

After the Plague: Revisiting Experiential and Adventure Education Outcome Variables After Covid-19

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Abstract

Background: The Covid-19 pandemic has changed the way the world works and experiential and adventure education programs are no exception. These changes have significantly affected various outdoor adventure and experiential education (OAEE) programs and will continue to do so in the foreseeable future. **Purpose:** The purpose of this article is to explore changes in outcome variables that may be appropriate for OAEE programs to consider, both during and after the pandemic, with an underlying premise that OAEE programs should reconsider their outcome variables to meet the changing needs of a postpandemic society. **Approach:** Using relevant research literature, outcome variables applicable to a postpandemic society are identified. **Implications:** Outdoor and experiential organizations should consider adapting a broader range of outcome variables in its program offerings to address the changing needs of a postpandemic society.

Keywords

human development, disciplinary frameworks, wilderness settings, settings, emerging adulthood, study community, adolescents, study community, adult education, topics

Introduction

Life has changed radically with the onset of Covid-19 and one place that change is apparent is in those organizations offering educational and recreational opportunities for people in outdoor and experiential settings. A review of the literature presents a

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mixed picture relative to overall impacts. For example, a recent report from the NPD market research group indicates that equipment for three outdoor-related activities has reported significant increases with the emergence of the Covid-19 pandemic. Those activities reporting growth include cycling (63%), paddle sports (56%), bird-watching, and camping (31%; NPD Research, 2020). The report suggested that these increases were due, in part, to the public's desire to engage in activities that it considered safer and more insulated from the Covid-19 virus (Powell, 2020).

When looking at outdoor recreation businesses, however, a slightly different picture emerges. While higher equipment sales for specific forms of recreational equipment have occurred, a report developed by the Outdoor Recreation Industry and Coronavirus (2020) indicated that 69% of the 20 national outdoor recreation trade associations responding to their survey and representing more than 100,000 businesses reported significant and negative impacts from Covid-19. Of the businesses responding to the survey, 79% reported laying off or furloughing a portion of their staff, and 11% indicated they have closed or laid off most or all their staff. In addition, more than 89% of the outdoor industry businesses indicated they have seen a decrease in sales, with 39% indicating a decrease of 50% to 75%.

Actual participation data also present a mixed picture. Despite the crowded trailheads, congested lakes and rivers with various watercrafts, and spike in sales of certain types of equipment, such as stand-up paddleboards, using a "before Covid-19" and an "after Covid-19" qualifier as a comparison measure for more than 1,000 respondents, Rice et al. (2020) reported that the number of outdoor activities commonly associated with outdoor and experiential education have actually decreased in levels of participation. A sample of the activities mentioned in the Rice et al. (2020) study includes backpacking, camping, climbing, downhill and cross-country skiing, flatwater canoeing, kayaking, or rafting. On a more positive note, Rice and his colleagues also reported that more than 66% of the study respondents anticipate returning to levels and types of participation they previously engaged in after the pandemic subsides.

Although the Outdoor Recreation Roundtable as an organization only partially represents those companies and entities involved in experiential and adventure education, the data presented through its survey probably have similar characteristics, including closings and shutdowns (either permanent or temporary), laid off or furloughed employees, questions about safety related to Covid-19, and concerns regarding the future of outdoor adventure and experiential education (OAE) programs.

A recent work by Mitten et al. (2020) examined the effect of Covid-19 on organizations specifically aligned with OAE and found that out of the 34 organizations studied, 40% reported as being closed down, 37% indicated staff reductions, and of the programs that have remained open, 50% have been able to maintain their staffing levels. It is notable that in this study, all the outdoor behavior health (OBH) programs (14) studied reported staying open.

Studies reporting on how the Covid-19 pandemic has affected the OAE field are somewhat limited. Ayotte-Beaudet et al. (2020) examined the impacts on outdoor program operations, Barton (2020) studied the changes in teaching strategies and techniques from the pandemic, and Mackenzie and Goodnow (2020) examined recreation

user trends. In addition, Quay and his colleagues (2020) provided a more intimate and global perspective from 20 outdoor and experiential leaders and instructors on the impact of the virus on a broad variety of OAEE and environmental education programs across the globe.

This article focuses on a different perspective from those previously mentioned, namely, *What outcome variables should OAEE programs and researchers consider promoting and studying following the Covid-19 pandemic?* Given the ability of OAEE programs to positively affect individuals in a variety of ways, including personal growth, social networking, and developing a heightened awareness of personal strengths and abilities, this issue is both timely and appropriate for the programmatic offerings of OAEE as well as future research considerations. Although there are many different types of OAEE programs, this article primarily focuses on those programs that offer multiday and overnight experiences typically involving a small group camping or adventure-based experience and usually operating within a natural and/or outdoor environment under the supervision of experienced staff. The authors begin with a brief overview of the effects that Covid-19 has had on the OAEE field, followed by a sampling of outcome variables that currently, either explicitly or implicitly, are promoted through a variety of OAEE programs. In this article, outcome variables are defined as those specific outcomes that programs or organizations hope will be achieved by their students from participation in that particular program. Following this is a representation of a model that seeks to provide an overview of how these outcome variables are achieved through OAEE, namely, through the use of natural and outdoor environments coupled with effective intentionally designed experiences. The authors then propose a set of outcome variables that would be important for OAEE programs to consider in light of the impact of Covid-19 on societal needs. To date, literature surrounding what outcome variables should be considered and are specific to a post-Covid environment has been extremely limited.

