

Flourishing through Resilience: The Impact of a College Outdoor Education Program

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EXECUTIVE SUMMARY: A growing number of industries and organizations are developing initiatives that focus on and prioritize well-being. Among them are institutions of higher education. As Rogers and Lucas (2016) pointed out, “we are increasingly seeing universities around the world take on the challenge of moving beyond only measuring outcomes related to academic and career success and expanding the scope of their responsibility to include students’ well-being and their capacity to build lives of vitality, resilience, purpose, and engagement.” Documented benefits of recreation, and in particular outdoor recreation, are numerous and include physiological benefits as well as an array of mental health benefits, such as reduction in stress and incidence of depressive symptoms, enhanced well-being, and increased peer support (e.g., Maller et al., 2015; Orsega-Smith, Mowen, Payne, & Godbey, 2004; Townsend, Pryor, Brown & St Leger, 2005). Many outdoor education programs are intentionally designed to utilize the myriad inherent physical, emotional, and mental challenges in order to achieve certain desired outcomes such as well-being (e.g., Sibthorp, Paisley, & Gookin, 2007). Participants from this study enrolled in a 13-day college outdoor education program completed a survey to measure resilience and mental health at the start and conclusion of the program. Resilience was measured using Wagnild and Young’s (1993) Resilience Scale (RS), and the Mental Health Continuum Short Form was used to measure the three domains of well-being (Keyes, 2009). A total of 132 participants completed the surveys over the three-year period ($N = 42$ in 2011, $N = 44$ in 2012, and $N = 46$ in 2013). A multivariate analysis of variance (MANOVA) was conducted to determine if participation in the outdoor education program impacted participants’ perceived level of psychological resilience and perceived mental health. Results revealed statistically significant gains from pre-course to post-course on psychological resilience, and the overall mental health well-being measure significantly increased. There is an increased felt need on many college campuses to address student flourishing, resilience, commitment to the university and overall success. In recent years, colleges and universities have sought innovative programming ideas to address these student needs. As budgets tighten and programs undergo greater scrutiny recreation professionals (e.g., outdoor programs, recreation and wellness departments) working on college campus are finding an increasing need

to demonstrate the outcomes of their program success and impact. Likewise, as a profession, we are in need of more evidence-based practice. College programs are in a prime position to use the momentum of the “outdoor interest” to elevate their impact through research and partnerships.

KEYWORDS: *Psychological flourishing, resilience, outdoor education, outdoor recreation*

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Introduction

A growing number of industries and organization are developing initiatives that focus on and prioritize well-being. Among them are institutions of higher education. As Rogers and Lucas (2016) pointed out, “We are increasingly seeing universities around the world take on the challenge of moving beyond only measuring outcomes related to academic and career success and expanding the scope of their responsibility to include students’ well-being and their capacity to build lives of vitality, resilience, purpose, and engagement.” And, who could argue against the importance of that? For many, the college years are an exciting time of substantial growth, exploration of interests and identity, increased independence, and greater responsibility. These years can also be stressful, as students integrate and balance academic demands and new peer-relationships with the life they have always known. According to the 2015 National College Health Assessment (American College Health Association, 2015) over 56% of college students reported feeling “overwhelming anxiety” and nearly 35% reported feeling “so depressed it was difficult to function” at some point in the 12 months prior to completing the survey. According to the same survey, academics (45%), finances (33%), and intimate relationships (30%) were the top three things cited by students as being “traumatic or difficult to handle.” Many students have the resources to effectively cope with the challenges and stresses of college, yet some experience much greater difficulty.

In an effort to provide tools and resources to handle such stresses, increasing attention has been paid to programs that promote positive development rather than merely problem prevention, particularly in adolescents and young adults. Characteristics of these programs include a sense of safety, challenging and interesting activities, a sense of belonging, supportive relationships with adults, involvement in decision-making, opportunities for leadership, and community involvement (e.g., Gambone & Arbretton, 1997; Werner, 1993; Witt & Caldwell, 2005). While no single program has a monopoly on providing such an environment, these characteristics (e.g., working together to achieve a common goal, accomplishing challenging tasks, and practicing leadership in a supportive environment) are notably inherent in many outdoor adventure education programs. Hence, such programs may be aptly suited to facilitate effective coping skills and promote psychological, social and emotional well-being.

