The Queers Are Here: LGBTQ+ Young Adults' Mental Health Outcomes in Wilderness Therapy

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Abstract

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Wilderness therapy is an emerging treatment modality that integrates nature with evidence-based therapeutic treatments (Russell, 2001). A growing body of literature continues to support its effectiveness with adolescents and young adults (Bowen & Neill, 2013; Curtis et al., 2018; Hoag et al., 2013); however, little research has been conducted on the experiences of its LGBTQIAP+ ("queer") participants. Such an absence is noteworthy because the percentage of queer wilderness therapy students might be as high as 18% (Wright et al., 2017) and given that queer individuals experience minority stress (Meyer, 2003), which is correlated with negative psychological outcomes (Baams et al., 2015; Mereish et al., 2019; Tebbe & Moradi, 2016). This dissertation fills the gap in the literature by using pre-existing data collected by the Outdoor Behavioral Healthcare Council (OBHC) and the National Association for Therapeutic Schools and Programs (NATSAP) to examine the mental health outcomes of young adult (ages 18-25) wilderness therapy students using the Outcomes Questionnaire 45.2 (OQ 45.2; Lambert & Burlingame, 1996). With a sample of 379 queer and non-queer wilderness therapy graduates, this study found that queer young adults' intake OQ 45.2 scores were statistically similar to those of straight young adults. It was also found that queer young adults' OQ 45.2 discharge scores were statistically significantly lower than their intake scores, indicating a reduction in psychological distress. This dissertation also examined preliminary post-wilderness therapy data, interpreted all results as they relate to clinical work and research, and concluded by offering next steps for treating queer young adults enrolled in wilderness therapy programs.

Table of Contents

Acknowledgments

First and foremost, this dissertation is for the millions of LGBTQ+ people in the US. Somehow, the world keeps knocking us down, and somehow, we keep getting back up.

Second, this dissertation is for the adolescents and young adults who, in this very moment, are searching for themselves in the vastness of the wilderness, and who are confronting their fears in ways we can only imagine.

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Chapter I: Introduction

Examining the Specific Needs of Queer Populations

There have been recent significant strides in lesbian, gay, bisexual, transgender, queer, intersex, asexual, and pansexual community LGBTQIAP+ (herein referred to as "queer") people's rights in the United States (US), such as Obergefell v. Hodges (2015), the landmark Supreme Court case that legalized same-sex marriage. Queer representation also continues to proliferate the media with figures such as Jari Jones, a fat, Black trans woman featured on billboards across New York City as part of Calvin Klein's 2020 Pride Campaign (Rivas, 2020) and the "Fab 5" on Netflix's reality show Queer Eye, all five of whom are openly queer (Bonner & Uy, 2020). Despite legal victories and increased representation, queer individuals continue to experience adverse social and societal conditions. Indeed, discrimination based upon sexual orientation and gender identity remains rampant and takes many forms, including employment discrimination, hate crimes, and sexual assault (Brewster et al., 2014; Herek, 2009; Rothman et al., 2011; Tilcisk, 2011). As such, queer individuals often experience negative physical and mental health outcomes. These outcomes include, but are not limited to, higher rates of substance use, mood disorders, and suicidal ideation and attempts in queer individuals compared to the general population (Cochran et al., 2001; Cochran et al., 2004 Drabble et al., 2005; Frost et al., 2015; Grant et al., 2014; Haas et al., 2010; Hottes et al., 2016; Keuroghlian et al., 2015; Witcomb et al., 2018).

Relevant Terminology

Before beginning a discussion of queer individuals' experiences in the US, it is important to discuss the author's decision to collapse sexual orientation and gender minorities under the umbrella of "queer." Two reasons exist: First, extensive literature on queer individuals tends to lump these categories together (e.g., Kaniuka et al., 2019; Pachankis et al., 2020; Woodford et al.,

2018), and second, differentiating sex and gender is inherently messy. Regarding the second point, the constructs of sex, gender, and sexual orientation rapidly fall apart when considered concurrently; indeed, a person who was CAFAB or CAMAB (coercively assigned male or female at birth) and who identifies as non-binary already transgresses the dichotomous relationship between sex and gender. When we consider that person's sexual orientation, because they do not identify as male or female, and because their gender identity does not conform to their biological sex, "lesbian, "gay," "pansexual," "bisexual," and so forth may limit the way that person expresses their identity. "Queer" disrupts this limited frame and offers an alternate, more expansive way to honor someone's experience (Griffon, 2017).

In addition to "queer," the author uses two terms that are relatively new to the lexicon. The first is "straight," which will refer to both cisgender (someone whose gender aligns with the sex they were assigned at birth) and heterosexual (those solely sexually and/or romantically attracted to the "opposite" gender, i.e., male to female, according to the gender binary). "Straight" will be used unless more specificity is needed, in which case the author will use cisgender or heterosexual. The second term is "TGNB," an acronym for transgender and gender non- binary people, which is a term used to refer to those who do not identify as cisgender.

Challenges Unique to Queer Populations

A Harmful US Sociopolitical Landscape. As previously mentioned, while there has been an increase in queer representation in the media, the US is far from an affirming or safe place for queer individuals. Indeed, experiences of discrimination remain alarmingly common for queer adults, with over 50% experiencing at least one of the following: sexual harassment, some form of violence, microaggressions, and verbal abuse with queer people of color experiencing significantly more discrimination than their White counterparts (Casey et al., 2019; Sutter & Perrin, 2016). Additional research has corroborated these findings not only along these manifestations of

oppression, but also when it comes to access to housing, employment discrimination, and the lack of appropriate and affirming care (Brewster et al., 2014; Jaffe, 2020; Shelton et al., 2020). Laverne Cox, a Black, transwoman activist, said it best when she commented, "there's unprecedented visibility for trans folks now, but we're being attacked more than ever before" (Greenfield, 2020).

Beyond interpersonal experiences of discrimination, scholars have implicated state and federal bodies in perpetuating harm against queer people. To take just some examples, homophobia was criminalized by many states, while in 18, there are still no state-enforced protections for queer individuals (Chelsea & Ostergard, 2017; Human Rights Campaign, 2020). While disheartening, this landscape is unsurprising when one considers the Trump administration's efforts to rollback protections for TGNB people under the Affordable Care Act, to opposecore legislative protections for queer populations such as the Equality Act, to appoint anti-queer judges, and many more offenses against queer individuals in the US (U.S. Department of Health and Human Services, 2020; GLAAD, 2020). These recent transgressions, coupled with the US's historic maltreatment of queer populations, means it is unsurprising that queer populations are at an increased risk of a variety of physical and mental health concerns.

Minority Stress. One theory that seeks to explain the association between the unsupportive environment in the US and the poor physical and mental health outcomes of queer young adults (compared to their straight counterparts) is minority stress theory (Meyer, 2003). Minority stress theory posits that, because they occupy a marginalized identity, queer populations experience stress greater than that of non-queer people (Meyer, 2003). There are two types of minority stressors: distal ones (the result of heterosexist events, such as hate crimes), and proximal ones (which occur when a queer person internalizes negative stereotypes about queer people). An example of a distal stressor is the result of the 2016 presidential election, immediately after which queer adults reported significant decreases in psychological well-being, while an example of a

proximal one might be shame about one's queer identity (Garrison et al., 2018; Williams et al., 2017).

Extensive research has linked minority stress to depression, anxiety, and suicidal ideation in adolescents and young adults (Baams et al., 2015; McCarthy et al., 2014; Feinstein et al., 2020). Indeed, studies suggest that the prevalence of depression may be 50% higher in queer samples compared to straight ones (King et al., 2008), with almost 54% of TGNB participants and 33% of sexual minority participants in one study reporting clinically significant depressive symptoms (Su et al., 2016). Moreover, compared to their heterosexual counterparts—who, according to national survey data, misuse opioids at a rate of 4.5%—sexual minority individuals misuse opioids at a rate slightly over 10% (Girouard et al., 2019). Sexual minority individuals are also at six times the risk of lifetime suicide attempts when compared to straight people (Haas et al., 2010; Kaniuka et al., 2019). This number skyrockets to a lifetime history of suicide attempt rate of 41% when speaking about TGNB people (Haas et al., 2014).

While this project does not center on minority stress, it is important to consider the underlying mechanism associated with the greater mental (and, relatedly, physical) distress queer populations experience compared to straight ones. Indeed, queer experiences of minority stress are well-documented in the literature, and those experiences have been extensively linked to poor physical and psychological outcomes (English et al., 2018; Garrison et al., 2018; Hatzenbuehler & Pachankis, 2016; Meyer, 2003; Rood et al., 2017; Staples et al., 2018; Williams et al., 2017).

Looking Beyond Traditional Treatment. Given the minority stress that queer populations face, they may need treatments oriented toward them not only because they are more likely to experience mental and physical distress than straight people, but also because they also less likely to benefit from treatments not tailored to them (e.g., Kidd et al., 2016; Klotzbaugh & Spencer, 2020; Lyons et al., 2015; Riggle et al., 2014; Rimes et al., 2018; Robertson et al., 2015; Senreich, 2009). The

different needs of queer populations will be discussed at length in Chapter II: Literature Review, and it will be done in relation to three primary modes of treatment: after-school, outpatient, and inpatient programs.

The rationale for referencing these treatments is that they share core similarities with wilderness therapy, the intervention in which this dissertation is interested. Wilderness therapy is an emerging form of treatment where participants ("students") live together in the wilderness in small groups, engage in rigorous daily exercise, and are in weekly group and individual therapy (Russell et al., 2008). Originating from the Outward Bound model of emotional, spiritual, and physical healing and growth by immersing oneself in nature, wilderness therapy combines this mentality with evidenced-based psychotherapy treatments (Bettmann et al., 2021; Russell, 2001; "History," 2020). Moreover, wilderness therapy is different than traditional treatment methods that offer psychotherapy insofar as it emphasizes the wilderness as a teacher of natural consequences and self-efficacy (Russell, 2001; Russell & Hendee, 2000; Powch, 1994). Wilderness therapy programs have also received media backlash in response to the deaths of students in wilderness bootcamps and therapeutic boarding schools, which have erroneously been associated with wilderness therapy under the umbrella of the "troubled teen industry" (e.g., Anderson, 2014; Sneider, 2017). This history will be discussed in Chapter II: Literature Review.

Within this chapter, wilderness therapy remains a rather amorphous concept. As such, to represent the nuance within the story of any young adult wilderness therapy student, three case studies are presented below. Each case study features a student who attends wilderness therapy for a unique reason and details how they arrived at their respective wilderness therapy program. This second aspect of the case studies is important because young adults over the age of 18 cannot legally be forced to enroll in treatment, so they are either coerced, threatened, or cajoled into attending (Loftin, 2020; Monahan, 1984; Tucker, 2018). These case studies are loosely based on

wilderness therapy students the author has personally encountered.

Case Study 1: Megan. Megan is a 19-year-old White, bisexual, cisgender woman. Since her sophomore year of college, Megan has been misusing substances. She started with marijuana and, under pressure from her peers and long-term girlfriend, started smoking heroin. Originally a B+ student, Megan barely gradated high school with a 2.1 GPA. Megan has disappeared for days at a time, and at one point, she disclosed to her parents that her girlfriend convinced her to engage in sex work in exchange for heroin. Moreover, Megan alluded that her girlfriend has physically assaulted her when she refused to do what she wanted. Megan has been in and out of inpatient and outpatient treatment facilities since her junior year, yet she continues to relapse. At the end of their rope, Megan's parents beg her to attend a wilderness therapy program in southern Utah. Recognizing that her drug use has taken over her life, Megan agrees to go. Her parents empty Megan's college account to pay for her treatment.

Case Study 2: Brad. Brad is a 24-year-old White, heterosexual, cisgender man. Two years before entering wilderness therapy, Brad's college roommate and best friend died suddenly in a car crash. Since then, Brad has been smoking marijuana daily to cope with his grief. He moved back home with his parents, turned down a post-graduation job offer, and only leaves his room to go to the bathroom; he eats all of his meals in his room. While Brad used to be an avid basketball player, he has stopped exercising and instead plays video games for 20 hours a day. His mother says that when he loses, she can hear him breaking objects in his room out of anger. She also often hears him crying himself to sleep at night. Brad's mother and extended family pool their savings to send Brad to wilderness therapy. Brad—recognizing that he is addicted to marijuana, severely depressed, and has trouble managing his anger—consents to attending a program in North Carolina.

Case Study 3: Sean. Sean is an 18-year-old, Asian, gay, cisgender man. He grew up in a

conservative Christian household and worries that his family will not accept his sexuality; indeed, they often talk about the "evils of the homosexual agenda" while at the dinner table. To help cope with his family's intolerance, Sean has begun to shoplift because he enjoys the thrill of it. Most recently, Sean was caught stealing an expensive item and the store has decided to press charges. Sean pleads guilty—much to the shame of his family—and is sentenced to community service. His parents, however, do not think that community service will be sufficient punishment to change his behavior. They give Sean an ultimatum: either consent to attending a wilderness therapy program in Colorado or be kicked out of the house. After a long, drawn out fight in which Sean and his father almost enter a physical altercation, Sean agrees to go to the program.

The Present Study

With the unique challenges queer individuals face in mind, the purpose of this dissertation is to use the data collected by research at the Outdoor Behavioral Healthcare Council (OBH) and the National Association of Therapeutic Schools and Programs (NATSAP), two bodies of practitioners and scholars dedicated to standardizing and researching wilderness therapy, to examine mental health outcomes in queer young adults. It will do so by comparing self-reported mental health symptoms assessed at intake and at discharge between queer and straight wilderness therapy participants. The ultimate goal of this project was to preliminarily ascertain if wilderness therapy is an appropriate alternative treatment modality for queer young adults. Indeed, while early research supports the effectiveness of wilderness therapy, no scholarship of which the author is aware addresses the experiences and mental health outcomes of queer young adults who participate in wilderness therapy programs. This work is important because queer people continue to need treatment options that are able to meet their unique needs (Bain et al., 2016; Duvivier & Wiley, 2016; Pachankis et al., 2019). A potential solution to this problem is to turn toward alternative forms of mental health treatment beyond traditional inpatient and outpatient settings, as they may

be able to shift their frame to account for the specific needs of queer individuals. Wilderness therapy presents such a possibility.