The authors acknowledge two issues: (a) the outcome variables that have traditionally appeared in the literature continue to be both effective and powerful for our students, and (b) other outcome variables beyond those promoted by the authors could also be desirable. We have based our suggestions on a number of recent studies related to the Covid-19 pandemic.

Outcome Variables

Beginning with the salient works of Iida (1975) and Shore (1977), a number of outcome variables commonly associated with OAEE programs have been investigated and include self-systems such as self-awareness and self-concept (Cooley et al., 2014). Other commonly identified variables that have appeared in the research literature involve instilling a sense of personal efficacy and competency, skill mastery, resilience, and grit or perseverance, to name a few (McKenzie, 2003). Table 1 provides a partial listing of several traditionally sought-after outcome variables.

A generalized model is depicted in Figure 1 and describes the process through which many OAEE programs achieve these and other outcome variables. Within this

Table 1. Traditional Outcome Variables of Outdoor Adventure and Experiential Education Programs.

Self-efficacy	Resilience	Skill development
Hardiness	Grit	Determination
Creativity	Competency	Social Support
Social Skill Development	Nature Connectedness	Communication Skills

Note. This table is not a comprehensive list of documented outcome variables.

model, Psycho-Evolutionary Theory (PET), Attention Restoration Theory (ART), and Biophilia provide a backdrop for specific learning opportunities using Intentionally Designed Experiences (IDEs). These IDEs, when combined with selected natural landscapes, can result in outcomes such as a sense of achievement, restoration, empowerment, social support, and resilience. Through these first-order outcomes, several second-order variables emerge such enhancements in self-systems such as self-concept and self-identity, stress reduction, and others, as described in Table 1.

As depicted in Figure 1, Stress Reduction Theory (Ulrich, 1981; Ulrich et al., 1991), Biophilia (Kellert, 1993), and ART (Kaplan, 2001) serve as a theoretical link for understanding the connection between natural landscapes and OAEE experiences. Furthermore, these theories help explain how natural settings can facilitate students for achieving the types of outcome variables desired by program mission statements such as personal self-systems and identity formation. Natural environments also serve as settings to escape the modern stressors of everyday life often exacerbated by the pandemic, thus providing an additional point of consideration as the lockdowns lift and people seek positive and stress-reducing environments. Thus, the combining of natural environments and intentionally designed experiences can provide OAEE programs with a potentially powerful tool for helping students deal with Covid-19-related issues and challenges (see Figure 1).

Post-Covid Variables and Applications

A rapidly developing body of research suggests that the Covid-19 pandemic has resulted in several serious mental health issues. Wang et al. (2020) reported that during the initial phase of the Covid-19 outbreak in China, more than half of the respondents in their study rated the psychological impact as moderate-to-severe, and about one-third reported moderate-to-severe levels of anxiety. What changes, both with programming and research efforts, an OAEE program decides to initiate are dependent on a number of internal and external factors, such as objectives of the program, students attending that program, and instructor skills and experience. We argue in this article that following the Covid-19 pandemic, there will be numerous economic, social, and psychological issues that society and OAEE students will face, and will bring a variety of these issues and concerns to their courses, thus suggesting that various OAEE programs may want to reevaluate their situation.

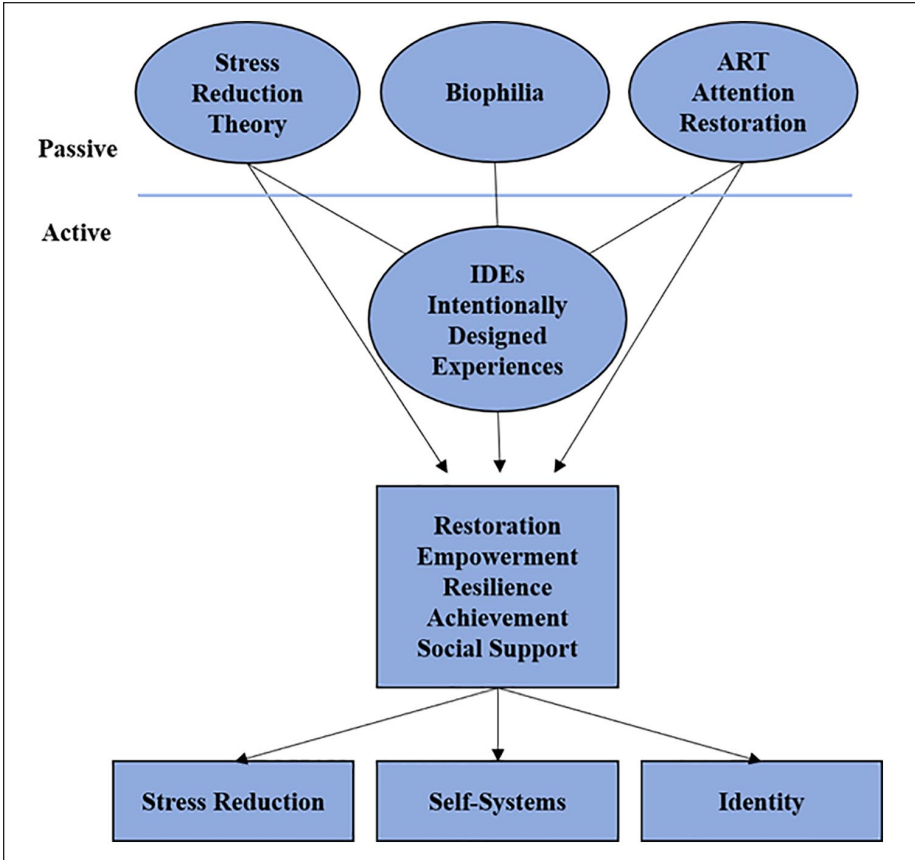


Figure 1. Model linking natural landscapes and IDEs used in OAEE programs.
Source. Adapted from Ewert and Voight (2012).
Note. IDEs = Intentionally Designed Experiences; OAEE = outdoor adventure and experiential education; ART = Attention Restoration Theory.