Documented benefits of recreation, and in particular outdoor recreation, are numerous and include physiological benefits (e.g., improved cardiovascular fitness) as well as an array of mental health benefits, such as reduction in stress and incidence of depressive symptoms, enhanced subjective well-being, and increased peer/social support (Driver, Brown & Peterson, 1991; Ewert & Kessler, 1996; Wagnild & Young, 1993). Many outdoor education programs are intentionally designed to utilize the myriad inherent physical,

emotional, and mental challenges in order to achieve certain desired outcomes, e.g., self-efficacy, life effectiveness, resilience, and social and psychological well-being (Goldenberg, McAvoy, & Klenosky, 2005; Hattie, Marsh, Neill, & Richards, 1997; McKenzie, 2000; Neill & Dias, 2001; Sibthorp, Paisley, & Gookin, 2007). In fact, more recently college outdoor administrators are becoming responsible for high-impact programs that address student flourishing (Rogers & Lucas, 2016).

In 1999, the U.S. Surgeon General defined mental health as “a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with people, and the ability to adapt to change and to cope with adversity” and stated that “mental health is the spring board of thinking and communication skills, learning emotional growth, resilience and self-esteem.” (U.S. Public Health Service, p. 4). Moving beyond the view of mental health as simply the absence of mental illness, the World Health Organization (2001), defined mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (p. 1). This whole states approach, according to Keyes (2007), is essential to achieving widespread mental health. Moreover, this shift in focus from a purely pathogenic perspective to one that also recognizes a salutogenic approach is especially helpful in understanding the effects outdoor education programs can have on the promotion of health and well-being. Developing an individual’s capacities (e.g., perseverance, optimism) which many outdoor education programs aim to do, can build personal resources that ultimately serve as buffers against life stressors that may negatively impact mental health, including psychological, social, and emotional health. Thus, the purpose of this study was to determine the effects of participation in a compulsory 13-day outdoor education program on college students’ perceived level of psychological resilience and mental (psychological, emotional, and social) health.

Literature Review

This research primarily focused on two outcomes: psychological resilience and flourishing. Resilience, simply stated, is one’s ability to deal with and adapt to stress or adverse circumstances (Wagnild & Young, 1993). By definition then, one’s degree of resilience is developed, at least in part, when one is exposed to stressful situations. Participants in outdoor programs are often presented with unfamiliar and/or uncomfortable situations and asked to approach various physical, social and emotional challenges. In other words, participants are intentionally challenged, which may be perceived as a “stressor” with the goal of achieving a beneficial outcome, often described as personal growth. Resilience literature is wide and growing.

Pioneering longitudinal studies by Werner (1993, 1995) focused on children born into poverty and raised in especially challenging environments, some of which, despite those extreme circumstances became successful adults. Over the past 15–20 years, resilience research has shifted from a focus on static risk factors or deficiencies, such as a lack of supportive others or limited access to important resources (e.g., quality education) to an emphasis on changeable protective factors (e.g., problem-solving skills, caring and meaningful relationships) that promote effective adaptation to one’s environment and foster continued development. Werner concluded that there were three primary areas in which protective factors if operating contributed to an individual’s success later in life: 1) within the individual, characteristics such as sociability and confidence in their own ability; 2) the family, such as the presence of a nurturing caregiver; and 3) the community, such as teachers, caring neighbors, and youth leaders (Werner, 2005).

Resilience may be developed in a number of ways, including building a social support network, setting realistic goals and having opportunities to make decisions (Bernard 1991; Werner, & Smith, 2001). Masten and Reed (2002) argue programs that create mentoring opportunities, encourage prosocial peer relationships, and teach effective coping strategies likely enhance resilience. Outdoor programs are often ripe with opportunities to achieve

goals, build relationships, make decisions to solve problems, and learn to cope with adversity and uncertain situations. Green, Kleiber, and Tarrant (2000) found that youth who participated in a multi-week ropes course program scored significantly higher on eight out of nine protective factors compared to youth who engaged in more traditional recreation activities, such as sports. Findings from a study by Neill and Dias (2001) indicated that Outward Bound participants experienced significant gains in psychological resilience compared to non-participants. Ewert and Yoshino (2008) reported similar findings in their study of a semester-long outdoor adventure program. Thus, there is a small but growing body of literature to suggest that outdoor adventure types of programs may be particularly effective at developing resilience.