To accomplish this goal, this dissertation begins with a literature review (Chapter I), which overviews the history of wilderness therapy, followed by an overview of the ways that wilderness therapy is similar to other, more mainstream forms of treatment. Next, this dissertation outlines what makes wilderness therapy unique from other modalities. It also provides information about the practical aspects of wilderness therapy: who attends these types of programs, why, how they get to and from the wilderness. The dissertation then highlights the gaps in the literature left by the dearth of research on queer young adult wilderness therapy students. The literature review ends with hypotheses. Following Chapter II, Chapter III outlines the participants, procedure, and instruments utilized in the study. Chapter IV discusses the analyses the author used to examine the data. Finally, Chapter V focuses on the clinical and research implications of the study, the study's limitations, and directions for future research.

Chapter II: Literature Review

This chapter begins with a discussion of the unique treatment needs of queer populations in relation to substance use, psychological distress, and suicide, and it will so through a minority stress framework. Next, this chapter will turn toward wilderness therapy, the primary focus of the dissertation, by defining wilderness therapy and discussing its history. Next, it discusses the nuts and bolts of this treatment modality—namely, who attends these programs, why, and how— while paying attention to the ways that it is similar to and different than other types of treatment. The chapter then attends to outcome data related to wilderness therapy with a discussion of why researchers believe wilderness therapy is effective. Finally, this chapter will pivot to a discussion of why queer populations may benefit from wilderness therapy. To reiterate, the word "queer" throughout this chapter will refer to LGBTQIAP+ individuals, while cisgender and heterosexual people will be referred to as "straight" unless further specificity is required. For the rationale behind the choice to use the word "queer," please see Chapter I: Introduction.

Queer Populations and Mental Health Correlates

Chapter I also defined the concept of minority stress (Meyer, 2003), which argues that queer populations experience additional physical and psychological distress due to living in a homophobic and transphobic society. Some specific negative outcomes are discussed in this chapter.

Substance Use. The current sociopolitical stressors queer populations face contextualize a variety of risk factors queer people disproportionately experience. One of these stressors is high rates of substance use. For instance, queer adults are significantly more likely to meet diagnostic criteria not only for opioid misuse, but also substance misuse disorders in general (Frimpong et al., 2020). TGNB adults face similar substance misuse rates; as an example, in one study, 10% of

the TGNB surveyed adults reported a lifetime history of substance use disorder treatment (Keuroghlian et al., 2015). Moreover, across multiple studies, TGNB have reported elevated substance use rates—which applies to alcohol and dangerous substances—compared to cisgender individuals, with prescription drug misuse rates for some types of substances (namely, analgesics such as codeine and oxycodone) nearing 24% (Benotsch et al., 2013; Reback & Fletcher, 2014; Santos et al., 2014).

Several correlates with higher rates of substance misuse have been found. These correlates include psychological distress that may be due to societal-level stigma against queer populations and the internalization of that stigma (Benotsch et al., 2013; English et al., 2018; Feinstein & Dyer, 2017; Livingston et al., 2016; Meyer, 2003; Parent et al., 2019). Additional research has linked being the victim of heterosexist discrimination (discrimination against queer individuals), ease of access to substances, and minority stress-related process with higher substance use rates (Felner et al., 2020; Mereish et al., 2014; Meyer, 2003).

Psychological Distress. Queer populations are also at a disproportionate risk for psychological distress, which includes significantly higher levels of depression and anxiety compared to straight ones (Budge et al., 2013; Shearer et al., 2016; Painter et al., 2018). As referenced in the introduction, queer individuals may experience depression at rates 50% greater than straight ones (King et al., 2008). Later studies corroborate these findings: In one study, approximately 54% of TGNB participants and 33% of sexual minority participants reporting elevated levels of depressive symptoms (Su et al., 2016). Anxiety rates are similarly high, with research reporting anxiety rates in sexual minorities of anywhere between 2.8 to 4.7 times the risk for clinically-significant anxiety compared to straight peers (Cochran et al., 2001; Fergusson et al., 1999). Psychological distress is particularly relevant to queer populations insofar as high levels of distress have been linked with poorer physical health, namely heart disease, diabetes, chronic pain,

and asthma (Bica et al., 2017; Blumenfield et al., 2012).

As with substance use, the mechanism often associated with these higher rates of psychological distress in queer individuals is minority stress. Literature has linked increased outness with a sexual minority identity with an increase in depressive symptoms; relatedly, higher levels of identity concealment were also related to decreased levels of psychological well-being (Riggle et al., 2017). Furthermore, psychological distress in TGNB adults has been positively associated with the minority stress constructs of rejection sensitivity, expectations of rejection, and internalized transphobia (Breslow et al., 2015; Bockting et al., 2013; Timmins et al., 2017;).

Attempted Suicides and Deaths by Suicide. No outcome measure more harrowingly underscores the disproportionate stress queer individuals face than attempted suicides and deaths by suicide. Indeed, as with psychological distress, multiple factors play a role in these disproportionately high rates of suicide attempts. These factors include, but are not limited to, substance use disorders, unemployment and low SES, mental health disorders, experiences of heterosexism, and perceiving higher levels of discrimination (Beckwith et al., 2019; Haas et al., 2014; Kaniuka et al., 2019; Su et al., 2016; Woodford et al., 2018). Yet again, minority stressors—particularly shame, fear of rejection, and experiences of victimization—are implicated in the association between a sexual minority identity and rates of rates of suicidal ideation (Mereish et al., 2019). Regarding TGNB adults, minority stress also plays a factor insofar as both distal and proximal minority stressors (namely, perceived discrimination, fear of transphobia, and social support) mediated the relationship between internalized transphobia and the risk of suicide (Tebbe & Moradi, 2016).

In summary, the minority stress that queer young adults experience is correlated with negative psychological and physical outcomes that occur more frequently and severely than they do in straight people. These outcomes include, but are not limited to, more substance use,

depression, anxiety, attempted suicide, and death by suicide (Felner et al., 2020; Frimpong et al., 2020; English et al., 2020; Painter et al., 2018; Tebbe & Moradi 2016; Woodford et al., 2018). These outcomes were chosen because they are some of the most common presenting concerns in wilderness therapy programs, the form of treatment at the center of this dissertation.

The History of Wilderness Therapy

Given the increased stress queer individuals experience, it is important to look toward creative solutions when considering how best to support them. This project is concerned with wilderness therapy, which, briefly defined, is an evidenced-based group treatment where a major component of therapy is the wilderness (Russell, 2001).

When people hear of wilderness therapy, they may think of wilderness boot camps, a crude, unregulated industry characterized by harsh treatment that has led to the death of some participants (Anderson, 2014; Hyde, 2015; Janofsky, 2001; Krakauer, 1995; Sneider, 2017). Indeed, images of physically exhausted, frightened children all dressed in the neon orange jumpsuit associated with incarcerated individuals may come to mind. Perhaps, we think, these young adults who are just barely 18 are forced to hike for miles through the desert with limited food and water, all while being berated by staff for their personal shortcomings and failures, until one of them inevitably collapses from exhaustion and heat stroke, at which point few (if any) medical interventions are offered.

To view wilderness therapy in this light is deeply mischaracterizing, although it is understandable considering how unsettling and tragic the deaths of teenagers and young adults in unregulated programs are. Boot camps are lumped into the umbrella category of, as one writer put it, the "troubled teen industry" (Sneider, 2017), which includes wilderness boot camps, militarized "therapeutic" boarding schools, and, in extreme cases, conversion therapy facilities (Hyde, 2015). The types of programs that are part of the "troubled teen industry" often utilize military training

tactics (yelling and physical punishment) as opposed to evidence-based therapeutic interventions (Russell, 2001).

In contrast, wilderness therapy is a relatively new form of treatment that takes an entirely different approach to how it treats its participants (often referred to as "students"). Wilderness therapies originate from the Outward Bound model of therapeutic camping (Russell, 2001). According to Outward Bound's promotional material, Outward Bound first began when two teachers decided to teach outdoor skills by prioritizing "physical fitness, enterprise, tenacity, and compassion among British youth" ("History," 2020). Much like wilderness program therapies today, Outward Bound's teaching tools are not textbooks and lectures, but rather the natural environment in which the learning takes place ("History," 2020).

Wilderness therapy programs expand upon Outward Bound's model of wilderness-based teaching by combining them with empirically based therapeutic methodologies (most commonly cognitive behavioral therapy, or CBT) and by explicitly centering mental health treatment as opposed to only character building ("History," 2020; Russell, 2001). More specifically, similarly to Outward Bound, wilderness therapy programs take place predominantly (if not solely) outdoors.

Students live in small peer groups, and adults and adolescents are separated into different groups. Furthermore, akin to Outward Bound, daily activities include physical activities (hiking, biking, and kayaking, to name a few, though hiking tends to be the most common recreational activity; Russell & Phillips-Miller, 2002). Also similarly to Outward Bound, wilderness therapies operate under the philosophy that the wilderness teaches students several important life lessons: that poor decisions often have natural consequences (for instance, hastily setting up a tarp shelter may leave participants vulnerable to a late night windstorm), that they are stronger than they initially believe (students are regularly asked to backpack for long distances in rough weather conditions), and that a group is often greater than the sum of its parts (via team building exercises;

Russell, 2001; Russell & Hendee, 2000; Powch, 1994).

Wilderness therapy programs are also referred to as adventure therapy and outdoor behavioral therapy. While the name of the treatment may differ, wilderness, adventure, and outdoor behavioral therapy programs are more or less synonymous terms, although adventure therapy can encompass treatments that take place in urban environments and tends to include a wider range of physical activities (Bowen & Neill, 2013; Tucker et al., 2013; "Wilderness Therapy Programs: A Comprehensive Guide for Parents," 2020). For the purposes of this dissertation, the term "wilderness therapy" encompasses studies that use synonymous terms, although the dissertation also specifies when studies that examine programs whose structure significantly differs are referenced.

A Primer on Nature vs. the Wilderness, and on the Nature of the Wilderness

Unsurprisingly, the wilderness is at the heart of *wilderness* therapy. It is, therefore, important to define what the wilderness is and how it is defined in this paper. Briefly stated, language around the wilderness and nature has origins that go back at least as far as 18th century English romantic poetry with the creation of the romantic sublime (e.g., Wordsworth, 1798). The wilderness has since been defined as a space "untrammeled by man" (Wilderness Act, 1964) and a place one visited "only against one's will, and always in fear and trembling" (Cronon, 1996, p. 7). As such, wilderness' programs use of the word *wilderness* is somewhat of a misnomer insofar as the wilderness exists where humankind does not, and so by operating in the wilderness, these programs' very use of the word runs contrary to its definition. When wilderness therapy programs talk about the wilderness, what they tend to refer to is the environment as a teacher of natural consequences and the inspiration for growth and healing. These concepts are discussed later in this chapter.

Further analysis of the term wilderness is beyond the scope of this project. This topic,

however, has been extensively addressed in other fields, such as sociology, feminism and queer studies, and history (e.g., Schrepfer, 2005). For the purpose of this dissertation, when the term "wilderness" is used, the author is referring to the outdoors.

Despite wilderness' complex etymology, extensive research has demonstrated that spending time outdoors is beneficial for mental and physical health. Findings suggest that spending time outdoors—especially when that exposure is prolonged—is associated with improvements in self-efficacy, self-esteem, mood, and behavioral regulation, to name a few (Bettmann et al., 2021; Bowen et al., 2016; Bratman et al., 2012; Fernee et al., 2017; Mygind et al., 29). Thus, the wilderness is an integral part of wilderness therapy, rather than only the setting in which treatment happens to take place.

Wilderness Therapy's Similarities to Other Treatment Modalities

While wilderness therapy programs share their setting with Outward Bound, they also have treatment aspects in common with inpatient, outpatient, and after school programs. In particular, wilderness therapies often employ the same types of interventions and are concerned with similar outcomes. The interventions that wilderness therapy programs have in common with each of the previously mentioned types of treatment—as well as which outcomes are examined and how they are conceptualized—will thus be discussed.

After-School Programs. One adjacent treatment area is that of after-school programs for adolescents. While this dissertation focuses on the experience of young adults in wilderness therapy (i.e., those above the age of 18), it is important to draw attention to the similarities between wilderness therapies and afterschool programs to contextualize wilderness therapy within the larger sphere of mental health treatment. A secondary objective is to emphasize what wilderness therapy and older, more thoroughly studied treatments have in common in order to understand the reasoning behind wilderness therapy programming.

As such, like wilderness therapy programs, after school programs focus on several primary objectives: teaching prosocial behaviors (ones seen as positive, helpful, and relationship-forming; Penner et al., 2005), providing structure, imparting valuable information, and improving mental and physical health through a variety of interventions (Durlak et al., 2010; Gordon et al., 2016; Heo et al., 2018; Khalsa et al., 2012, Lubans et al., 2016, Ludgya et al., 2017).

Like wilderness therapy programs, after school programs emphasize the teaching of prosocial behaviors; for instance, according to a meta-analysis by Durlak and colleagues (2010) of 69 after-school programs, compared to those in the control group, those in after-school programs saw significant gains in pro-social behaviors. These behaviors included, but were not limited to, coping skills that increased participants' self-awareness, problem-solving skills, and ability to resolve conflicts. The authors conceptualized their eight outcome measures—including self-perceptions, positive social behaviors, drug use, and achievement test scores—in relation to SAFE (Sequenced, Active, Focused, and Explicit) skill training. Per their analyses, the presence or absence SAFE practices moderated the relationship between program implementation and positive outcomes in that only studies with SAFE programs were associated with any statistically significant outcomes.

Regarding physical health interventions aimed at improving mental health, Lubans and colleagues (2016) conducted a meta-analysis of 25 studies centered on the relationship between these two constructs. By looking at neurobiological, psychosocial, and behavioral mechanisms of change, the authors found significant support for changes in brain chemistry because of exercise, which was correlated with changes in self-perceptions, self-esteem, and self-concept (among other markers of well-being). Types of physical activities included team sports, martial arts, and yoga.

Literature published after Lubans' study continues to support the positive relationship between physical and mental health (e.g., Mears & Jago, 2016; Ludyga et al., 2017). For instance,

using a sample of 36 students ages 12-15, Ludyga and colleagues (2017) examined the relationship between exercise during school recess and measures of impulse and inhibitory control. Their sample included 13 girls and 23 boys recruited from a private school; no data on race, sexual orientation, or SES were reported. Adolescents were assigned to an exercise or control group; those in the exercise group were enrolled in an eight-week exercise program that occurred during recess while the control group experienced no change to their schedule. The authors did not observe any effects or interactions between exercise during school break time and indications of neurophysiological measures of impulse control in adolescents. However, they did observe a significant negative correlation between increase in exercise and reaction time on the Stroop test, a standardized measure of inhibitory control (Ludyga et al., 2017; Stroop, 1935).