From this perspective, OAEE can play an important role in helping students cope with post-Covid-19 by focusing on several specific outcome variables. Based on recent research studies, these outcome variables include resilience, dealing with uncertainty, mitigating the effects of anxiety and stress, coping with depression, and reducing a sense of hopelessness/helplessness. The following section discusses these variables and describes various applications that can be useful in OAEE programming. A partial list of potential specific applications and activities is listed in Table 2.

Resilience

Even before the emergence of Covid-19, resilience could be considered one of the most visible and sought-after outcome variables for OAEE programs. Goodman et al.

Table 2. Specific Examples of Activities and Experiences.

Variables	Activities and experiences
Resilience	Mindfulness Focus on values Share feelings in a supportive group Identify personal strengths Progressive challenges Goal-setting activities
Dealing with uncertainty and anxiety	Have students share past successes Develop trust between students Challenge students regarding their need for certainty Use meditation to help students become more tolerate of uncertainty Have students actively deal with their sense of uncertainty
Stress and depression	Exposure to natural settings Use relaxation and autogenics Familiarize students with coping skills Develop social support among group members Provide postcourse methods for students to maintain connection to each other
Hopelessness and helplessness	Focus on a sense of loneliness Instill a sense of positive self-assessment Have students take inventory of positive Utilized a “Strengths-based” approach Develop social support between students

(2020) defined resilience as a type of interactive and dynamic process of adapting, managing, and negotiating adversity. Resilience can also be thought of as an individuals’ ability to “bounce back” or recover quickly from the effects of a stressor, allowing individuals to maintain a more stable and homeostatic psychological equilibrium over time (Bonanno, 2004; Liu et al., 2017). Richardson (2002) suggested three temporal modes of resilience: (a) an increase in functional coping during challenges or adversity, (b) quicker recovery after the exposure to the adversity, and (c) an increased adaptive capacity to deal with the adversity. During the Covid-19 pandemic and afterward, many of our students and staff may experience the need to develop greater levels of resilience, as a mediating factor for their personal lives or their perception of hardships to their family, community, or country (Shaw, 2020).

Applications for developing resilience. Various ways of promoting resilience have been suggested throughout the existing literature. For example, Denkova et al. (2020) found that offering short-term training in mindfulness improved markers of resilience in fire-fighters. Some research has suggested that feelings of empowerment and belonging may help to promote resilience (Oldfield et al., 2020). Through OAEE programs, curriculum is often developed to help students learn how to successfully deal with adversity and enhance personal resilience, through a process of engaging and increasingly

difficult and more complex challenges, structured facilitation, and reflection, which allows students to see their greater potential for dealing with future challenging and adverse situations (e.g., resilience). For example, Gass et al. (2012) encouraged a non-stigmatizing modality that enhances resilience through the development of protective factors such as a supportive group environment.

Ewert and Tessneer (2019) pointed out that many factors inherent in a variety of OAE programs can also play a role in the development of resilience and include weather extremes, fatigue, food, medical problems, intra- and interpersonal conflicts, and goal dilemmas, along with the protective factors of a supportive group, caring instructors, facilitation, and processing events. Also, a sense of loss can interweave many aspects in the lives of many incoming students. Zhai and Du (2020) suggested that recognizing this sense of loss will provide opportunities to develop tailored strategies that facilitate functional adaptation and the enhancement of resilience.

Although many programs have focused on resilience before the pandemic, the current pandemic suggests that well-designed OAE programs that focus on developing resilience can provide ample opportunities for students to meet challenges and achieve success, and bounce back from adversity. How an individual performs on a course during the OAE experiences is similar to how individuals will need to bounce back after the pandemic or other life hardships. Group discussions that focus on how students have bounced back in their lives can be assistive in helping them see how they can do so following the pandemic. In this way, OAE programs can provide opportunities for individuals to practice these skills related to coping and resilience. OAE program administrators should consider how best to facilitate learning and discussions around this idea.

Uncertainty and Anxiety

In a post-Covid-19 world, many students will come to OAE programs with a sense of uncertainty and anxiety. This proliferation of a sense of uncertainty and elevated levels of anxiety can often result in erratic and deep-seated negative behaviors such as withdrawal from family and friends (Hirsh & Kang, 2016). This may be particularly prevalent as everyone, regardless of sociodemographic status, gender, or background, could have been or can be infected. This is especially true as the virus still exists and there is currently no definitive treatment or vaccine. Ho et al. (2020, in press) suggested that the extensive coverage of the media has influenced the public's physical and psychological response to the disease threat, which can often heighten levels of anxiety and a sense of uncertainty. Moreover, many significant psychological issues, including depression, anxiety, panic attacks, somatic symptoms, posttraumatic stress disorder symptoms, delirium, and even self-blame and suicidality, have been associated with younger people (Sim et al., 2010). Younger students are often an important population served by OAE programs. Slovic (2010) talked about aspects of long-term anxiety that can be related to the concept of "dread" or a low-level but long-lasting negative emotional reaction when thinking about a potential hazard such as COVID-19. Many of the students coming into our OAE programs may be experiencing dread as a form of low-grade anxiety as a result of Covid.