Positive psychology, while a relative newcomer to the field of psychology has garnered significant attention over the past 20 years. According to Seligman (as cited in Keyes & Haidt, 2003) two of the long-term aims of positive psychology begin with developing buffers to enhance prevention of depression (and other mental illness) and identifying and building individual strengths. For example, resilient individuals are better able to persevere and cope in times of trouble, thus programs that foster the development of resilience may in turn enhance an individual's overall well-being. Keyes (2003, 2006, 2009) argues for a greater focus on understanding the mechanisms that promote happiness, productivity, and meaning in life, in short, what helps people flourish. He defines flourishing as "a state in which an individual feels positive emotion toward life and is functioning well psychologically and socially...such individuals are filled with emotional vitality and are functioning positively in the private and social realms of their life" (Keyes & Haidt 2003, p. 6).

In developing his model of mental health, Keyes' (2002) identified three domains: emotional, psychological, and social well-being. Emotional well-being refers to one's satisfaction with life and positive affect. Psychological well-being is described as the extent to which people are thriving in their personal life. And lastly, social well-being, is the degree to which people are thriving in their social lives (Keyes, 2009, p.321). Together these domains represent the extent to which an individual is mentally healthy (i.e., flourishing), moderately mentally healthy, or languishing.

A recent study by Mutz and Muller (2016) reported significant mental health benefits for participants in an eight-day outdoor adventure immersion experience in Germany. The young adult participants in the study reported significant gains in life satisfaction, happiness, mindfulness, and self-efficacy and significantly lower perceived stress compared to non-participants. Other studies have looked more closely at college outdoor orientation programs and demonstrate positive impacts on student adjustment, resilience, social support, and well-being (Posey, Hill, Gomez, McFall, Humenik, & Clifford, 2015, Shellman, 2015). Posey et al. found significant differences from the pre- and posttest of the measures on skill transference and resiliency during a four-day outdoor orientation program. These among other studies show promise of college outdoor programs assisting youth in coping with the transitional part of their life. Thus, college administrators ought to become well versed in a variety of ways to develop programs that target these specific outcomes.

To achieve the purpose of this study, the following hypotheses were tested:

H1: Participation in a compulsory outdoor education program will increase college students' perceived level of psychological resilience as measured by the Resilience Scale (Wagnild & Young, 1993)

H2: Participation in a compulsory outdoor education program will increase college students' perceived mental (psychological, emotional, and social) health as measured by the Mental Health Continuum (Keyes, 2009).

Methods

Program

Participants of a 13-day college outdoor education program were asked to complete a survey to measure resilience and mental health at the start and conclusion of the program. This program occurs annually, over a two-week period in May/June and is a required component of the recreation, parks, and leisure studies department degree program at a mid-sized college in Central New York. While many students look forward to this experience with excitement and anticipation, that is not true in every case. Some dread the experience and only participate because it is required to fulfill their degree requirements. The first week of the program follows a residential camp model with a highly structured schedule aimed at building community and developing outdoor skills (e.g., knot tying, tent/tarp set-up, canoeing skills, and orienteering). Students sleep in camp bunk rooms, meals are shared in a large dining hall at scheduled times, and each day begins with a flag raising and ends with an evening program. The second week of the program is expedition-style. Students are divided into trip groups of five to six students led by an experienced outdoor instructor with assistance from a student staff member (typically a student who has previously participated in the program). Trip groups spend six days on a self-contained canoe expedition in the Adirondacks. Most groups hike one or two Adirondack peaks, portage canoes various distances, and camp in a different location each night. The two days spent back in camp after the canoe trip consists mainly of equipment cleanup and de-issue, trip group awards and skit presentation, art project completion, and the final camp banquet.

Data Collection

Data were collected in summer of 2011, 2012, and 2013. Participants were asked to complete both surveys on the first day of the outdoor program and again on the last day of the program. Resilience was measured using Wagnild and Young's (1993) Resilience Scale (RS) which contains 25 items measured on a 7-point Likert scale. The RS has been tested on a wide and diverse sample, including young adults, to assess resilience and demonstrates strong reliability estimates (ranging from .85–.91) and test-retest reliabilities in the .67 to .84 range (O'Neal, 1999; Wagnild & Young, 1993). The scale has also been used to measure resilience of outdoor and adventure education program participants (e.g., Ewert & Yoshino, 2008; Neill & Dias, 2001; Shellman, 2009). In this study, Cronbach alpha for the RS was .90. To assess participants' mental health, the Keyes (2009) Mental Health Continuum Short Form (MHC-SF, 2009) was used. The MHC-SF contains 14 items measuring three domains of well-being: *psychological*, *emotional*, and *social well-being*. Each item is measured on a scale of 0 (never) to 5 (everyday). The MHC-SF can also be used for categorical diagnosis. For example, one may be categorized as *flourishing* (total scores ranging from 47-70), *moderately mentally healthy* (scores ranging from 27-46), or *languishing* (scores ranging from 0-26). The MHC has sound psychometric properties with a Cronbach alpha >.80, and test-retest reliability ranging from .65 to .68 (Keyes, 2006). In the current study Cronbach alpha of .87 was obtained.