Queer people in after school programs. While the literature on queer youth is sparse, some research has been conducted on queer individuals in after-school programs. Much like those not explicitly oriented toward queer populations, the after-school programs mentioned in this study focus on imparting life skills and providing valuable information to queer youth (Heck, 2015; Johnson, 2017; Palkki & Caldwell, 2018). Indeed, while the focus of this dissertation is on young adults, queer youth are (unsurprisingly) the target population in middle and high school after-school programs, and for good reason: TGNB students are still harmed and erased by restrictive bathroom policies, homophobic slang such as "that's so gay" and "fag" continue to pervade the hallways and classrooms of high school and middle school buildings, and school staff have continued to make negative remarks about students' gender expression (Koswic et al., 2017).

After-school programs that affirm queer youth's identity are, therefore, more necessary than ever in that they often provide safe spaces— i.e. those in which individuals feel comfortable "expressing traits that define them as 'other'" (Palkki & Caldwell, 2018, p. 29)—that are otherwise absent. In one example, Palkki and Caldwell (2018) conducted a cross-sectional survey of queer

youth who had participated in their high school's choirs. Their sample consisted of 1,123 queer participants from the US and Canada, all of whom were in their high school's choir. Data on participants' race, ethnicity, gender identity, and sexual orientations were not reported. Using mixed-methods analysis, the authors concluded that, although high school choirs were not explicitly safe spaces, many students felt supported by them. Moreover, the absence of explicit or implicit support significantly decreased the likelihood that queer students described their high school choices as safe spaces (Palkki & Caldwell, 2018).

Beyond literature that examines the potential benefits of safe spaces, Heck (2015) studied how to increase the benefits of pre-existing ones. The author did so by examining the feasibility of integrating a cognitive behavioral therapy (CBT) intervention into a high school Gay-Straight Alliance club (GSA). While the GSA did not meet afterschool, it is included in this section of the literature review because of it supplements traditional school curricula, much like afterschool programs do. With a sample of 10 high school students in a GSA program (no demographic information was reported) over the course of four CBT sessions that met in lieu of the weekly GSA meeting, per participant self-reports, the program was "believed to be beneficial for the participants and other LGBTQ youth" (Heck, 2015, p. 7). In particular, respondents found that the specific coping skills taught by the CBT curriculum imparted new coping skills and reinforced, pre-existing positive ones, though the author suggested that future literature can conduct a clinical study to look at effectiveness outcomes (Heck, 2015).

In another study that centered on queer spaces, Johnson (2017) worked with 18 Black youth, 10 of whom were queer, in an after-school writing club. The article centers on the narratives of queer students—particularly the three queer students who explicitly spoke about their experiences as Black, queer youth. By analyzing student writing and asking about students' experiences in the writing club via semi-structured interviews, the author found that students

"wrote to undo the pain of abuse and heartbreak… [in ways] that were critical, courageous, and communal" (Johnson, 2017, p. 29). Moreover, writing was an opportunity for participants to express and explore an otherwise-silenced aspect of their identity: their queerness (Johnson, 2017).

Outpatient Programs. Yet another type of program similar to wilderness therapy is intensive outpatient programs. Outpatient programs employ many of the same interventions as wilderness therapy programs, including hiking, yoga, and mindfulness with the goal of improving patients' psychological well-being (Bowen et al., 2009; Hall et al., 2016; Neunhäuserer et al., 2013; Norton & Peyton, 2017; Sturm et al., 2012; Spadola et al., 2020). Moreover, outpatient programs often rely on group therapy to deliver treatment (Ritschel et al., 2012).

Regarding hiking, trekking in the mountains significantly improved participants' mental health by reducing feelings of hopelessness and depression (Sturm et al., 2012). There were 20 participants: 14 women and six men, each of whom had at least one prior suicide attempt. No data on race or sexual orientation were reported. Participants were randomly assigned to either hike (hiking group) or not (control group); after nine weeks, the groups switched and the control group hiked while the hiking group did not. Using the Hopelessness Scale and the Beck Depression Inventory-II (Beck et al., 1974; Beck et al., 1996), the authors found that in the hiking phase, depression, hopelessness, and suicidal ideation all decreased. Moreover, there was high treatment compliance, indicating that hiking may be a highly motivating, engaging form of treatment (Sturm et al., 2012).

Using the same data set and participants as Sturm and colleagues (2012), Neunhäuserer and colleagues (2013) evaluated the impact of the 9-week hiking program on patient's physical fitness. Per the results, hiking significantly improve patients' maximal exercise and aerobic capacities without increasing the severity of participants' suicidal ideation. They also concluded that hiking was an appropriate treatment intervention even for at-risk clients.

Yoga is another tool often employed by wilderness therapy programs. As with hiking, literature supports the link between yoga and mental health (Hall et al., 2016; Varambally & Gangadhar, 2012). Indeed, practicing yoga has been linked with decreases in depressive and anxiety disorders, eating disorders, and in alcohol dependence. As an example, in a pilot study, 14 adolescent girls—60% White, age 14-18—in an outpatient eating disorders clinic participated in a 12-week yoga intervention. This intervention supplemented their intensive outpatient routine and consisted of weekly yoga classes in addition to traditional group and individual psychotherapy. Compliance was mixed, with five participants attending all classes, six attending most classes, and 14 participants completing the first follow-up assessment. Using data from these 14 participants, the authors reported statistically significant improvements in mood and body image using the Beck Depression Inventory-II, the State Trait Anxiety Inventory, the Eating Attitudes Test, and the Eating Disorder Examination-Questionnaire-6 (Beck et al., 1996; Cooper & Fairburn, 1987; Garner & Garfinkel, 1979; Spielberger et al., 1983; Hall et al., 2016). These improvements were measured via a paired samples t-test.

Like yoga, mindfulness—i.e., paying attention on purpose and without judgment, often via meditation (Kabat-Zinn, 2005)—is often integrated into wilderness therapy programming. Mindfulness received significant support in the literature as an impactful treatment tool for a variety of presenting concerns, from substance use disorders to stress (Bowen et al., 2009; Hazlett-Stevens, 2018; Paulik et al., 2010). Indeed, when those in outpatient programs engage in mindfulness programs, they tend to report lower levels of stress, anxiety, and depression, as well as higher levels of satisfaction and quality of life, compared to before they began practicing mindfulness (Hazlett-Stevens, 2018; Paulik et al., 2010).

In one particularly relevant study with 168 participants, the authors examined the relationship between mindfulness and substance use frequency and cravings (Bowen et al., 2009).

Participants were 51.8% White, 28.6% Black, 15.3% multiracial, and 7.7% Native American. To assess their outcome variables of substance use and self-awareness, the authors used several scales, including the Penn alcohol Craving Scale, the Five Factor Mindfulness Questionnaire (FFMQ), and the Acceptance and Action Questionnaire (AAQ; Baer et al., 2006; Flannery et al., 1999; Sobell et al., 1996). Using a generalized linear model, the authors concluded that mindfulness was associated with a decrease in cravings and with an increase in self- awareness in those with a substance use disorder not only immediately following participant's outpatient program, but also at four months post-intervention (Bowen et al., 2009).

In addition to interventions centered around physical health and mindfulness practices, outpatient mental health settings tend to emphasize group therapy, with two of the most popular modalities being cognitive behavioral therapy and dialectical behavioral therapy (Ritschel et al., 2012; Webb et al., 2016). In one study, authors examined changes in psychological distress and well-being in an intensive outpatient community mental health center (Webb et al., 2016). The sample included 56 participants ages 18-73, 59% of whom were female and 84% of whom were White. 80% had mood disorders, over 50% had anxiety disorders, 23.6% had substance use disorders, and 65% carried at least two diagnoses. Outcomes were measured with the Beck Depression Inventory, the Zung Self-Rating Anxiety Scale (SAS), the Mindfulness Attention Awareness Scale (MAAS), and the Hope Scale (Beck et al., 1961; Brown & Ryan, 2003; Snyder et al., 1991; Zung, 1971). Patients received treatment rooted in CBT (cognitive behavioral therapy), DBT (dialectical behavioral therapy), and psychological flexibility skills in an intensive outpatient setting up to five times a day, five days per week for an average stay of 11.7 days. The authors concluded that CBT was associated with symptom reduction in those with mood disorders and that DBT was associated with a reduction in symptoms of anxiety (Webb et al., 2016).

Queer people in outpatient treatment. As mentioned in Chapter I: Introduction,

treatment outcomes may vary between sexual minority and straight individuals. This change applies not only to after-school programs, but also to outpatient ones (Kidd et al., 2016; Rimes et al., 2018; Senreich, 2009). In one example of a non-substance use program, queer individuals reported lower levels of treatment satisfaction than their heterosexual counterparts— especially when they received treatment outside of the New York metropolitan area. Moreover, following treatment, gay and bisexual men had lower levels of abstinence than did any other treatment group. Queer men were also more likely than heterosexual men to leave treatment early due to voluntary termination or because they were prematurely discharged (Senreich, 2009).

More recently, Rimes and colleagues (2018) compared pre- and post-treatment data from 188 lesbian women, 222 bisexual women, 645 gay men, 75 bisexual men, 6,636 heterosexual women, and 3,024 heterosexual men in the United Kingdom (UK)—74.5% of whom were White—Rimes and colleagues (2018) compared outcomes between sexual minority and straight clients. Data were pulled from the database of an outpatient service network that provides adults with individual psychotherapy. The author reported smaller improvements in psychological distress in queer women than they did in straight women, with bisexual women experiencing the least amount of improvement. Notably, there were no significant differences between straight and queer men, perhaps because queer men do not have to confront sexism in addition to homophobia in the way that queer women do (Rimes et al., 2018).

Regarding TGNB clients, no data were available to assess treatment outcomes between TGNB and straight samples. However, preliminary evidence points to a general lack of counselor competence when it comes to providing high-quality mental health care to TGNB clients (McCullough et al., 2017; Mizock & Lundquist, 2016; Snow et al., 2019). Furthermore, adjacent literature has examined treatment barriers that reduce the likelihood that TGNB adults seek out and benefit from mental healthcare (Snow et al., 2019). These barriers include mental healthcare

providers who are not educated in TGNB-specific issues (e.g., TGNB-specific healthcare, history, and culture), who pathologize their client's gender identity, and who act as gatekeepers to gender-affirmative medical interventions by requiring their clients to "prove" the authenticity of their claims, among other harmful practices (McCullough et al., 2017; Mizock & Lundquist, 2016; Painter et al., 2018; Snow et al., 2019). It is no wonder, then, that TGNB are less likely to seek treatment than their cisgender counterparts (Reisner et al. 2015). As such, TGNB-specific mental health treatment—or at least TGNB-sensitive mental health treatment—is necessary to help bridge the gap in attendance rates and quality of care between TGNB and cisgender clients.

Moreover, preliminary evidence points to a general lack of counselor competence when it comes to providing high quality mental health care to TGNB clients (McCullough et al., 2017; Mizock & Lundquist, 2016; Snow et al., 2019). Though relatively few studies compare outcomes between sexual minority and straight populations—and no studies compare TGNB with cisgender ones—the cited literature suggests that queer people may benefit the most from treatments tailored specifically to them. Several examples of queer-specific treatments exist and are explored below.

In an example of queer-affirmative treatment, Riggle and colleagues (2014) conducted a study in which queer participants were asked to write a positive identity narrative following a lecture on positive identity development. Following a thematic analysis, the authors concluded that even a brief, queer-affirmative intervention has the potential to immediately and positively impact the self-identity of queer young adults. These findings have led scholars to assert that interventions centered around affirming the narratives of queer—particularly TGNB—individuals may yield additional benefits; for instance, TGNB support groups and community spaces have also been found to increase psychological well-being (Bockting et al., 2013; Hughto et al., 2015; Testa et al., 2014).

Another—and this time sexual minority-specific—example is that of Hart and colleagues

(2014), who integrated HIV prevention into a small-sample (N = 3) pilot study of cognitive behavioral therapy for gay and bisexual men with social anxiety. Modifications to the traditional CBT framework (inspired by Hope et al., 2010) included creating an anxiety hierarchy specific to sexual situations. Post-treatment results indicated that participants engaged in either lower levels of unprotected anal sex compared to the start of treatment or that they had stopped engaging in unprotected anal sex altogether (Hart et al., 2014).

Similar results were found in a test of LGB-affirmative CBT for gay and bisexual men, but this time with the frame of minority stress (restated, the stress associated with identifying as queer and that exacerbates other life stressors; Meyer, 2003). Compared to those in the no treatment (control) group, those in the minority stress-framed CBT group reported improvements in four outcomes: depressive symptoms, alcohol use problems, sexual compulsivity, and unprotected anal sex (Pachankis, 2015).

Beyond CBT, there are preliminary data suggesting that narrative therapy can be adapted to assist queer individuals with learning disabilities (LDs) to develop positive self-identity stories (Elderton et al., 2013). Over the course of a series of narrative therapy group sessions, 11 lesbian, gay, bisexual, and transgender participants were able to reframe stories about their lives in a richer, more positive way (Elderton et al., 2013, suggesting that less-structured treatment approaches may also be tailored for queer populations.

Another example of a less conventional and structured approach to queer therapy is music therapy. Music therapy is a therapeutic technique that uses music (sung, written, played, or heard) as a conduit through which clients give voice to, process, and connect with their trauma (Aalbers et al., 2017). The broad potential applications of music therapy have led researchers to theorize that music therapy may assist queer populations through its potential for the symbolic performance and rejection of traditional gender roles and through the reconstruction of language so that it more

closely reflects the experiences of queer individuals (Bain et al., 2016). Preliminary data support Bain and colleagues' (2016) theorizations. Based on interviews with 12 queer music therapists, Boggan and colleagues (2017) were able to identify several strengths of queer music therapy, including a) music theory's ability to empower and affirm clients' identities, b) its design for group use, and c) its emphasis on common experiences (Lorde, 1984) rather than common identities.

Taken together, the literature on queer mental health simultaneously affirms the necessity for queer-affirmative mental health treatment while pointing to the need for an increase in the number of available queer-supportive treatments. Indeed, the abundance of evidence that those queer populations experience significant levels of psychological distress related to their queerness indicates that they likely would benefit from mental health services tailored to them (Rowan, Jenkins, & Parks, 2013). When queer people enter non-queer-focused treatments, they may experience lower levels of treatment completion and satisfaction (Buroughs et al., 2015; Eliason & Hughes, 2014; Senreich, 2009). Conversely, when mental health treatments adjust themselves to meet the specific needs of queer patients, they can have significant, positive outcomes (e.g., Boggan et al., 2017; Elderton et al., 2013; Riggle et al., 2014).