Relative to anxiety and Covid-19, a report by Mental Health America (2020) indicated a 634% increase in reported anxiety disorders in 2020. Anxiety disorders often start in adolescence and early adulthood and can show in a variety of ways, including physical, psychological, and behavioral, with Levula et al. (2018) reporting that social networking is an important factor in this development. This coincides with the very age group of which many OAEE operate.

Following the Covid-19 pandemic and applicable to OAEE programs is the presence of generalized anxiety disorder (GAD) in which the primary symptoms are an overwhelming and often unfounded sense of anxiety about things that may go wrong accompanied by one's inability to cope with the issue. Traditionally, people suffering from GAD tend to worry excessively about issues such as their finances, health, family, and work. These and other issues have been exasperated by the pandemic and often remain important concerns for many of our students. Huang and Zhao (2020) recently found that relative to the pandemic, young people expressed higher levels of anxiety than older people, and overthinking about the virus was detrimental to their individual's mental health. GAD often exhibits itself as an intolerance of uncertainty and reduced problem-solving skills, with Lee (2020) also reporting that specific anxiety-related symptoms related to Covid-19 include sleep disturbance, perceptions of incapability, and appetite loss, many of which are often seen on OAEE programs.

Another emerging issue related to the Covid-19 pandemic, and has implications for OAEE programs, is the concept of *health anxiety*. Asmundson and Taylor (2020a, 2020b) reported that health anxiety arises from the misinterpretation of perceived bodily sensations and changes, many of which can be protective in everyday life, such as feeling cold or tired. However, during an outbreak of infectious disease, particularly in the presence of inaccurate or exaggerated information from the media or elsewhere, health anxiety can become excessive. As a result, individuals can misinterpret what is going on with them physically, with complaints and perceived symptoms that do not exist or are exaggerated. For OAEE, this suggests that students in post-Covid may be predisposed to report medical and physical issues that far exceed the rate of reporting these same ailments in the pre-Covid era.

Applications for dealing with uncertainty and anxiety. Recent studies have suggested that Covid-19 can have significant and deleterious effects on an individual's sense of well-being as a result of the effects of anxiety and uncertainty (Mann et al., 2020). Rettie and Daniels (2020) suggested there should be a focus on providing resources to encourage and equip individuals with the use of adaptive coping strategies such as acceptance and seeking appropriate levels of support. At the same time, attempts to discourage the use of maladaptive coping strategies such as denial and self-destruction during times of uncertainty and anxiety are also helpful in OAEE programs facilitating students in learning how to cope with uncertainty and anxiety. A supportive social group, facilitated instruction, and progressive challenges all make for ideal scenarios for one to practice these types of coping skills. In addition, weather, route finding, and being out of one's "comfort zone" all contribute to a state of cognitive dissonance for students in an OAEE setting. This cognitive dissonance can be dealt with by training,

practice, and supportive staff. In turn, these three factors can turn something that produces anxiety (cognitive dissonance) into a learning situation that can lead to a sense of competence and the ability to cope with that anxiety, both during the course and afterward. Moreover, these types of experiences can provide students with proactive practices in dealing with a sense of uncertainty and the resultant heightened levels of anxiety in a post-Covid-19 society.

OAAE programs can also provide a sense of escape which is important for both reductions in perceived levels of stress and anxiety reduction. Removing students from their everyday environment and using both natural settings and intentionally designed programs can allow them to get a break from the worries of everyday life post-Covid-19 (Ewert & Chang, 2018). This is in addition to the usual health and mental wellness benefits that often occur in OAAE types of programs.

Stress

Emerging evidence suggests rates of posttraumatic and psychological stress in the general population are elevated due to Covid-19. Cooke et al. (2020) reported that nearly one in four adults having experienced significant stress due to the Covid-19 pandemic. Beyond the stresses inherent in the illness itself, factors such as stay-at-home orders, quarantine, and isolation, economic uncertainty, and the lack of a vaccine raise concerns about how people will react individually and collectively to Covid-19. A recent review of quarantined people and health care providers is instructive in revealing several detrimental emotional outcomes, including stress, depression, irritability, insomnia, fear, confusion, anger, frustration, boredom, and the stigma associated with quarantine, some of which persisted after the quarantine was lifted (Pfefferbaum & North, 2020). Stress represents the dichotomy between individual resources and specific demands that can result in the development of several undesirable physiological, psychological, behavioral, or social outcomes (Ewert & Chang, 2018). It seems reasonable that students attending a post-Covid-19 OAAE program will often arrive with elevated levels of stress from what has happened to them during the pandemic, the threat of potential infection, and what the future holds for them following the virus. These are in addition to the usual sources of anxiety students with which the students arrive at OAAE programs. These concerns can be present in the OAAE staff as well; a group that is often overlooked as organizations develop plans for dealing with the Covid-19 pandemic.

Applications for dealing with stress. Because of the unique social and natural environments that students and staff in OAAE programs often operate in, instructors often get a very up-close perspective of their students. However, there are certain elements that practitioners may want to build into their experiences to further reduce stress and, more importantly, teach students skills for stress management after they depart from their OAAE course. There are many solutions for stress management that can be built into the OAAE experience, including yoga, mindfulness exercises, and guided meditation, all of which have been shown to help reduce stress (Pascoe et al., 2017).

Relatedly, specific skill-building sessions on how to handle the stress of a postpandemic world might help equip individuals for dealing with newfound stressors (see Table 2).