Data were entered into SPSS and analyzed using descriptive statistics followed by multivariate analysis of variance (MANOVA). In addition to tests for significant differences between group means, effect sizes were calculated to understand the magnitude of the difference, and hence the degree of the effect of the program.

Results

A total of 132 participants completed the surveys over the three-year period ($N = 42$ in 2011, $N = 44$ in 2012, and $N = 46$ in 2013). After data screening, 132 matched pretest-posttest surveys were retained. Participants ranged in age from 19 to 40 with a mean age of 21.5 years and included 46 (35%) males and 86 (65%) females. Twenty-one participants were over age 22.

A MANOVA was conducted to determine if participation in the outdoor education program impacted participants' perceived level of psychological resilience and perceived mental health. MANOVA results revealed statistically significant gains (+.43) from pre-course ($M = 5.65$, $SD = .66$) to post-course ($M = 6.08$, $SD = .67$) on psychological resilience, $F(1, 262) = 27.52$, $p < .01$. Cohen's d was calculated as a measure of effect size. Findings indicated a medium-large effect with Cohen's $d = .645$ for the resilience measure (Cohen, 1988).

In addition, participant scores on the overall mental health well-being measure significantly increased (+.56) from a mean of 4.06 at pre-test to 4.62 at posttest, $F(1, 262) = 31.89$, $p < .01$ (see Table 1). Again, Cohen's d was calculated as a measure of effect size and findings revealed medium-large a Cohen's d value of .694 for the overall mental health measure (Cohen, 1988). An examination of the subscales indicated all three domains of well-being significantly increased: *Psychological* $F(1, 262) = 22.69$, $p < .01$, $\eta^2 = .080$, *Emotional* $F(1, 262) = 5.66$, $p < .05$, $\eta^2 = .021$, and *Social* $F(1, 262) = 47.40$, $p < .01$, $\eta^2 = .153$. The greatest increase was observed in the social well-being domain with a +23.5% percent change in score from pre- to posttest.

Table 1

Pre- and Posttest Means and Standard Deviations for Mental Continuum Short Form

MHC-SF	Time 1 (pre)		Time 2 (post)		Difference (+/-)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Overall	4.06	.84	4.62	.77	+.56 (13.8%)
Psychological Well-being	4.26	.86	4.74	.77	+.48 (11.3%)
Emotional Well-being	4.55	.99	4.82	.81	+.27 (5.9%)
Social Well-being	3.53	1.04	4.36	.91	+.83 (23.5%)

Based on the calculated partial eta squared, a moderate effect size was found for the psychological well-being subscale, a small effect size for the emotional well-being subscale, and a large effect for the social well-being subscale. No significant gender x time interaction effects were found for psychological resilience, overall mental health or any of the three domains of mental well-being.

The majority, 84.8%, of participants were categorized as *flourishing* at the start of the program, 13.6% ($n = 12$) were categorized as *moderately mentally healthy*, and 1.5% ($n = 2$) were categorized as *languishing* at the pretest (see Table 2). At posttest, the percentage of participants categorized as *flourishing* increased to 95.5% ($n = 126$). Five participants, one of whom started out as such, were categorized as *moderately mentally healthy*, and one of the two participants who began the program in the *languishing* category remained there.

Table 2

Category of Mental Health from Pretest to Posttest

MHC-SF	Time 1 (pre)		Time 2 (post)		Difference (+/-)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
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Social Well-being	3.53	1.04	4.36	.91	+.83 (23.5%)

Discussion and Conclusion

Results of this study are congruent with findings from existing research (e.g., Mutz & Mull, 2016) that has demonstrated the positive effect outdoor programs can have with regard to fostering psychological resilience and mental health and well-being. Although the current study used different assessment measures, similar domains were examined, lending further support to the efficacy of outdoor programs to foster mental health and subjective well-being. Data analyses revealed significant positive gains in resilience and mental health following participation in the two-week outdoor education program. It should be noted that resilience is fostered in environments where one has strong social support. This particular college outdoor program is heavily focused on creating a sense of community, which may also help to explain why the greatest increase, and largest effect size of the three mental health domains was found in the *social well-being* domain. Further research needs to be conducted to determine the longitudinal effects of outdoor education programs such as the one described in this study. Acknowledging this, the researchers plan to conduct a follow-up assessment on the participants described here to help determine lasting impacts on mental health and resilience.