Inpatient Treatment. In terms of structure, the treatment modality that wilderness therapy most closely resembles is that of inpatient treatment. Much like inpatient settings, wilderness therapies tend to be residential and emphasize group and individual therapy (Rosner et al., 2011; Russell, 2001; Small et al., 2018). Wilderness therapies and inpatient units are also similar insofar as they are residential in nature. Furthermore, due to their residential status, both types of treatment are concerned with patient safety to a greater degree than other types of programs; for example, both wilderness therapies and inpatient programs need to plan for a client who run away (Exworthy & Wilson, 2010; Houston et al., 2010; Mezey et al., 2015). Finally, like outpatient programs, inpatient units regularly employ group therapy as a treatment modality (Berking et al., 2013).

Relatedly, wilderness therapies and psychiatric inpatient units tend to carry patients with higher levels of risk than outpatient settings do, though inpatient units have clients with higher risk than wilderness therapy (Russell & Hendee, 2000). Indeed, unlike inpatient settings, many wilderness therapy programs do not work with clients who have a history of psychosis, are at- risk for suicide, or who have a history of acute and chronic violence outside of their home ("Adolescent Profile," 2020; "Who We Treat," 2017; "Wilderness Therapy Programs: A Comprehensive Guide For Parents," 2020). At the same time, both wilderness therapy programs and inpatient units share the mutual goal of intervening at a moment of acute crisis and then, eventually, helping a patient or student transition to a less-intensive form of treatment often known as aftercare (Bolt, 2016; Smith et al., 2016; Vigod et al., 2013).

One form of hospital inpatient treatment more similar to wilderness therapy is that of equine-assisted therapy (Nurenberg et al., 2015). A sample of 90 patients recently hospitalized for violent or regressed behavior for two months or longer was randomly assigned to several conditions: equine-assisted therapy, canine-assisted therapy, social skills-focused therapy, or regular inpatient care. Participants in this study averaged 44 years in age, 37% were women (no statistics on any queer patients were reported; thus, it is likely that patients in the sample self-identified to the hospital and the researchers as straight), 61% were White, and 76% had a formal diagnosis of schizophrenia or schizoaffective disorder. Following a ten week-long intervention in one of each of the groups, Nurenberg and colleagues compared the frequency of aggression-related (either violent or non-violent) incidents before and after treatment. Those in animal-assisted therapy—particularly equine-assisted therapy—had the greatest decreases in the frequency aggression-related incidents of all groups; moreover, those in both the canine and equine-assisted therapy groups required less one-on-one clinical observation, seclusion, or restraint following the intervention compared to those in traditional hospital care (Nurenberg et al., 2015).

While equine-assisted inpatient therapy is quite different than wilderness therapy not only in content, but also in population (wilderness therapy programs do not admit clients with a history of psychosis; "Adolescent Profile," 2020; "Who We Treat," 2017; "Wilderness Therapy Programs: A Comprehensive Guide For Parents," 2020), core similarities remain: that of the inpatient setting and the use of a nature-based intervention to supplement traditional care.

Yet another aspect that wilderness therapy programs and intensive inpatient settings have in common is their integration of group and individual therapy (which is also present in outpatient settings; Burlingame et al., 2018; Jepsen et al., 2013; Webb et al., 2016). To take one example, Jepsen and colleagues (2013) conducted a study with young adults with histories of childhood sexual abuse. Fifty-two adults were women and four were men; the sample had a mean age of 39.5 years-old. Participants were enrolled in a 3-month inpatient program that utilized individual and group therapy. Several outcomes were measured, including depression (via the Beck Depression Inventory-II; Beck et al., 1996), general well-being (via the Symptom Check List 90-Revised; Derogatis et al., 1973), and interpersonal problems (via the Inventory of Interpersonal Problems; Alden et al., 1990). Following treatment, patients reported reductions in depressive symptoms and interpersonal difficulties immediately following treatment and at the one-year follow-up (Jepsen et al., 2013).

Queer people in inpatient treatment. As with outpatient programs, inpatient mental health care facilities do not always address the unique needs of queer individuals. To take an example, one study examined degrees of patient satisfaction in a sample of queer participants as satisfaction related to participants' queer identity (Klotzbaugh & Spencer, 2020). Among a sample of majority-White 508 queer participants—51.8% female and 47% male with 23% identifying as lesbian, 35.6% identifying as gay, 39% identifying as bisexual, and the rest identifying as trans and queer—those who reported that they were dissatisfied with their service were also likely to

relate their dissatisfaction to the way their identity as a queer person was handled by staff. Furthermore, using a multiple logistic regression, participants were less likely to recommend the hospital to queer friends and family if they also reported dissatisfaction.

Finally, the authors ran a chi-square test of independence to compare rates of satisfaction as they related to doctors, nurses, and non-medical staff. Among the sample, gay participants reported the highest degree of satisfaction and bisexual participants indicated the lowest level of satisfaction; trans and queer participants were not included in final analyses due to a small sample size.

Researchers have also studied the experiences and mental health outcomes of queer adults in residential and inpatient treatment centers (Lyons et al., 2015; Robertson et al., 2015), though this body of literature is quite thin. Indeed, beyond the following studies, little literature covers the experiences of queer adults in inpatient mental treatment aside from those that either report demographic information comparing queer adults to their straight counterparts or provide recommendations for best practices when working with queer individuals (e.g., Klein & Ross, 2014; Klotzbaugh & Glover, 2016; Saw, 2017).

In a study of gay and lesbian adults in mental health psychiatric units in the UK, Robertson and colleagues (2015) looked at participants' relationship needs. Participants in this study were three gay men and three lesbians ages 31 to 57 years-old; no participants were bisexual and half identified as White. While experiences of discrimination were not the central focus of the paper, they nevertheless emerged as one of the five central themes salient after a thorough semi-structured interview process. As one participant stated, "it is literally, you know, walking into a field of landmines… you don't know who is safe to talk to on your ward" (Robertson et al., 2015, p. 272). Moreover, patients described the staff as homophobic. As such, the authors concluded that the treatment setting did not do all it could to meet its patient' needs and help them feel comfortable

(Robertson et al., 2015).

Lyons and colleagues (2015) also conducted semi-structured interviews on the experiences of queer patients within inpatient settings, though with a focus on transgender individuals. Fourteen transgender participants who had been in residential treatment for substance misuse and/or sex work engaged in the study. All participants lived within the Greater Vancouver area of Canada. Participants were 27 to 47 years-old, with 13 identifying as Indigenous and one as White. Nine identified as transgender women, four as two-spirit (a term that describes "an indigenous person who has feminine and masculine spirits" [Lyons et al., 2015, p. 3]), and one as someone who dressed as a woman when doing sex work. The authors found that inclusive, trans-affirming treatment settings were associated with a greater likelihood of reporting a positive experience in treatment; conversely, the more stigma a participant felt, the less likely they were to describe their time in treatment as meaningful or effective (Lyons et al., 2015). Moreover, they recognized the limitations of qualitative work insofar as no firm correlational statements could be made from the interview data.

Section Summary. This exploration of treatment types adjacent to wilderness therapy is important in order to understand the programming and curricula that characterize wilderness programs. Moreover, looking into other types of treatments helps to conceptualize which aspects of wilderness therapy—in addition to the therapy part of it—are found in other modalities. In addition, since this dissertation is interested in the experience of queer young adults, this section has discussed relevant findings with queer populations. As mentioned in the introduction, queer populations who received interventions that are not specifically designed for them often did not reap the same benefits as straight counterparts who receive the same interventions (Kidd et al., 2016; Senreich, 2010).

Wilderness is similar to after-school programs, outpatient treatments, and inpatient settings

in several ways. As it relates to after-school programs, wilderness therapy shares a focus on physical activity and prosocial behaviors, as well as on an increase in physical health and a decrease in psychological distress (Durlak et al., 2010; Gordon et al., 2016; Heo et al., 2018; Khalsa et al., 2012, Lubans et al., 2016, Ludgya et al., 2017). Wilderness therapy is comparable to outpatient interventions insofar as both use mindfulness, yoga, hiking, and group therapy in conjunction with individual therapy as ways to, again, improve physical and mental health (Bowen et al., 2009; Hall et al., 2016; Neunhäuserer et al., 2013; Norton & Peyton, 2017; Ritschel et al., 2012; Sturm et al., 2012; Spadola et al., 2020). Finally, wilderness therapy resembles inpatient settings in that both tend to work with clients who are in acute crisis with the purpose of stabilizing them, both utilize nature-based interventions, and both offer a combination of individual and group psychotherapy (Jepsen et al., 2013; Nurenberg et al., 2015; Rosner et al., 2011; Russell & Hendee, 2000; Small et al., 2018). Since wilderness therapy has much in common with these types of treatment, we can assume that the mechanisms of change present in other settings might also serve the same purpose when it comes to wilderness therapy.

Regarding queer populations in literature on adjacent treatments, research supports the necessity for "safe spaces" (Johnson, 2017, p. 29) as a necessity for positive treatment outcomes across settings. After-school programs—or, in the case of GSAs, school clubs—such as choirs and writing clubs present an opportunity to create empowering, queer-specific spaces for youth (Johnson, 2017; Heck, 2015; Palkki & Caldwell, 2018), particularly when queer people are affirmed and supported.

As for outpatient treatments, there is an abundance of evidence that queer populations experience significant levels of psychological distress related to their queerness and that they would likely benefit from mental health services tailored to them (Rowan, Jenkins, & Parks, 2013). When queer people enter non-queer-focused treatments, they may experience lower levels of

treatment completion and satisfaction (Buroughs et al., 2015; Eliason & Hughes, 2014; Senreich, 2009). Conversely, when mental health treatments adjust themselves to meet the specific needs of queer clients, those clients can experience have significant, positive outcomes (e.g., Boggan et al., 2017; Elderton et al., 2013; Riggle et al., 2014).

Finally, these same findings are reflected in literature on inpatient programs. When queer adults enroll in residential and inpatient programs that are not explicitly queer-affirming or that are actively discriminatory, they describe their experiences as negative (Lyons et al., 2015; Roberts et al., 2015). Furthermore, inpatient programs that are inclusive were associated with reports of more positive mental health treatment outcomes. It must be noted, however, that the literature on queer populations in inpatient and residential programs is scant; as such, the studies that do address treatment experiences are primarily qualitative. Moreover, many of the reviewed studies were international and took place in Europe. It is thus unclear whether and how treatment in the US may be different, which is yet another limitation of the literature on queer adults in residential treatment settings.

What Makes Wilderness Therapy Unique?

While this dissertation has paid attention to the ways in which wilderness therapy is similar to Outward Bound, after school programs, outpatient treatments, and inpatient settings, it is also important to discuss what sets wilderness therapy apart from these other modalities. First, while both wilderness therapies and Outward Bound courses take place outdoors, unlike Outward Bound, wilderness therapy programs also include daily group and weekly individual therapy supervised and delivered by licensed, qualified practitioners (Becker, 2010; Russell & Phillips- Miller, 2002).

Given wilderness therapy's focus on therapy, the question remains: What type(s) of therapy is/are used? The literature on the theoretical orientation of wilderness therapy is sparse in part because adventure therapy operates using an eclectic model that integrates psychodynamic,

cognitive behavioral, and humanistic orientations, among others (Gass et al., 2012). Wilderness therapy is intentionally eclectic, the authors continue, because it must meet the needs of a diverse client population within a dynamic environment. Indeed, several wilderness programs corroborate Gass and colleagues' assessment of wilderness therapy as grounded in several theoretical orientations, as many programs simultaneously integrate mindfulness, family systems theory, cognitive behavioral therapy, and dialectical behavioral therapy, among others ("Individual and Group Therapy," 2020; "Why Second Nature?," 2020; S. Zuidweg, personal communication, December 21, 2020). For examples of which wilderness therapy programs integrate which orientation(s), see Table 1. This topic will also be discussed in the Theoretical Orientations, Therapeutic Interventions, and Treatment Constructs section of this chapter.

In addition to their focus on therapeutic treatment, wilderness therapy programs tend to have several aspects in common. First, a typical wilderness therapy program ranges between six to 12 weeks, where the length of time often depends upon the therapist responsible for a student's treatment, who will allow the student to "graduate" when they believe the student is ready to leave. Second, individual and group therapy are integral to the treatment process. Third, rites of passage often mark the emotional, spiritual, and physical changes students experience while moving through their wilderness therapy programs (Bettmann et al., 2016; Davis-Berman & Berman, 2013; Roberts et al., 2016; Russell, 2000). These changes tend to happen in several phases: a "cleansing" phase that occurs at the beginning of the program and that helps students acclimate to their new life in the wilderness, a "personal and social responsibility phase" where the student learns to live responsibly among a community while tackling their individual treatment goals, and a "transition and aftercare" phase (Russell, 2001, p. 75). Finally, wilderness therapy combines "traditional therapy techniques… in a wilderness setting, when the wilderness is approached with therapeutic intent" (Russell, 2000, p. 170). This last aspect is what differentiates wilderness therapy programs

from other, more traditional inpatient settings; indeed, the wilderness is not only the setting for the lessons students are asked to learn (including self- efficacy, problem-solving skills, and adaptive coping skills; Houston et al., 2010; Russell & Walsh, 2010), but also often the teacher (often via metaphor) of these lessons (Fernee et al., 2017, Russell, 2001).

Yet another difference between traditional therapeutic models (including after school, outpatient, and inpatient programs) and wilderness therapy is that wilderness therapy attends not only to the mental health of its students, but also their physical and spiritual health. Substantial literature has supported physical health changes in students who participate in wilderness therapy programs. These changes are often measured by cardiovascular health, heart rate variability (a way to measure psychosomatic manifestations of anxiety), and a healthier body mass index (BMI, even though BMI is a problematic and limited way to frame physical health [see Evans & Colls, 2009]), as well as positive changes in students' relationships to their spiritual selves (Johnson et al., 2020; Reese et al., 2018; Tucker et al., 2016). Wilderness therapy programs target the physical and spiritual parts of their students' identities by incorporating healthy eating, daily mindfulness practices consisting of yoga and meditation, and rituals such as "solos," where students spend up to several days at a time without any human contact except to receive meals and medication (Harper et al., 2019; "Healthy Living," 2020).

That wilderness therapy programs address so many components of their students' lives by pulling from a variety of methodologies ranging from evidence-based treatments to rituals like the "solo" speak to their use of an "integrated care model" (Tucker et al., 2016, p. 17), i.e. one that addresses the mental and physical needs of its patients. However, it is necessary to mention that many of the practices employed by wilderness therapies—sweat lodges, the use of the medicine wheel, solos (similar to the Vision Quest of the Great Plains Indian tribes; "Hanblečeya – Crying for a Vision," n.d.), requiring students to learn how to make bow drill fires, and so on— are

appropriated from North American indigenous cultures (Skidmore, 2017). A thorough interrogation of wilderness therapy's—and, by extension, the US's—problematic and racist history of cultural appropriation is far beyond the scope of this dissertation.