For example, individuals with a previous history of suicidal thoughts, panic and stress disorder, low self-esteem, and low self-worth are easily susceptible to catastrophic thinking like suicide (Thaker & Jain, 2020). They also suggest that solution and emotion-focused coping techniques were useful in emotional and behavioral problems associated with the pandemic. Contrary to this, maladaptive coping techniques for stress, such as self-denial or a belief in self-care, were positively associated with adjustment problems. This suggests that OAEE instructors need to be sensitive to the messages that post-Covid students may be sending, keeping in mind that although the pandemic might be over, the effects are not. Once again, establishing a focused dialogue with students regarding the ways they deal with the stress in their lives is a powerful tool that OAEE instructors and staff have at their disposal.

Depression

One comorbidity often related to stress is the presence of depression. Like stress, given the psychological issues that students can bring with them to an OAEE program, depression can be present in a variety of ways. Defined as a mental disorder that can last for at least 2 weeks and affects a person's ability to work, carry out activities of daily living (ADLs), or engage in satisfying personal relationships (Mental Health and First Aid Workshop, 2013), depression in an OAEE setting may present itself in the following ways: loss of enjoyment and interest, difficulty in focus and making decisions, lack of energy, and sleeping difficulties. Salari and colleagues (2020) pointed out that while aging increases the risk of Covid-19 infection and mortality, the levels of anxiety, depression, and stress are significantly higher in the age group of 21 to 40 years. They suggest that one main reason for this seems to be that this age group is concerned over the future consequences and economic challenges caused by the pandemic and is, therefore, more affected by business closures and loss of income.

Applications for dealing with depression. As Figure 1 illustrates, because most OAEE programs utilize some component of the natural environment, these programs can be inherently stress-reducing. There is also a variety of interpersonal skills that can combat stress and depression that practitioners could incorporate into their OAEE experience. For example, inventorying one's equipment might be a good way to teach students how to develop lists and stay organized, which can lead to lower stress levels and subsequent depression (Stahl & Goldstein, 2019). Kyriakopoulos (2011) reported that OAEE types of programs can be useful in helping individuals dealing with issues such as depression through four ways: enhancing intrapersonal relationships, improving interpersonal relationships, providing an experiential outdoor venue for achieving therapeutic change, and offering a secure personal place for achieving inner healing. Once again, the natural and outdoor environment coupled with intentionally designed

programs can provide an effective milieu for dealing with mental health issues such as depression.

Hopelessness and Helplessness

Often, a comorbidity factor associated with depression is a sense of hopelessness. Shea and Hurley (1964) defined hopelessness as “the feeling that any effort aimed at constructive change . . . is doomed before it is even attempted” (p. 32). They also defined the related term of helplessness as “the conviction that everything that can be done has been done, which results in an inability to mobilize energy and effort.” Scioli and Biller (2009) listed nine types of hopelessness, of which three have direct connections to OAE programming. These include (a) a feeling that the student cannot live safely in the world, (b) limitedness or a sense of failed mastery, and (c) powerlessness or the feeling that one is incapable of navigating one’s way toward desired goals. Given the characteristics associated with the Covid-19 pandemic (e.g., invisible threat, widespread infection, and the continuing expanding nature of the pandemic), it is easy to see how our students could arrive at our programs with a sense that there is nothing they can do about the virus, and feeling like they will inevitably contract the virus.

Applications for ameliorating a sense of hopelessness and helplessness. Variables that impact an individual’s “mental toughness” like hardiness and resilience are two defenses against feelings of stress and depression (Pusch & Dobson, 2017). OAE programs can be ideally positioned to help students develop these types of traits through progressive challenges in programming and meaning-making sessions with skilled facilitators that specifically focus on variables such as feeling of hopelessness and helplessness (McKenzie, 2003). Practitioners, instructors, or counselors may want to utilize a more intentional approach such as having specific goal-setting sessions where students practice making achievable goals for dealing with hopelessness and helplessness (Peterson & Seligman, 1983). In addition, a supportive group and trusted staff are critical in helping students deal with these feelings. Furthermore, as with other outcome variables, ceremonies and other types of celebration can reinforce the beliefs that students have regarding their self-efficacy in overcoming feelings of hopelessness and helplessness.

Overall implications for selected outcome variables. Course design is of paramount importance when factoring in these variables. Starting small with attainable physical, social, and emotional goals will help students find success and limit early dismissals. Practitioners will want to build in scenarios where students can succeed at something early in the course. This will help boost a sense of competence and enhance a sense of mental toughness. Conversely, a course that is too easy and does not provide appropriate challenges can be less effective for students learning what they are capable of. Practitioners should examine their courses and the design and be flexible for various student ages, abilities, and expectations. This will be of utmost importance in postpandemic programming.

In addition, as previously described, social support is a primary moderating variable for feelings of depression and anxiety. Studies have suggested that OAEF programs can be highly effective in the development of social support and social connectedness (Scarf et al., 2017). Special attention should be given at the start of the course to facilitate group cohesion and reduce feelings of anxiety. That may mean rethinking overly ambitious itineraries or providing more time and energy for team-building and/or confidence-building types of activities. Also, hiring and training staff who can develop activities for dealing with variables such as resilience, anxiety, and depression are going to be all the more important in a postpandemic era of programming.

Discussion

In a post-Covid-19 world, OAEF businesses and programs should consider the strategies, tactics, and policies they need to change to stay relevant and increase their effectiveness in achieving their missions. This article attempts to provide some ideas for thinking about this shift, particularly as they relate to outcome variables. Although not exhaustive, the authors view these actions as important to promoting the OAEF field and the research done in this field. Furthermore, this time in our history is a unique opportunity for OAEF programs to provide a unique service in helping the world adjust to postpandemic norms.

