggest studies that include student veteran backpacking participants in greater numbers than shown in our study. Further, we believe that additional research exploring how specific elements of outdoor experiences may contribute to student veterans' sense of belonging, happiness, and stress-coping gains would make a valuable contribution to the literature. Finally, we propose the exploration of an array of research variables important to the experience of student veterans, such as building camaraderie, social experiences with other veterans, engaging with nature, challenge, and unplugging.

## Implications for Practice

An implication for practice is for institutions of higher education to offer multi-day wilderness backpacking events for student veterans. The case for backpacking events for student veterans is illuminated by the present study. Also, findings from Ilagan et al. (2016), with a sample consisting of students at a U.S. military college, revealed improvements in stress-coping and self-efficacy following a three-day backpacking event. Another study with students at a military college showed gains in happiness after a three-day backpacking trip (Ilagan et al., 2019).

To bolster the implications for universities to adopt outdoor programming, the results from a literature review by Andre et al. (2017) showed institutional benefits which include positive effects on student recruitment, retention, student satisfaction, and opportunities for recreation programs to support and correspond to existing academic programs. Mitten et al. (2018) similarly asserted that for universities, outdoor recreation programs are a low-cost intervention shown to restore attention, decrease depression, and improve immune system functioning and overall emotional health of their students.

## Conclusion

While the number of U.S. military veterans in higher education grows, a knowledge gap exists about the interpersonal and intrapersonal experiences of these students. The present study contributes to the knowledgebase of student veterans and provides outcomes for a small sample of these students who engaged in a three-day backpacking trip. The authors hope that institutions of higher education that serve veteran students will offer opportunities for multi-day outdoor recreation to enhance the coping and psychological well-being of their student veterans.

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