Since wilderness therapy is still an emerging form of treatment, scholars have called for the standardization and regulation of wilderness therapy practices (e.g., Becker, 2010; Dobud, 2017; Houston et al., 2010; Pollack et al., 2013). Thus, to guard against malpractice and to set a minimum standard of care for wilderness therapy programs, states such as California have begun to pass legislation that requires programs operating within their borders to acquire state licensure and establishes students' rights (SB-524). While legislation sets the ethical "floor" (minimum) that wilderness therapy programs must meet, scholars have also generated standards in an effort to encourage wilderness therapy programs to aspire to a "ceiling" (best practices) of treatment, too (Knapp et al., 2017). The standards include: a) if it operates on public land, the program must be licensed by the state in which it operates, b) staff must be trained in specific interventions the programs proport to offer (for instance, programs advertising substance abuse treatment must have staff licensed and experienced in substance abuse work, c) programs regularly evaluate their own effectiveness, and d) programs work with aftercare programs to ensure that students continue receiving treatment after they leave the wilderness (Becker, 2010; Russell, 2001; Instruction Memorandum, 2008).

To help enforce these standards, the Outdoor Behavioral Healthcare Council (OBH) and the Association of Experiential Education (AEE) formed a partnership to create a set of "ethical, risk management, and treatment standards" by which they judge various wilderness therapy programs before accrediting them; so far, 19 wilderness therapy programs across the US have received AEE OBH accreditation ("Accreditation," 2020). Per the Outdoor Behavioral Healthcare Council, accreditation consists of an application to apply for accreditation, a self-assessment, a site

visit by a Council liaison, a majority vote by the Accreditation Council, and regular updates from the wilderness program to the Accreditation Council ("Outline of the AEE Accreditation Process," n.d.).

The Nuts and Bolts of Wilderness Therapy

Not only is it important to talk about what wilderness therapy is, but it is also necessary to understand the inner workings of wilderness programs. Thus, this section covers additional background information on wilderness therapy, including who attends these types of programs, why adolescents and young adults go to them, how long students stay once they are there, and how they get to and from the wilderness. Moreover, this section discusses the specific interventions and orientations employed in wilderness therapy programs.

Participants. With an understanding of what wilderness therapy is, it is also necessary to talk about the demographic composition of its participants. In North America, the vast majority of wilderness programs are government-funded, while only approximately 65 wilderness therapy programs are private pay (Johnson et al., 2020). There is "very little overlap" between many aspects of private pay and government-subsidized wilderness therapy programs, including who attends them (Bettmann et al., 2016, p. 2661).

When it comes to government-funded programs, the programs themselves tend to have fewer staff per student and resources tend to be more limited. Moreover, students in federally-subsidized programs often have complicated legal histories, are people of color, and are disproportionately male; relatedly, they are more likely than students in private programs to be mandated to attend wilderness therapy by the juvenile justice or child welfare systems (Bettmann et al., 2020). Government-funded programs tend to only accept clients from the surrounding areas and have extremely long wait lists. Furthermore, because demand is so high for these programs, only those with the most severe diagnoses are admitted (Christenson & Gutierrez, 2017).

This dissertation is concerned with private pay wilderness therapy programs. The reason for this choice is th=at the data used for analysis were collected by the Outdoor Behavioral Healthcare Council, which collects data solely from private pay programs; as such, the vast majority of their clients are of higher socioeconomic status and White ("Accreditation," 2020; Roberts et al., 2016).

Within the private pay sphere, generally speaking, adolescents (ages 13-17) tend attend in greater numbers than young adults; for instance, one study with almost 1,000 participants reported 192 young adults and 737 adolescents; 80% were from private pay programs and 20% were from government-funded ones (Hoag et al., 2014). When young adults do attend wilderness therapy programs, they range in age from 18 to anywhere up to 32 years-old, though the majority of young adult participants range between 18 and 23-years-old (Roberts et al., 2017). The main reason for the difference in adolescent and young adult attendance is that wilderness therapy programs were primarily designed for adolescents, with wilderness programs for young adults emerging only in the past few years; thus, there are often fewer adult groups within a given wilderness therapy program—if there is a young adult program at all (Russell, 2001; Bettmann et al., 2017). When wilderness therapy programs do have both adolescent and young adult programs, the structure between them is similar (Hoag et al, 2014). However, because young adults must consent to attending a wilderness therapy program and adolescents are compelled to go by their parents, young adults often have more privileges than adolescents do. For example, young adults are not usually required to count out loud when using the bathroom (to assure they are not running away) yet adolescents are (Kaplan, 2020; Rensin, 2016).

Regarding the matter of gender in wilderness therapy programs, adolescent groups are often separated by gender, while young adult groups can be mixed-gender (DeAngelis, 2013). Generally speaking, boys/men attend wilderness therapy programs with greater frequency than

girls/women (Hoag et al., 2014). Indeed, depending upon the study, the percentage of boys in a program often nears or exceeds 80% (Bettmann et al., 2014; Curtis et al., 2018; Hoag et al., 2013; Hoag et al., 2014; Roberts et al., 2017; Tucker et al., 2018). This number is particularly striking because 60% of young adults with mental health diagnoses are women (SAMHSA, 2014). One reason that scholars have hypothesized this treatment-need disparity is that parents and guardians may be more protective of women, meaning that female attendees may need to demonstrate even more distress than their male counterparts for parents to perceive them as warranting wilderness therapy (Hoag et al., 2013).

Regarding TGNB and sexual minority students, to the best of the author's knowledge, no data on TGNB clients in wilderness therapy are reported in published literature except for a single case study of a non-binary person (Tucker et al., 2020). One study did compare outcomes of straight to queer young adult wilderness therapy students, but it was not published in a peer-reviewed journal (Wright et al., 2017). Outcomes are promising, however, insofar as those who identified as queer saw greater improvement in Outcome Questionnaire 45- 2 (OQ 45.2; Lambert & Burlingame, 1996) scores than their straight counterparts (Wright et al., 2017). In addition, Wright and colleagues (2017) reported that slightly over 18% of the participants in their study self-identified as queer in some way, indicating the need for a more in- depth analysis of wilderness therapy outcomes in queer young adults.

In terms of race, most private pay wilderness therapy clients are White, with percentages in some studies nearing the upper 80s (Hoag et al., 2011; Hoag et al., 2013; Russell et al., 2008). This number is unsurprising because of the prohibitive cost of most private wilderness therapy programs; for instance, Summit Achievement Wilderness Therapy, one of the first wilderness therapies to receive OBH accreditation, charges $590 per day for a stay that averages between 42 and 56 days in addition to a $3,000 enrollment fee. Thus, the total price of a private pay wilderness

therapy program can be anywhere from $27,780 to upwards of $36,040 before the cost of transportation to and from the site (often via plane), which can add thousands more in cost ("Accreditation," 2020; "Financing Options," 2020). Summit Achievement is not anomalous in terms of the fees it charges: RedCliff Ascent Wilderness Therapy, another program accredited by the OBH, costs $485 per day with a minimum stay of 30 days ("Program Cost, Insurance, and Financing Information," 2019), putting the minimum amount at $14,550 before any transportation fees.

Compounding this cost is the expense of aftercare. Most wilderness therapy students attend some type of aftercare program—including boarding schools, residential treatment facilities, intensive outpatient programs, and so on—following graduation from their program, which can add tens of thousands in extra cost (Becker, 2010; Russell, 2005). With the high price of wilderness therapy programs in mind, and given that people of color—namely, Black, Latinx, and Indigenous populations—are disproportionately impacted by poverty, it follows that most private pay wilderness therapy students are White (Denavas-Walt & Proctor, 2015; Reeves et al., 2016).

Presenting Concerns. With the arguably-exorbitant cost of wilderness therapy, families do not make the decision to send their adolescents and young adults lightly—nor should they, due to the extreme nature of this type of intervention (Becker, 2010). Indeed, students sent to wilderness therapy programs are often enrolled in moments of acute crisis when their behavior feels unmanageable by their parents; as such, when enrollment occurs, one of the primary goals is student stabilization (Harper, 2009a; S. Zuidweg, personal communication, December 21, 2020). Oftentimes, previous, less intrusive interventions—such as intensive outpatient and inpatient programs— have failed and wilderness therapy becomes a family's last resort (Harper, 2009a). As an example, in a sample with 297 adult clients ages 18-34 (27% female, 73% male, 88% White), 71% of young adult participants had been in treatment prior to enrolling in wilderness therapy

(Hoag et al., 2013).

In a similar study, 55% of young adults who attended wilderness therapy programs carried four or more diagnoses (Hoag et al., 2014). These diagnoses were most commonly mood, anxiety, and substance use disorders, while a small percentage of students were (also) diagnosed with a persistent developmental disorder, learning disorder, or behavioral disorder. Strikingly, 82% of adults in their study were diagnosed with a substance use disorder (Hoag et al., 2014).

Mood disorders included Major Depressive Disorder and Bipolar Disorder; substance-use disorders were often related to cannabis, alcohol, cocaine, opioids, and amphetamines. Other common diagnoses included Attention-Deficit Hyperactivity Disorder (ADHD) and Oppositional defiant Disorder (ODD; Hoag et al., 2014). These complex diagnostic profiles highlight one reason that previous types of treatment have not worked and why, therefore, participants ended up in an extreme treatment program such as that of wilderness therapy.

Additional studies reported similar presenting concerns. In Curtis and colleagues' (2018) study comparing residential treatment to outdoor behavioral therapy (i.e., wilderness therapy), over two thirds of their participants carried three or more diagnosis. Furthermore, within the wilderness therapy portion for their sample, 44.8% were referred primarily for a mood or anxiety disorder, 37.3% were referred for a substance use disorder, and a small percentage were referred for behavioral disorders (Curtis et al., 2018). Demographically, this sample was similar to Hoag and colleagues (2014) study: 73.40% of clients were male, 26.50% were female, and .10% identified as "other," 87.80% of participants were White, and they ranged in age between 17 (.5% of the sample) and 25.

In another sample of young adults in wilderness therapy, mood and anxiety disorders accounted for 52.1% of referrals, substance use disorders accounted for 30.6% of referrals, and the rest of participants cited developmental, behavior, and attachment disorders as their reason for

referral (Roberts et al., 2017). Roberts and colleagues' (2017) sample was demographically similar to other studies referenced in this section: 82.3% of participants were male and the rest were female, they ranged between 18 and 32 years of age. No data on clients' race and ethnicity were collected or reported (Roberts et al., 2017).

Transportation. As previously mentioned, the average wilderness therapy program ranges in length from to approximately six to 12 weeks, though programs have been known to last only five weeks and to go up to 22 weeks (Bettmann et al., 2016; Roberts et al., 2017). Yet one does not spontaneously end up in a wilderness therapy program. Many families work with an educational consultant or a therapeutic placement consultant, who will recommend a wilderness therapy program to them and who often helps them get their foot in the door with their program of choice (Bolt, 2016). The educational consultant often has a role beyond connecting a family to a wilderness therapy program; they often guide the family through a student's entire treatment journey, from the crisis intervention of wilderness therapy to programs that decrease in intensity as the child improves (Bolt, 2016).

When it comes to adolescents, because they are underage and under the advice of their educational consultant, many parents hire transport services to "escort" their children to wilderness programs. Adolescents who are transported via these escort services are often unexpectedly woken up in the middle of the night by strangers and driven either to the wilderness therapy program or to the airport, where they are in the legal custody of the escort service until they are formally enrolled in their wilderness therapy program (Becker, 2010; Tucker et al., 2018). Anecdotal evidence suggests that these services are abusive; indeed, news outlets often refer to these types of programs as "kidnapping" services, and horror stories detail teens who experience Post-Traumatic Stress Disorder (PTSD)-like symptoms following their "kidnapping" (Solomon, 2016). These stories are worsened by the fact that the transportation requirements are legislatively regulated in

some but not all states, so the quality of care that adolescents receive varies greatly (Pollack et al., 2013).

The extreme and jarring way in which youth are transported to wilderness therapy programs raised ethical dilemmas raised for Becker (2010), who suggested that forcing an adolescent into treatment (and removing their opportunity to assent) might increase their resistance to therapy. Thus, one might think that such a rocky start might sour the wilderness therapy experience in its entirety, leading to weaker treatment outcomes in transported youth when compared to non-transported youth.

Outcomes between these two groups are actually similar (Tucker et al., 2015; Tucker et al., 2018). In a sample of 350 adolescents in wilderness therapy, 50.9% of whom were transported to their treatment program and 50.3% of whom were male, there was no statistically significant difference in outcomes between those who were transported to their program and those who were not (Tucker et al., 2015). Data were collected at one week into the program, discharge, and at six months post-discharge. Notably, youth who were transported to wilderness therapy did report higher levels of psychological distress and dysfunction at intake; however, the differences between transported and non-transported youth were not statistically significant when comparing discharge scores (Tucker et al., 2015).

A follow-up study by the same principal investigator yielded similar results. This time, data were collected from 282 matched pairs of adolescents—67.38% male and 22.62% female; no statistics on race, ethnicity, or sexual orientation were reported—not only at intake and discharge, but also at six months follow-up. When comparing the mental health outcome data of the 64.5% of youth who were transported to treatment to those who were not, the authors observed no significant differences in post-treatment symptomatology reduction. These results were consistent not only at discharge, but also up to six months after treatment ended (Tucker et al., 2018).

Notably, to the best of the author's knowledge, the participants in the present study did not arrive at wilderness therapy via these transportation methods. All participants were over the age of 18 and thus consented to treatment.

Section Summary. This section discussed the demographic makeup of wilderness therapy participants, the majority of whom are White, male, and from middle class or wealthy families because wilderness therapy is so costly (e.g., "Financing Options," 2020). As such, a typical private pay wilderness therapy program's student population is over 80% White (Hoag et al., 2013). It is also often upwards of 70% male, perhaps because families are more reticent to send their female children to wilderness therapy (Hoag et al., 2013). Notably, wilderness therapy participants—compared to the general population—may be disproportionately queer (Wright et al., 2018).

Furthermore, most young adults who attend these types of programs have been enrolled in an alternative form of treatment in the past; moreover, many of them carry comorbid diagnoses, one of which is often a substance use disorder (Hoag et al., 2014). Other common presenting concerns include mood disorders and behavioral disorders (Curtis et al., 2018; Roberts et al., 2017). Finally, the ways in which students wind up in wilderness therapy was discussed. Adolescents tend to be transported to the wilderness, while young adults must be convinced by their parents to go (Loftin, 2020; Tucker et al., 2018).