First, this change starts with the field instructor. The individuals delivering the mission of the OAEF program need to be cognizant of the unique challenges occurring in our world and how their programs can connect with these issues. Having meaningful discussions about the students' feelings and how they specifically dealt with the pandemic will be imperative for helping students connect learnings from the course to the postpandemic world. Research shows that connection to other people who have had similar experiences and have had to cope in similar ways is a powerful therapy and leaves individuals with enhanced coping abilities (Bougard et al., 2016; Wesner et al., 2019). To see that their peers on the course also struggled in similar ways and had to deal with the same hardships can provide powerful and healing experiences that should be nurtured in our postpandemic programming.

In addition, the training and development of field staff's behavioral and emotional health care practices need to be reconsidered. Training that primarily focuses on techniques for dealing specifically with virus mitigation will challenge administrators to balance staff training with a tendency to focus on pandemic mitigation versus mental health and wellness training. Instructors and staff will be asked to handle complex social and emotional health issues and will need training and resources commensurate with this need. Enhancing staff training by facilitating discussions around dealing with the multitude of effects from the pandemic (e.g., anxiety, depression, helplessness, uncertainty, and resilience) and then using experiential activities will promote the ability of our students to effectively deal with the challenges they face.

In addition, program administrators should consider adopting policies and procedures to handle both the pandemic and psychological aftermath at both the student and

staff level. Beyond specific considerations for hygiene (not in the scope of this article), administrators, in particular, should consider the hardships that staff have to deal with, both professionally and personally. The pandemic affects our staff and instructors in a variety of ways, including working with students in the field, living at base camps, and the threat of Covid in their own lives. Social isolation, being stuck indoors, lack of physical touch, and restricted access to exercise facilities are all hardships that individuals have had to endure during the pandemic. Lessons on dealing with these topics would go far for combating future crises with the students. For example, how to stay positive through meditation or mindfulness while an individual is required to stay indoors, indoor yoga routines for physical health, and how to stay socially connected while at home may all be lessons OAEE programs should incorporate in courses to help during any future lockdowns.

Administrative staff would also do well to implement a program-wide support structure for positive mental health and wellness promotion within their staff and instructors. Strategies, such as Positive Behavioral Interventions and Supports (Sugai & Horner, 2020), promote preventive and anticipatory practices to assuage mental health and wellness incidents before they happen at school and, by extension, experiential education programs (Davidson & Meier, 2020). By focusing on implementing these proven strategies, administrators can structure their programs to prevent mental and behavioral health incidents and strengthen their ability to respond appropriately, should they occur, even after preventive measures.

OAEE programs have the unique ability to enhance students' view of how their actions and behaviors can impact, both themselves and society. A virus that originates in China and then spreads across the globe in only a few short weeks is difficult to comprehend or even visualize. By enhancing our students' understanding of how society affects them and vice versa, OAEE programs can help provide valuable perspectives on how an individual's action can have community and worldwide implications (wearing a mask, physical distancing, etc.).

Finally, researchers can provide an important service to OAEE by helping develop a better understanding of the outcome variables described earlier that are integral to the student experience. Questions involving research could include the following: (a) Can OAEE programs enhance variables such as resilience and mitigate variables such as depression or anxiety? (b) Are there other outcome variables that are emerging that need to be considered by OAEE? and (c) How can the OAEE field better integrate with other fields that are also involved with helping people deal with the pandemic? Providing a challenging but safe environment, positive social connections, and an emphasis on self-empowerment, OAEE programs can be an integral part of the solution for how we move forward after this pandemic and, more importantly, how we build a healthy, robust citizenry more capable of coping with the next global crisis. The challenges for OAEE programs, such as cost and access to public lands, still exist and will have to be dealt with. But individuals can experience significant benefits from participation in OAEE programs, provided that these programs can meet the new and evolving needs of those we serve.

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References

- Asmundson, G., & Taylor, S. (2020a). Coronaphobia: Fear and the 2019-nCoV outbreak. *Journal of Anxiety Disorders*, 70, 102196. <https://doi.org/10.1016/j.janxdis.2020.102196>
- Asmundson, G., & Taylor, S. (2020b). How health anxiety influences responses to viral outbreaks like COVID-19: What all decision-makers, health authorities, and health care professionals need to know. *Journal of Anxiety Disorders*, 71(2020), 102211.
- Ayotte-Beaudet, J. P., Beaudry, M. C., Bisailon, V., & Cordeau, P. (2020). *Outdoor classes in Higher Education during the context of Covid-19 in Canada: Guide to support management during the first phases of implementation*. <https://eduq.info/xmlui/bitstream/handle/11515/37932/outdoor-classes%20-fabriqueREL-USherbrooke-2020.pdf?sequence=2>
- Barton, D. C. (2020). Impacts of the COVID-19 pandemic on field instruction and remote teaching alternatives: Results from a survey of instructors. *Ecology & Evolution*, 10, 12499–12507. <https://doi.org/10.1002/ece3.6628>
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59(1), 20–28. <https://doi.org/10.1037/0003-066X.59.1.20>
- Bougard, K. G., Laupola, T. M. T., Parker-Dias, J., Creekmore, J., & Stangland, S. (2016). Turning the tides: Coping with trauma and addiction through residential adolescent group therapy. *Journal of Child and Adolescent Psychiatric Nursing*, 29(4), 196–206. <https://doi.org/10.1111/jcap.12164>
- Cooke, J. E., Eirich, R., Racine, N., & Madigan, S. (2020). Prevalence of posttraumatic and general psychological stress during COVID-19: A rapid review and meta-analysis. *Psychiatry Research*, 292, 113347. <https://doi.org/10.1016/j.psychres.2020.113347>
- Cooley, S., Holland, M., Cummings, J., Novakovic, E., & Burns, V. (2014). Introducing the use of a semi-structured video diary room to investigate students' learning experiences during an outdoor adventure education groupwork skills course. *Higher Education*, 67(1), 105–121.
- Davidson, C., & Meier, B. (2020). *Positive behavioral interventions and supports* [Conference session]. Association for Experiential Education, Virtual conference. <https://aeconference.com/>
- Denkova, E., Zanesco, A. P., Rogers, S. L., & Jha, A. P. (2020). Is resilience trainable? An initial study comparing mindfulness and relaxation training in firefighters. *Psychiatry Research*, 285, 112794.