So, of what importance might this information be to administrators of higher education? Too often programs such as this are viewed as “nice, but...perhaps not necessary.” After all, aren’t students in college to gain knowledge and skills to be successful in their career? But if institutions of higher education are “expanding the scope of their responsibility to include students’ well-being and their capacity to build lives of vitality, resilience, purpose, and engagement” as Rogers and Lucas (2016) point out, then one way in which they can effectively do this is through incorporating purposefully planned and intentionally designed outdoor education experiences into the academic curriculum. And, who could argue against the necessity of that?

Limitations and Suggestions for Future Research

Findings of this study are encouraging and lend support for programs that utilize the outdoors and natural environments as a means of promoting positive mental health and well-being. This study was limited to a sample of students enrolled in an academic recreation, parks and leisure studies program. It may be that students drawn to such academic programs are naturally inclined to respond positively to recreating in natural environments. Future studies might attempt to control for this by examining differences among students who participate and those who do not participate in such courses. In this study, where participation is a mandatory degree requirement, the next step may be to compare participants to other students in the academic department who will eventually, but have not yet, participated in the outdoor-based course. It would also be worthwhile to follow-up with participants six months to one year after their experience to determine the durability of the changes observed in the current study. In addition, future research should examine what, if any, effect the outdoor education practicum has on variables such as academic performance or campus and community engagement.

Implications for Practice

There is an increased felt need on many college campuses to address student flourishing, resilience, commitment to the university, and overall success. In recent years, colleges and universities have sought innovative programming ideas to address these student needs. As budgets tighten and programs undergo greater scrutiny recreation professionals (e.g., outdoor programs, recreation and wellness departments) working on college campus are finding an increasing need to demonstrate the outcomes of their program success and impact. Likewise, as a profession, we are in need of more evidence-based practice. College programs are in a prime position to use the momentum of the “outdoor interest” to elevate their impact through research and partnerships.

Some colleges and universities have access to outdoor recreation resources (e.g., climbing walls, outdoor equipment, staff, etc.). However, partnerships can be beneficial to maximizing the success of outdoor programs. For example, partnering with local, state, or

federal parks may be a necessity for access and use of public/government land. Programs may also benefit from partnering with park rangers, interpreters, and other staff to assist in environmental education. Additionally, some parks have concessions that rent outdoor recreation equipment and may require MOUs, sharing of resources, in-kind services, permitting and other items. All of these, done well, could lead to new partnerships with significant reciprocity. For example, such a unique partnership of having interpreters/rangers from the Adirondack State Park offer environmental education for the students in this study (had this been done), could have afforded them to professional networking opportunities. Thus, the possibilities of using the site as an internship or possible career placement could be explored.

Additional implications for practice could be the support and tie to organizations such as the National Recreation and Park Association. NRPA has identified three pillars as part of its outreach: Health and Wellness, Conservation, and Social Equity. College outdoor programs are very much aligned with the pillars and can often assist college administrators with funding, leveraging support/resources, and tying research to practice. To illustrate, through participation in outdoor activities (e.g., hiking), students are engaging in health-promoting behaviors, and by teaching and practicing responsible and ethical use of the outdoors, students are engaging in conservation practices. Finally, social equity may have an unforeseen benefit for international students. College outdoor programs that use a model similar to this study could continue to offer experiences for international students. University outdoor programs have explored adjustment of international students and indicate positive results between leisure pursuits and the transition to a university setting (Gómez, Urzua, & Glass, 2014). Outdoor orientation programs have for years provided evidence of social support of students, and could further leverage this study to international participation.

In closing, it is worth restating the current state of mental health on college campuses in the United States: over one-third of students surveyed reported feeling “so depressed it was difficult to function” (American College Health Association, 2015). This generation of college students may need different supports and resources than previous generations, or perhaps different means of receiving such assistance. The evidence indicates that outdoor programs can be an effective way of helping students develop meaningful relationships and gain skills to cope with adverse or challenging circumstances that many face throughout college. Providing access to such opportunities through recreation programs on campus is one way recreation professionals can make a positive and lasting contribution to the well-being of students nationwide.

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