Theoretical Orientations, Therapeutic Interventions, and Treatment Constructs

While researchers have established a consistent definition of what wilderness therapy is (and is not), few studies address how wilderness therapy programs operationalize their treatments. This section focuses on the specific interventions and orientations wilderness therapy programs use, as well as some of the theoretical underpinnings for why wilderness therapy works. Finally, this section addresses which of the interventions and constructs central to wilderness therapy might

specifically apply to queer populations.

Theoretical Orientations. The treatment orientations wilderness therapy programs use vary from site to site. OBH-accredited wilderness therapy programs report using cognitive behavioral, dialectical behavioral, and family systems orientations, among others, in their work with students ("Individual and Group Therapy," 2020; "Our Clinical Approach to Wilderness Therapy," 2020; "The Therapy Experience," 2020; "Therapeutic Methods," 2020; "Therapeutic Approach," 2020). It is likely that more orientations are used, although promotional material on programs' websites offers little insight into theoretical nuance.

Since online promotional materials offer little information, this author spoke with Sebastian Zuidweg, Open Sky Wilderness Therapy's clinical director. Within Open Sky, wilderness therapists can exercise flexibility when it comes to how they implement these orientations. Indeed, therapists who work for Open Sky Wilderness Therapy, which predominantly utilizes CBT, DBT, and family systems theory, often integrate additional frameworks, such as a Rogerian approach—i.e., one framed by unconditional positive regard and by an emphasis on the therapeutic alliance—into specific interventions ("Individual and Group Therapy," 2020; Rogers, 1957; S. Zuidweg, personal communication, December 21, 2020). One way this approach is applied might be when considering a student's maladaptive behaviors in relation to which need those behaviors try to meet, and how to better meet those needs without compromising a student's core values (S. Zuidweg, personal communication, December 21, 2020). This frame is partly rooted in cognitive behavioral therapy insofar as it looks at changing maladaptive behavior to improve mental health and partly rooted in Rogerian humanism insofar as it believes in the client's inherent goodness. Stated differently, perhaps student (a term that is interchangeably used with "client") misuses substances to cope with a traumatic event in their life and steals from their parents to pay for those substances. Their work in wilderness therapy would include identifying what need

those substances fulfill, such as the need to cope with painful memories, and how to accomplish this goal without harming those they love.

While it is unclear how flexible other wilderness therapy programs are, this possibility seems likely. Wilderness therapies tend to specialize in certain populations and to accordingly adapt their treatment methods (S. Zuidweg, personal communication, December 21, 2020). New Vision Wilderness Therapy, which specializes in attachment difficulties, uses canine therapy to provide students with stable attachment figures while blueFire Wilderness Therapy, which emphasizes community living, utilizes equine-assisted therapy to teach personal responsibility ("Canine Therapy," 2020; "Equine Therapy at blueFire," 2020). Moreover, therapists in each of these programs pull from a variety of theoretical orientations (cognitive behavioral therapy, dialectic behavioral therapy, dyadic developmental therapy, recreation therapy, and motivational interviewing, to name a few) while doing this animal-assisted work ("Our Clinical Model," 2020; "Therapeutic Model," 2020).

Therapeutic Interventions. It is also important to look at which specific interventions comprise these theoretically integrative approaches. One treatment intervention that wilderness therapies have in common is that of mentorship systems wherein a senior student is responsible for helping an incoming student acclimate to wilderness living ("Adventure Therapy for Young Adults from South Carolina," 2020; "Clinical Approach," 2020; S. Zuidweg, personal communication, December 21, 2020). Mentorship has been demonstrated to ease difficult transitions and to provide peer support in what can be isolating settings (Douglas et al., 2019; Klodnick et al., 2015). Moreover, wilderness therapy programs utilize peer mentorship to increase participant buy-in under the logic that by seeing others who readily engage with wilderness therapy, a new student will be quicker to trust their treatment team (S. Zuidweg, personal communication, December 21, 2020). Mentorship programs work across a broad variety of

therapeutic orientations to the extent that alliance-building and student buy-in are pivotal regardless of a clinician's framework (Horvath, 2001).

Another intervention common to wilderness therapy programs is that of psychoeducation, or the process of providing students with tools to problem-solve and better communicate with each other. Psychoeducation is broad in scope; in the context of wilderness therapy, it means teaching coping strategies common to CBT and DBT. These strategies include, but are not limited to, making "I feel" statements, practicing emotional regulation, and utilizing mindfulness techniques ("Clinical Approach," 2020; "Individual and Group Therapy," 2020; Joyce-Beaulieu & Sulkowski, 2015; Maffei et al., 2018; S. Zuidweg, personal communication, December 21, 2020; "Therapeutic Work at Trails Carolina," 2020). These strategies may also integrate aspects central to additional theories. An "I feel" statement, for example, may be followed by a specific request for support, thereby incorporating a relational component (S. Zuidweg, personal communication, December 21, 2020). Psychoeducation also includes lessons taught through metaphor, such as Open Sky's Dragon Ceremony, where students identify and name the barriers that have kept them from well-being in the past (i.e., misusing substances, pushing others away, the fear of being unlovable; S. Zuidweg, personal communication, December 21, 2020).

Treatment Constructs. The previously mentioned interventions are derived from treatment constructs that underpin wilderness therapy programs. Indeed, while wilderness therapies do have much in common with more traditional treatment settings, they are also different to the extent that they take place in the wilderness (for a discussion of similarities and differences between wilderness therapy programs and standard treatment types, please see the Wilderness Therapy's Similarities to Other Treatment Modalities and What Makes Wilderness Therapy Unique? sections in this chapter). Taking the setting into account, one model by Russell and Farnum (2004) recognizes three main factors that differentiate wilderness therapy: the wilderness,

the physical self, and the social self. According to the authors, these components create the "therapeutic milieu," or the environment in which therapy takes place. The wilderness provides a controlled setting for treatment to occur; the physical self must survive the challenges of living in the wilderness by becoming stronger and more adept at completing tasks of daily living; and the social self is tasked with living in a dynamic group environment wherein feedback about a student's behavior and impact on others is emphasized and wherein working as part of the team is the only way to make it through the program (Russell & Farnum, 2004).

The physical activities central to wilderness therapy call upon all three parts of Russell and Farnum's (2004) model. Indeed, wilderness programs intentionally emphasize rigorous daily exercise. The goal is clear: "Hiking creates space for meaningful conversation, challenge, and a sense of accomplishment" ("Sample Daily Schedule," 2020). Thus, not only does physical exercise improve most participants' physical health, but it also teaches them lessons about the wilderness as a teacher, relying on others for support, and trusting in oneself to overcome challenging tasks.

Another construct central to wilderness therapy is that of the therapeutic alliance, or "strength and quality of the relationship between the client and the therapist" (Harper, 2009b, p. 45). The therapeutic alliance is crucial in any mental health treatment setting, wilderness therapy included. Using a sample of 85 adolescent wilderness therapy students, the majority of whom were White and male, Harper (2009b) assessed the relationship between the therapeutic alliance and treatment outcomes. The author observed a non-significant relationship between the two constructs due in part to the high rates of participant attrition as students moved through the program. However, it is important to note that prior literature has substantiated a significant, positive relationship between the strength of a therapeutic alliance and treatment outcomes, indicating that future research in this area as it pertains to wilderness therapy may be promising (Arnow et al., 2013; Harper 2009b; Hogue et al., 2006).

Research has also looked at substance use recovery skills, readiness to change, and symptom reduction impact wilderness therapy treatment outcomes (Bettmann et al., 2013). Participants were 189 adolescents (66% female and 81.6% White) who attended wilderness therapy programs for an average of 64.7 days. The authors did not find a significant relationship between readiness to change and treatment outcomes, suggesting that, at least for adolescents, buy-in may not be as important as previously thought. Furthermore, Bettmann and colleagues (2013) noted that, when it came to substance use-focused treatment, abstinence strategies were most strongly correlated with positive change scores.

Applying These Techniques to Queer Populations. Substantial research posits that several of the interventions mentioned above. In terms of theoretical orientation, applying Rogers' unconditional positive regard to traditional psychotherapy has been linked to meaningful changes in mental health for queer clients across a wide range of ages, from adolescents to older adults (Hinrichs & Donaldson, 2017; Lemoire & Chen, 2005; Roe, 2017). Specifically, clients identified explicitly-affirming support—especially when it is given without judgment—as one of the most impactful aspects of treatment. Wilderness therapy programs also center unconditional positive regard as evidenced by the fact that several wilderness therapy programs emphasize this construct (Russell, 2000; S. Zuidweg, personal communication, December 21, 2020; Souza, 2019).

Regarding interventions themselves, a growing body of literature has addressed how effective behavioral (namely, CBT and DBT) interventions are at improving the mental health of queer individuals (Chaudoir et al., 2017; Craig et al., 2013; Pachankis, 2014; Pachankis et al., 2015; Ross et al., 2008). Notably, these studies are geared toward reducing minority stress rather than supplying queer young adults with concrete coping strategies (and none of these studies name the specific interventions delivered; Chaudoir et al., 2017); as such, a direct comparison of these interventions to those of wilderness therapy is not possible at this time. Relatedly, scholars have

called for more research on this area with the aim of further concretizing what queer-specific CBT and DBT includes (Beard et al., 2017; Craig et al., 2013; Hart et al., 2020; Melendez-Torres & Bonell, 2014).

Section Summary

This section has attempted to concretize some of the methodology and theories behind wilderness therapy. It has done so by discussing the theoretical orientations wilderness therapists often employ, some of the interventions employed in wilderness therapy treatment, and the rationale behind those choices. Moreover, this section examined the ways that these ideas apply to queer individuals.

In terms of treatment orientations, wilderness therapies tend to use CBT, DBT, and family systems theory, though frameworks often vary between and within programs and incorporating Carl Rogers' unconditional positive regard seems to be consistent across programs ("Individual and Group Therapy," 2020; "Our Clinical Approach to Wilderness Therapy," 2020; S. Zuidweg, personal communication, December 21, 2020; "The Therapy Experience," 2020; "Therapeutic Methods," 2020; "Therapeutic Approach," 2020). Interventions within these orientations include peer mentorship and psychoeducation about topics such as healthy communication, boundary setting, and healthy coping strategies. These aspects are common across programs ("Adventure Therapy for Young Adults from South Carolina," 2020; "Clinical Approach," 2020; "Individual and Group Therapy," 2020; Joyce-Beaulieu & Sulkowski, 2015; Maffei et al., 2018; S. Zuidweg, personal communication, December 21, 2020). This section also highlighted some of the underlying constructs in wilderness therapy—namely, the factors that differentiate wilderness therapy from traditional treatment settings and the universally-applicable therapeutic alliance (Haper 2009b; Russell & Farnum, 2004).

Many of the therapeutic approaches mentioned earlier have been researched using queer

participants. Indeed, unconditional positive regard is an important aspect of treatment for queer clients of all ages—especially when that positive regard centers one's queer identity without pathologizing it (Lemoire & Chen, 2005; Hinrichs & Donaldson, 2017; Roe, 2017). Beyond unconditional positive regard, the incorporation of behavioral therapies, including those that wilderness therapy programs typically use, has significant empirical support when it comes to treating queer populations (Craig et al., 2013; Chaudoir et al., 2017; Pachankis, 2014; Pachankis et al., 2015; Ross et al., 2008).

Wilderness Therapy Treatment Outcomes

In addition to analyzing how and why wilderness therapy operates, this dissertation is primarily concerned with examining wilderness therapy outcomes. Generally speaking, the literature suggests that individuals who attend wilderness therapy programs see reductions in psychological distress as well as improvements in physical health (e.g., Bettmann et al., 2017; Curtis et al., 2018; Hoag et al., 2013; Hoag et al., 2014; Roberts et al., 2016; Roberts et al., 2017; Russell et al., 2017; Tucker et al., 2018), although sources continue to call the effectiveness of wilderness therapy into question (Bierma, 2020; Kaplan, 2020; Rensin, 2016). This section will discuss wilderness therapy outcomes along several key parameters: by presenting problems, by dosage (i.e., how much time in wilderness therapy is needed in order to generate significant, long-lasting reductions in symptomatology, whether that change takes the form of behavioral or psychological change), longitudinally, and compared to other treatments.

Where possible, this section will discuss presenting problems in relation to the Outcomes Questionnaire-45.2 (OQ 45.2; and, when adolescents are involved, the Youth Outcomes Questionnaire [Y-OQ-2]) as the outcome variable, as the OQ 45.2 is the primary dependent variable in the proposed study (Burlingame et al., 1996; Lambert et al., 1996; Lambert et al., 2004).

Changes in behavioral regulation and emotional health are measured via the Youth

Outcome Questionnaire Self-Report 2.0 (Y-OQ-2.0-SR) and its shorter version, the Youth Outcome Questionnaire 30 Self-Report (Y-OQ-30-SR; Burlingame et al., 1996). Both the Y-OQ-2.0-SR and the Y-OQ-30-SR have several subscales: intrapersonal distress, somatic problems, interpersonal relationships, social problems, behavioral dysfunction, and "critical items" that indicate that specific follow-up is needed (Burlingame et al., 1996). Furthermore, both Y-OQ assessments have been successfully screened for reliability and validity across a diverse, normative sample (Burlingame et al., 2004; Dunn et al., 2005).

Regarding adults, this dissertation and other studies use the Outcomes Questionnaire-45.2, which is used with adults (Lambert & Burlingame, 1996). Like the youth versions, the OQ 45.2 measures a client's psychological distress. It does so across three broad categories: symptom distress, interpersonal relationships, and social role performance (Lambert & Burlingame, 1996). The OQ 45.2 has been found to have strong reliability, validity, and internal consistency, and to be sensitive to changes in a participant's mental health (Beckstead et al., 2003; Boswell et al., 2013; Lambert & Burlingame, 1996; Schulenberg, 2004; Vermeersch et al., 2000).

By Presenting Problems. The presenting problem is typically whatever obstacle brings a client to wilderness therapy in the first place. Within the realm of wilderness therapy, presenting problems include anxiety, depression, substance use, a "failure to launch," gaming addiction, low self-esteem, and so on, as well as a combination thereof (e.g., "Young Adult Profile," 2020). A growing body of literature has been published on presenting problems in relation to wilderness therapy outcomes (Bettmann et al., 2016; Tucker et al., 2014; Roberts, 2015).