- Ewert, A., & Chang, Y. (2018). Levels of nature and stress response. *Behavioral Sciences*, 8, 49. <https://doi.org/10.3390/bs8050049>
- Ewert, A., & Tessneer, S. (2019). Psychological resilience and posttraumatic growth: An exploratory analysis. *Journal of Experiential Education*, 42(3), 280–296. <https://doi.org/10.1177/1053825919859027>
- Ewert, A., & Voight, A. (2012). The role of adventure education in enhancing health-related variables. *International Journal of Health, Wellness and Society*, 2(1), 75–87.
- Gass, M. A., Gillis, H. L., & Russell, K. C. (2012). *Adventure therapy: Theory, research, and practice*. Routledge.
- Goodman, D. J., Saunders, E. C., & Wolff, K. B. (2020). In their own words: A qualitative study of factors promoting resilience and recovery among postpartum women with opioid use disorders. *BMC Pregnancy and Childbirth*, 20(1), Article 178.
- Hirsh, J. B., & Kang, S. K. (2016). Mechanisms of identifying conflict: Uncertainty, anxiety, and the behavioral inhibition system. *Personality and Social Psychology Review*, 20(3), 223–244. <https://doi.org/10.1177/1088868315589475>
- Ho, C., Chee, C., & Ho, R. (2020). Mental health strategies to combat the psychological impact of COVID-19: Beyond paranoia and panic. *ANNALS Academy of Medicine Singapore*, 16, 155–160.
- Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: A web-based cross-sectional survey. *Psychiatry Research*, 288. <https://doi.org/10.1016/j.psychres.2020.112954>
- Iida, M. (1975). Adventure oriented programs: A review of research. In B. Van der Smissen (Ed.), *Research and Camping and Environmental Education* (pp. 219–237). *Proceedings from the National Research Workshop, Pennsylvania State University*.
- Kaplan, R. (2001). The nature of the view from home: Psychological benefits. *Environment and Behavior*, 33(4), 507–542.
- Kellert, S. (1993). The biological basis for human values of nature. In S. Kellert & E. O. Wilson (Eds.), *The Biophilia hypothesis* (pp. 42–69). Island Press.
- Kyriakopoulos, A. (2011). How individuals with self-reported anxiety and depression experienced a combination of individual counselling with an adventurous outdoor experience: A qualitative evaluation. *Counselling & Psychotherapy Research*, 11(2), 120–128. <https://doi.org/10.1080/14733145.2010.485696>
- Lee, S. A. (2020). Coronavirus Anxiety Scale: A brief mental health screener for COVID-19 related anxiety. *Death Studies*, 44(7), 393–401. <https://doi.org/10.1080/07481187.2020.1748481>
- Levula, A., Harré, M., & Wilson, A. (2018). The association between social network factors with depression and anxiety at different life stages. *Community Mental Health Journal*, 54, 842–854. <https://doi.org/10.1007/s10597-017-0195-7>
- Liu, J., Reed, M., & Girard, T. (2017). Advancing resilience: An integrative, multi-system model of resilience. *Personality and Individual Differences*, 111, 111–118. <https://doi.org/10.1016/j.paid.2017.02.007>
- Mackenzie, S., & Goodnow, J. (2020). Adventure in the age of COVID-19: Embracing micro-adventures and localism in a post-pandemic world. *Leisure Sciences*. <https://doi.org/10.1080/01490400.2020.1773984>
- Mann, F. D., Krueger, R. F., & Vohs, K. D. (2020). Personal economic anxiety in response to COVID-19. *Personality and Individual Differences*, 167, 110233.
- McKenzie, M. (2003). Beyond the outward bound process: Rethinking student learning. *Journal of Experiential Education*, 26(1), 8–23.