In one such study, researchers examined outcomes in residential treatment facilities and wilderness therapy programs (Tucker et al., 2014). Participants were 1,058 adolescents—the vast majority of whom (85.6%) came from wilderness programs—with an average age of 15.7 years. 73.4% of participants identified as male, 23.6% identified as female, and 67 had missing gender

data. No data on race, ethnicity, or sexual orientation were reported. According to the results (analyzed chi square analysis), mean changes in Y-OQ-SR-2 and Y-OQ-30-SR suggest that those in wilderness therapy programs experienced clinically significant changes in mental health, though 32.3% of wilderness therapy graduates reported no clinically significant improvements at post-test. Importantly, the only significant predictor of improvement was gender, where female participants were 3.5 times more likely to report statistically significant levels of improvement. There were no differences in outcomes based upon presenting problem, although having an attention-related disorder was marginally significant ($p = .056$; Tucker et al., 2014).

Another study on adolescents yielded similar results (Tucker et al., 2018). In a sample of 282 youth, 69.5% were diagnosed with a mood disorder, 56.4% with an anxiety disorder, 66.3% with a conduct or behavioral disorder, and 62.7% with a substance use disorder (for additional data on participant demographics, please see the write-up of this study in the Transportation section of this chapter.) Adolescents across all diagnostic groups reported significant improvements in Y-OQ-SR scores. Interestingly, per the Y-OQ 2.01 (the parent form of the Y- OQ-SR), parents reported the highest levels of change across time for those diagnosed with substance use disorders regardless of the use of transportation not only at discharge, but also at six months follow-up (Tucker et al., 2018).

Beyond adolescents, literature on wilderness therapy has looked at outcomes in young adult clients (Roberts et al., 2016; Bettmann et al. 2016). Using the OQ 45.2, psychological distress was collected at weeks one, three, five, at discharge, and at six and 18-month follow-up. The final sample consisted of 153 men (82.26%) and 33 women (17.74%) ages 18 to 32. Participants remained in their program for an average of 10.1 weeks, though length of stay ranged anywhere from five to 22 weeks. 39% of participants were primarily diagnosed with a mood disorder, 30% with a substance use disorder, 13% with an anxiety disorder, and the remaining 18% with a

developmental, behavior, or attachment disorder. Using hierarchical linear modeling, the authors determined that, while wilderness therapy was associated with clinically significant improvements in OQ-4.2 scores at three and five weeks into the program (but not at discharge), there were no statistically significant differences in outcomes between clients of different presenting concerns. These results mirror those of Tucker and colleagues (2014), leading the authors to speculate that, because wilderness therapy programs are selective—and that young adults who do go are in acute mental health crises—there is a greater likelihood that participants will experience meaningful change while in their program (Roberts et al., 2016).

In addition to wilderness therapy programs that cater to a wide array of presenting problems, specialized programs exist (Russell et al., 2016). In an exploratory study with 32 young adult men—mean age 22.9 years; no data on race, ethnicity, on sexual orientation were reported—at Shunda Creek Wilderness Therapy, a 10 to 12-week government-funded wilderness program located in Alberta, Canada, with data collected and analyzed in the United States, OQ 45.2 scores were collected at intake, every two weeks after intake, and discharge. Participants also completed the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006), which assesses mindfulness skills, at intake and discharge. Using pairwise t-tests adjusted with Bonferroni corrections, the authors found significant evidence that clients experienced change while in wilderness therapy; indeed, self-reported measures of subjective discomfort, interpersonal relationships, and social engagement all improved, as did mindfulness skills (Russell et al., 2016).

By Dosage. Beyond an understanding of which presenting problems can be addressed in wilderness therapy, it is important to consider how long it might take for the treatment to start having an effect—especially, as has previously been discussed, because wilderness therapy is so time- consuming and expensive. To reiterate, the term "dosage" refers to how much time a student must spend to experience significant and longitudinal reductions in psychological distress. As

scholarship relates to dosage and wilderness therapy, studies seem to be relatively consistent with one another (Hoag et al., 2013; Roberts et al., 2016; Tucker et al., 2018).

As dosage impacts adolescent treatment, data suggest that adolescents experience diminishing returns following their first few weeks of wilderness therapy. Indeed, data collected from 645 adolescents in wilderness therapy (68.6% male, 32.4% female, 64.5% of whom had been transported to treatment) demonstrate that participants' Y-OQ scores significantly declined from weeks 0 to 8, with participants reporting progressively lower Y-OQ scores from intake and through discharge. Moreover, following graduation, the average Y-OQ score moved up a nominal amount, leading the authors to suggest that wilderness therapy had a significant, long- term impact on its clients. No statistically significant differences were reported by gender (Tucker et al., 2018).

Researchers have also conducted studies on dosage in young adult samples. In one study, Hoag and colleagues (2013) collected data from 297 young adults. Twenty seven percent of participants were women, 73% were men, and 88% were White. They ranged in age between 18 and 34-years-old with an average wilderness therapy treatment time of 9.8 weeks. Data were collected at intake, week three, week five, discharge, and six months after discharge. As measured by the OQ 45.2 via paired samples t-tests, clients entered with an average score that indicated clinically significant distress (M_{intake} = 67.32, SD = 21.6) and exited the program with, on average, OQ 45.2 scores within normal limits ($M_{discharge}$ = 38.82, SD = 20.2); this change was statistically significant. Moreover, while change was consistent between time points, it took five weeks for OQ 45.2 scores to drop low enough to reach clinical significance (Hoag et al., 2013).

Another study yielded similar results insofar as decreases in distress seemed to plateau at about five weeks into treatment (Roberts et al., 2016). With a sample of 186 students in OBH-accredited programs, the researchers collected data at week one, week three, five, at discharge, and at six and 18-month follow-up. 17.74% of participants were women, 82.26% of participants were

men, they ranged in age from 18 to 33 years-old, and stayed in their wilderness programs for anywhere from five to 22 weeks. No data on race, ethnicity, or sexual orientation were reported. Per OQ 45.2 outcome data, participants began treatment with mean OQ 45.2 scores of 71, indicating significant clinical distress. By week five, on average, participants' scores dropped below 63, which indicates distress within normal limits. Statistically significant change occurred between intake and week three and between week three and week five, with no significant differences occurring between any other two time points.

Longitudinally. For many reasons, collecting data after clients graduate from their wilderness therapy program is challenging (Hoag et al., 2013; Combs, 2016), an obstacle that inevitably impacts the degree to which scholars can collect longitudinal outcome data. One reason that longitudinal data collection is so difficult is that clients often move between multiple treatment facilities and locations following their time in wilderness therapy. Yet another reason is that while students are in aftercare programs, parents serve as the primary contact between a wilderness program and its graduates; as such, responses can be inconsistent because most young adults and adolescents live away from their homes in the months and, sometimes, years following wilderness therapy (Combs, 2016). To help overcome this obstacle, Comb (2016) recommends an "interactive follow-up process" (p. 20) that directly reaches out to the student via their personal e-mail address, and that involves that student's aftercare program and their parents in the data collection process. Relatedly, Hoag and colleagues (2013) observed that directly e- mailing wilderness therapy graduates—as opposed to sending surveys via mail—improved response rates from 3% to 33%.

Keeping in mind that an optimal way of gathering longitudinal data has yet to be developed, only a few studies assess long-term wilderness therapy outcomes. In a study with 88 adolescent wilderness therapy participants (67% male and 33% female; no data on race, ethnicity, or sexual orientation were reported), participants were assessed up to two years following their graduation

from wilderness therapy (Russell, 2005). Per Y-OQ results, at 12 months follow-up, participants reported lower Y-OQ scores at discharge than they did at intake; however, the author did not report whether the changes were significantly different. Moreover, Y-OQ scores between those who attended residential versus outpatient aftercare programs were different, but again, they were not different at a statistically significant level. At the same time, per data collected from participants via semi-structured interview, two years after graduation, 90% of the wilderness therapy students the authors surveyed stated that they believed wilderness therapy was effective (Russell, 2005).

A more recent study (Tucker et al., 2018) compared outcomes between adolescents transported ("escorted") to wilderness therapy and those who were not. Data were collected one week into participants' wilderness therapy programs, at discharge, and at six months after graduation (for a discussion on the differences in outcomes based on transportation and participant demographics, please see the Transportation section of this chapter.) Using the Y- OQ-SR, data were collected at intake, discharge, and at six-month follow-up. According to multilevel modeling analyses, for all adolescent groups, there were significant improvements in Y-OQ-SR scores at all time points relative to intake. Adolescents' parents also reported significant and sustained improvement for as long as six months post-discharge, at which point data collection ceased.

As longitudinal data pertain to young adults, the literature on this population is even scarcer than the literature on adolescents. Indeed, when researchers have attempted to collect longitudinal data on young adults, they often met with response rates so low that they lacked the statistical power to run analyses (Hoag et al., 2014). As such, only a few successful longitudinal studies on wilderness therapy have been published. In one successful example, Roberts and colleagues (2016) were able to connect longitudinal data. Using a sample of 186 young adults in wilderness therapy—ages 18 to 32 years-old, 82.3% male and 17.7% female, with length of stay ranging from five to 22 weeks; no data on race, ethnicity, or sexual orientation were collected—Roberts and colleagues

(2016) collected outcome data from participants a total of six times using the OQ 45.2. Time points were at week one, week three, week five, discharge, six months post-discharge, and 18 months post-discharge.

According to analyses performed via hierarchical linear modeling, participants reported significant symptom reduction across all three domains of the OQ 45.2 (symptom distress, interpersonal relationships, and social role performance) from week one to week five and then from week 5 to discharge. Between week five and discharge, OQ 45.2 responses increased slightly though not significantly and stabilized between discharge and the last time point (18 months post-discharge; Roberts et al., 2016).

Compared to Other Treatments. Not only is it important for wilderness therapy programs to be effective, but it is also important for them to be effective in comparison to other treatments—especially when someone is in psychological distress; otherwise, there is no discernable reason someone would choose wilderness therapy—which is an expensive, intensive treatment option—over one that is more accessible to the general population. Again, the literature comparing wilderness therapy to other treatments is relatively scarce (Gass et al., 2012).

The few studies that do exist are promising. One such study was conducted by Bowen and Neill (2013), who ran a meta-analysis on 197 wilderness therapy studies published between 1967 and 2012. The study represented a staggering 17,728 unique participants; 62% of participants were male and 38% were female. They ranged in age from nine to 65 years-old (M = 17, SD = 7) with an average length of stay of 26 days (M = 64, SD = 148). Wilderness therapy students were compared to those who participated in alternative treatments—i.e., non-wilderness therapy programs—and to control group participants—i.e. those who did not receive therapy. According to their analyses, short-term wilderness therapy outcomes were moderate (Hedges' g = .47). In comparison, effect sizes for the alternative and no treatment groups were smaller (g =.14 and g =

-.03, respectively). Finally, wilderness therapy results were sustained in the long- term (g = .03; Neill & Bowen, 2013). It must also be noted that this study looked not only at the US and Canada, but also at programs globally; as such, caution should be exercised when attempting to narrow the study's application to solely North American wilderness programs.

Curtis and colleagues (2018) also compared wilderness therapy programs to more traditional ones. To do so, they examined OQ 45.2 outcomes of young adults in wilderness therapy and in a non-wilderness-based residential treatment program. Their sample consisted of 760 young adults from wilderness programs and 450 young adults from residential treatment centers. Those in wilderness therapy programs averaged 20.31 years in age, 87.8% of them were White, and 73.4% of them were men; those in residential treatment programs averaged 21.18 years in age, 84.4% of them were White, and 59.5% of them were men. One-way repeated measures ANOVAs were conducted for the wilderness therapy and for the residential treatment groups. Results indicate that, in terms of outcomes measured via the OQ 45.2, there was no statistically significant result between wilderness therapy and residential treatment setting (Curtis et al., 2018). Furthermore, graduates of both types of programs maintained their gains by the six- month follow-up, although young adults in wilderness therapy programs reported a statistically (but not clinically) significant uptick in interpersonal distress following termination from their program. It must also be noted that there was a large amount of variance in outcome measures for both groups and at each time point, indicating that results were not uniform across participants (Curtis et al., 2018).

Section Summary. A growing body of literature supports the effectiveness of wilderness therapy. Using literature that primarily cites the Y-OQ (for adolescents) and OQ 45.2 (for young adults) as outcome variables, this section has addressed outcomes by presenting problems, dosage, longitudinally, and in relation to other treatment. Regarding presenting problems, the literature

suggests that, after graduating from wilderness therapy programs, adolescents and young adults with a variety of presenting concerns—including mood, behavioral, and substance use disorders—reported clinically and statistically-significant improvements across all three subscales of the Y-OQ and OQ 45.2 (Bettmann et al., 2016; Roberts et al., 2016; Russell et al., 2016; Tucker et al., 2014; Tucker et al., 2018). Moreover, for adolescents, wilderness therapy seems to consistently lower Y-OQ scores from intake to discharge, although only one study on adolescents and dosage was found (Tucker et al., 2018). As for young adults, the impact of wilderness therapy seems to become statistically and clinically significant starting from five weeks into the program, at which point students experience diminishing returns in terms of OQ 45.2 score reductions. These gains seem to be maintained not only through treatment, but also up to 18 months post-discharge, although data are scarce because of the practical barriers of following young adults' treatment trajectories for so long (Hoag et al., 2013; Hoag, 2014; Combs, 2016; Russell, 2005; Roberts et al., 2016). Finally, wilderness therapy seems to be either more effective than or at least as effective as other types of treatment. It is also significantly more effective than receiving no treatment, though further comparison research is needed (Gass et al., 2012; Neill & Bowen, 2013; Curtis et al., 2018).

Queer People and Wilderness Therapy

Given the emerging research that continues to provide evidence for the effectiveness of wilderness therapy across presenting concerns and client ages, it is curious that studies that explicitly examine gender identity and sexual orientation remain relatively uncommon; indeed, queer students have been mentioned in wilderness therapy literature only two times (Tucker et al., 2020; Wright et al., 2017), only one of which was in a peer-reviewed journal. One reason might be that the field is still trying to establish itself among majority (i.e., straight) populations and that there simply are not enough resources to dedicate to a relatively small subset of wilderness therapy

attendants. Regardless of the reasons behind its existence, this gap is striking considering that queer populations are at a greater risk of deleterious physical and mental health outcomes—including higher rates of heart disease, substance use, depression, anxiety, and poverty (Cochran et al., 2001; Frost et al., 2015; Grant et al., 2014; Haas et al., 2010; Hottes et al., 2016; Keuroghlian et al., 2015; Witcomb et al., 2018)—compared to their straight counterparts. Moreover, as discussed in Chapter I: Introduction, compared to straight people, queer individuals often have negative (or at least less positive) experiences with mental healthcare when they are treated with interventions not tailored to them (e.g., Rimes et al., 2018; Senreich, 2009). They are also less likely to seek out mental health care compared to straight people due to a variety of barriers, including insensitive staff members and gatekeeping service providers (Reisner et al., 2015; Snow et al., 2019).