- Mental Health America. (2020). *Covid-19 and mental health: A growing crisis*. <https://mhanational.org/research-reports/covid-19-and-mental-health-growing-crisis>
- Mental Health and First Aid Workshop. (2013). *Mental first aid*. Bloomington, Indiana, June, 2019.
- Mitten, D., Leonard, A., Lieberman-Raridon, K., & Ewert, A. (2020). *360 risk management: Impacts of the coronavirus 2019 pandemic on outdoor and adventure education organizations*. In C. Dallat & J. Jackson (Eds.), *Proceedings of the 2nd Annual Adventure Risk Research Symposium. Wilderness Risk Management Conference*.
- NPD Research. (2020, August 25). *Outlook for the U.S. Sports industry* [Report from the NPD.com].
- Oldfield, J., Stevenson, A., & Ortiz, E. (2020). Promoting resilience in street connected young people In Guatemala: The role of psychological and educational protective factors. *Journal of Community Psychology*, 48(2), 590–604.
- Outdoor Recreation Industry and Coronavirus. (2020). *Outdoor recreation industry and Coronavirus*. Outdoor Recreation Roundtable. Web. 29 September. 2020.
- Pascoe, M., Thompson, D., & Ski, C. (2017). Yoga, mindfulness-based stress reduction and stress-related physiological measures: A meta-analysis. *Psychoneuroendocrinology*, 86, 152–168. <https://doi.org/10.1016/j.psyneuen.2017.08.008>
- Peterson, C., & Seligman, M. (1983). Learned helplessness and victimization. *Journal of Social Issues*, 39(2), 103–116.
- Pfefferbaum, B., & North, C. S. (2020). Mental health and the COVID-19 pandemic. *The New England Journal of Medicine*, 383, 510–512. <https://doi.org/10.1056/NEJMp2008017>
- Powell, M. (2020, August 25). *Sneakernomics: Second half predictions for U.S. Sports Retail*. <https://www.npd.com/wps/portal/npd/us/blog/2021/sneakernomics-2021-outlook-for-sports-retail/>
- Pusch, D., & Dobson, K. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child Abuse and Neglect*, 64, 89–100. <https://doi.org/10.1016/j.chiabu.2016.12.012>
- Quay, J., Gray, T., Thomas, G., Allen-Craig, S., Asfeldt, M., Andkjaer, S., . . . Foley, D. (2020). What future/s for outdoor and environmental education in a world that has contended with COVID-19? *Journal of Outdoor and Environmental Education*, 23, 93–117. <https://doi.org/10.1007/s42322-020-00059-2>
- Rettie, H., & Daniels, J. (2020). Coping and tolerance of uncertainty: Predictors and mediators of mental health during the COVID-19 pandemic. *American Psychologist*. Advance online publication. <http://dx.doi.org/10.1037/amp0000710>
- Rice, W. L., Meyer, C., Lawhon, B., Taff, B. D., Mateer, T., Reigner, N., & Newman, P. (2020, April 18). The COVID-19 pandemic is changing the way people recreate outdoors: Preliminary report on a national survey of outdoor enthusiasts amid the COVID-pandemic. <https://doi.org/10.31235/osf.io/prnz9>
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58(3), 307–321.
- Salari, N., Hosseini-Far, A., Jalali, R., Vaisi-Raygani, A., Rasoulpoor, S., Mohammadi, M., . . . Khaledi-Paveh, B. (2020). Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: A systematic review and meta-analysis. *Global Health*, 16, Article 57. <https://doi.org/10.1186/s12992-020-00589-w>
- Scarf, D., Hayhurst, J. G., Riodan, B. C., Boyes, M., Ruffman, T., & Hunter, J. A. (2017). Increasing resilience in adolescents: The importance of social connectedness in adventure education programmes. *Australasian Psychiatry*, 25(2), 154–156. <https://doi.org/10.1177/1039856216671668>

- Scioli, A., & Biller, H. B. (2009). *Hope in the age of anxiety*. Oxford University Press.
- Shaw, S. C. K. (2020). Hopelessness, helplessness and resilience: The importance of safeguarding our trainees' mental wellbeing during the COVID-19 pandemic. *Nurse Education and Practice*, 44, 102780. <https://doi.org/10.1016/j.nepr.2020.102780>
- Shea, F., & Hurley, E. (1964). Hopelessness and helplessness. *Perspectives of Psychiatric Care*, 2(1), 32–38.
- Shore, A. (1977). *Outward bound: A reference volume*. Topp Litho.
- Sim, K., Huak, C. Y., Chong, P. N., Chua, H. C., & Wen Soon, S. (2010). Psychosocial and coping responses within the community health care setting towards a national outbreak of an infectious disease. *Journal of Psychosomatic Research*, 68, 195–202.
- Slovic, P. (2010). *The feeling of risk: New perspectives on risk perception*. Earthscan.
- Stahl, B., & Goldstein, E. (2019). *A mindfulness-based stress reduction workbook*. New Harbinger. <https://books.google.com/books?hl=en&lr=&id=XHInDwAAQBAJ&oi=fnd&pg=PT12&dq=personal+organization++and+stress+reduction&ots=ECI9PSqKcL&sig=fEoXpFZIY9EMkzADA0F7bLbEOaA>
- Sugai, G., & Horner, R. H. (2020). Sustaining and scaling positive behavioral interventions and supports: Implementation drivers, outcomes, and considerations. *Exceptional Children*, 86(2), 120–136.
- Thaker, V., & Jain, A. (2020). Perceived stress, coping, and adjustment in adolescents. *Journal of Adolescent Health*, 38(4), 409–415. <https://www.sciencedirect.com/science/journal/1054139X>
- Ulrich, R. (1981). Natural versus urban scenes: Some psychophysiological effects. *Environment and Behavior*, 13(5), 523–556.
- Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A., & Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology*, 11, 201–230.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, Y., Ho, C. S., & Ho, R. C. (2020). Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *International Journal of Environmental Research and Public Health*, 17(5), Article 1729. <https://doi.org/10.3390/ijerph17051729>
- Wesner, A. C., Behenck, A., Finkler, D., Beria, P., Guimarães, L. S., Manfro, G. G., & Heldt, E. (2019). Resilience and coping strategies in cognitive behavioral group therapy for patients with panic disorder. *Archives of Psychiatric Nursing*, 33(4), 428–433. <https://doi.org/10.1016/j.apnu.2019.06.003>
- Zhai, Y., & Du, X. (2020). Loss and grief amidst COVID-19: A path to adaptation and resilience. *Brain, Behavior, and Immunity*, 87, 80–81. <https://doi.org/10.1016/j.bbi.2020.04.053>

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