Queer young adults may also be over-represented in inpatient settings, including in wilderness therapy. Indeed, one unpublished study that examined 2,953 young adults (46.8% attended wilderness programs and 1,572 were in residential treatment programs) reported a queer participant rate of 18.1% (Wright et al., 2017). This number is high when considering that estimates of the percentage of LGB adults range from approximately 2-4% (Haas et al., 2010; Silenzio et al., 2007). Meanwhile, estimates of those who identify as TGNB range from approximately .5% to .8% depending upon one's race, ethnicity, and age, though these numbers—especially those regarding TGNB adults—are almost certainly underestimates (Flores et al., 2016; Herman et al., 2017). While it may seem counterintuitive that a historically underrepresented group in traditional treatment settings is overrepresented in wilderness therapy and residential inpatient settings, it is possible that this discrepancy exists because queer people—due to the extreme societal pressure placed upon them—do not seek treatment until they reach points of crisis, which often requires a more extreme intervention such as wilderness therapy. Another possibility is that

wilderness therapy appeals to the families of queer young adults because those families look for a service that can help them address complicated presenting concerns (i.e., an interaction between queerness and a mood, substance use, and/or behavioral disorder). These reasons are conjecture; as such, examining the disproportionately high number of queer young adults in wilderness therapy is a key area of future research.

It is important to study queer young adults within the context of wilderness therapy for several reasons. First, as has been stated, this research has not been done despite the unique needs of queer young adults. While the study that does exist is promising (e.g., Wright et al., 2017), and while wilderness therapy programs are clearly making an effort to become more queer-inclusive (e.g., Tucker et al., 2020), more work needs to be done.

Second, wilderness therapy might offer queer young adults a unique experience insofar as one of the central aspects of wilderness therapy is to remove individuals from the harmful environment that may contribute to psychological distress, including separation from peers or "other opportunities for dangerous or self-destructive behaviors" (Hoag et al., 2013, p. 295). This aspect may be particularly important for queer individuals for whom a reprieve from an unaffirming space might be clinically indicated.

A third reason that it is important to study queer young adults in wilderness therapy is that preliminary evidence suggests that outcomes may vary by gender. For instance, Hoag and colleagues (2014) reported that men and women had different prevalence rates of substance, behavior, and anxiety disorders at discharge. Furthermore, in a pilot study of 33 adolescents, intake rates of anxiety were significantly different between boys and girls such that by discharge, boys self-reported anxiety levels so low that they fell within normal limits, whereas girls reported clinically and statistically significant higher levels of anxiety (Gabrielsen et al., 2019). It is important to look beyond the gender binary to examine if TGNB wilderness therapy clients report

different levels of psychological distress than their straight counterparts.

Purpose of the Study

This study filled a significant gap in the burgeoning literature of wilderness therapy by exploring the experiences of LGBTQ+ ("queer") young adults who attend these programs. Briefly stated, wilderness therapy is an emerging treatment modality that is characterized by its pairing of a unique setting—the wilderness—with evidenced-based individual and group psychotherapy for adolescents and young adults (Russell, 2001; Russell & Hendee, 2000). The literature on wilderness therapy outcomes is promising: Researchers have reported significant outcomes for young adults not only longitudinally, but also across a broad array of presenting problems and in relation to residential inpatient treatment (Bowen & Neill, 2013; Curtis et al., 2018). Yet there is a scarcity of literature on queer young adults in wilderness therapy despite the possibility that, relative to the general population, wilderness therapy students are disproportionately queer (Wright et al., 2017). This study addressed this shortcoming in the literature by the comparing outcomes of queer young adult wilderness therapy participants to heterosexual and cisgender ("straight") ones.

The study answered the following research questions: (1) Compared to their straight counterparts, did queer young adults' OQ 45.2 intake scores differ? (2) Did queer young adults' OQ 45.2 scores improve from intake to discharge? By answering these questions, this study aimed to advocate for future research with queer young adults in wilderness therapy, with the goal of ascertaining whether wilderness therapy is a viable alternative treatment modality. Notably, longitudinal hypotheses were not explored due to the high rates of participant drop-out after students graduate from their programs (this is a common occurrence, e.g., Hoag et al., 2013). The hypotheses are:

1. In line with prior literature on the relationship between the minority stress queer

populations face and the correlating negative psychological outcomes (Baams et al., 2015; Feinstein et al., 2020; Haas et al., 2014; King et al., 2008; Meyer, 2003; Rood et al., 2017), it was hypothesized that, compared to their straight counterparts, queer young adults would report lower OQ 45.2 intake scores, indicating less psychological distress.

2. In line with prior literature on treatment outcomes for queer young adults when they are exposed to treatments with core similarities to those of wilderness therapy (namely, being removed from harmful and invalidating environments; Hoag et al., 2014), it was hypothesized that queer young adults' self-reported OQ 45.2 scores at discharge would be significantly lower than their OQ 45.2 at intake, and that, on average, the difference in these scores would be equal to or greater than 14, indicating a clinically and statistically significant reduction in psychological distress.

Chapter III: Method

This section outlines how participants were recruited, how data were collected, and which instruments were used to collect data. When referring to instruments, this section provides evidence for their use, validity, and reliability with young adult wilderness therapy students.

Participants and Recruitment

The sample was collected by the Outdoor Behavioral Health Council (OBH) and was collected from both OBH the National Association of Therapeutic Schools and Programs (NATSAP)-affiliated programs. All wilderness therapy programs in this study private pay (S. Javorski, personal communication, September 16, 2020; A. Werman, personal communication, August 29, 2020). The initial sample (N = 433) included adult wilderness therapy clients whose data were collected from February of 2019 to August of 2020 and for whom both intake and discharge OQ 45.2 scores were available. Per the data, adults as old as 42 enrolled in wilderness therapy; however, only participants who were ages 18-25 at the time of intake were included in the study. This age range was chosen because it encompasses the life stage known as emerging adulthood (Arnett, 2000), a time between adolescence and full adulthood characterized by identity formation and boundary testing. Moreover, this age range is appropriate because many wilderness therapy programs restrict their young adult students to that age range; thus, the sample in this study more closely reflects the young adult wilderness therapy population ("Adventure Therapy Young Adults," 2020; "First Light Young Adults," 2020; "Vantage Point," 2020; "Young Adult Program," 2020).

The final sample (N = 379) consisted of participants ages 18-25 (M = 20.80, SD = 2.17). 72% identified as men, 23% identified as female, and 5% identified as transgender or gender non-binary (TGNB). Regarding sexual orientation, 77% identified as heterosexual, 2% as lesbian or

gay, 11% as bisexual, and 8% as queer in another way (e.g., pansexual, demi-sexual, questioning). The remaining 1% of participants did not specify their sexual orientation but were included in the dataset as they indicated that they were genderqueer. Participants remained in their respective wilderness therapy programs for an average of 10.96 weeks (SD = 3.31). No data were collected on race, and only a small percentage of the eligible sample reported their ethnicity. The absence of the latter two variables remains a large gap in this dissertation and will be discussed in the limitations portion of this project. Tables 2 and 3 details the demographic data available to the author. Finally, it is important to note that since all participants were over the age of 18, none arrived at their wilderness therapy program using transport services.

As is the case with many wilderness therapies, the sample was overwhelming male (73% identified as male). It was also over-representative of queer young adults (23% identified as queer). To qualify for the study, participants had to be over the age of 18 at the time of enrollment and be able to complete questionnaires in English. They must have also graduated from their wilderness therapy program so that an outcome analysis could be run. To maintain confidentiality, no identifying information included with the dataset accessible to the researcher.

Since this study examined follow-up analyses, retention rates were calculated. Of the 379 for whom OQ 45.2 intake and discharge data are available, 50 (13.19%) answered six months after discharge in addition to immediately after discharge, and 19 (5%) answered at all timepoints (intake, discharge, six months post-discharge, and 12 months post-discharge. Implications of and analyses with these participants are discussed in Chapters IV and V.

Procedure

Participants in this dissertation were queer and straight young adults ages 18-25 enrolled in wilderness therapy programs from February 2019 to August 2020. Young adults consented to the research and were informed that participation was voluntary, that their data were de-identified,

that they could withdraw from the study at any time and without consequence, and that refusing to participate would not impact their wilderness therapy experience.

Intake survey. If a young adult was interested in participating in the study, after providing their informed consent, they were given a paper copy of the National Association of Therapeutic Schools and Programs (NATSAP) Adult Intake Questionnaire (NATSAP Adult Q-I; Appendix B) to complete. The copy is not electronic because students in wilderness therapy do not have access computers. The NATSAP Adult Q-I asks demographic information, including gender identity, sexual orientation, and treatment and substance use history. It also includes Likert-based scales (ranging from 1-10) in response to several prompts (e.g., "It makes sense for me to be in this therapeutic program"), where a "1" indicated strong disagreement with the statement and a "10" indicated strong agreement, though no qualitative answers were pared with scale values (S. Javorski, personal communication, June 26, 2020). The survey also asks participants why they are in wilderness therapy, for instance via court order, family/friend suggestions, or at the recommendation or mandate of a school, therapist, or employer. Finally, young adult clients were administered the OQ 45.2 to establish their mental health at the time of intake.

Follow-up surveys. The Outcomes Questionnaire (OQ 45.2; Appendix A) was administered not only at intake, but also at discharge, six months after discharge, and one year after discharge. Response rates rapidly fell off once students graduate from their wilderness therapy programs and move onto either aftercare or return home. For potential reasons for this phenomenon, please see Hoag and colleague's (2013) article. Attrition rates are also discussed in Chapter IV: Results.

Instruments

This section discusses the OQ 45.2, the outcome measure that the OBH uses to assess mental health. Data were collected at four time points: intake, discharge, six months after

discharge, and 12 months after discharge. The adjunctive survey given to the student and to the staff member depends upon which time point data are being gathered.

Outcomes Questionnaire 45.2. The Outcomes Questionnaire 45.2 (OQ 45.2; Appendix A) is a 45-item self-report instrument that assesses three broad categories of psychosocial functioning, represented as subscales: a) Symptom Distress ("I feel lonely"), b) Interpersonal Relations ("I have trouble getting along with friends and close acquaintances"), c) and Social Role ("I feel unhappy in my marriage/significant relationship"; Lambert et al., 1996). Change scores are calculated by subtracting a client's discharge score from their intake score to calculate a Reliable Change Index (RCI). A difference of 14 or more points indicates clinically significant change (Beckstead et al., 2003; Burlingame et al., 2004). In addition to having a change score above 14, for treatment to be considered clinically significant, an individual must begin treatment with an OQ 45.2 score greater than or equal to 64 (Burlingame, 2004).

The OQ 45.2 is predominantly used to assess psychotherapy treatment outcomes. This measure is valid and reliable with general populations enrolled in individual psychotherapy as well as with queer populations (Lambert et al., 1996; Levitt et al., 2015; Probuda et al., 2008; Starks et al., 2009). In terms of reliability, the total score for the OQ 45.2 has consistently been found to have high reliability in that Cronbach's alphas of .93 and .94 were reported with both undergraduate students and with normative samples from the general population across a wide age range (Boswell et al., 2013; Lambert et al., 1996; Starks et al., 2009). The scale also has test- retest reliability estimated at r = .84 (Lambert et al., 1996). Furthermore, concurrent validity has been reported as good (Boswell et al., 2013; Lambert et al., 1996; Umphress et al., 1997), and authors have reported that the OQ 45.2 has significant construct validity with a variety of presenting concerns, including mood disorders, interpersonal stressors, behavioral disorders, and stress related to sexual orientation (Boswell et al., 2013).

The OQ 45.2 has been used extensively in wilderness therapy outcome studies with young adults (see Hoag et al., 2013; Roberts et al., 2016; Russell et al., 2016). Within these studies, Bettmann and colleagues (2017) reported a Cronbach's alpha of .92 for their sample of late adolescent and young adult wilderness clients. Regarding validity, at both intake and discharge from wilderness programs, the OQ 45.2 has demonstrated significant, strong, or moderate correlations with measures of cognitive distortions related to depression (r = .62, p = .00 at intake and r = .58, p = .00 at discharge) and with measures of how adaptive one's life skills are (r = -.63, p = .00 at intake and r = -.58, p = .00 at discharge; Hoag et al., 2013). In this dissertation, OQ45.2 data were collected at intake, discharge, and six and 12 months after discharge.

NATSAP Adult Q-I (Adult Questionnaire – Initial). The NATSAP (National Association of Therapeutic Schools and Programs) Adult Questionnaire – Initial (NATSAP Adult Q-I; Appendix B) is administered when students first enter wilderness therapy. Per the instructions, clients are asked to mark the answer to the questions as they apply to them at the start of wilderness therapy. The intake form asks for demographic information (gender identity and sexual orientation, but not socioeconomic status, race/ethnicity, or other demographic details), living situation, medication history, substance use, behavioral concerns, treatment history, experiences with previous treatment modalities, and the reason a client is attending wilderness therapy. Some questions are answered via a sliding bar (e.g., "How much therapeutic progress do you believe you need to make at this current program?"), where a "1" indicates little or no progress and a "10" indicates a great deal of progress, though as previously stated, no qualitative descriptions were provided with the dataset given to the dissertation author.

NATSAP Adult Q-D (Adult Questionnaire – Discharge). The NATSAP Adult Questionnaire – Discharge (NATSAP Adult Q-D; Appendix C) is administered at discharge. Like

the NATSAP Adult Q-I, the NATSAP Adult Q-D asks for the client's demographic information, their living situation following their graduation from wilderness therapy, and their current medication use. The NATSAP Adult Q-D also asks reflective questions about the program (e.g., "How much effort did you put into your treatment at the program you just completed?") that clients answer via a sliding bar where the far-left indicates "no progress" and the far right indicates "a lot of progress." In the dataset the author received, responses were reported on a scale of "1" to "10," where "1" reflects "no progress" and "10" reflects "a lot of progress."

NATSAP Adult Q-PD (Adult – Post Discharge). The NATSAP Adult Questionnaire - Post-Discharge (NATSAP Adult Q-PD; Appendix D) is administered to clients six and 12 months after they graduate from their wilderness therapy program. In addition to asking the same questions about living situation, gender identity, sexual orientation, medication, and substance use, the NATSAP Adult Q-PD is concerned with students' treatment histories following their time in wilderness therapy (e.g., "In the past 6/12 months, what type of therapy or treatment have you participated in?"). The NATSAP Adult Q-PD also asks after any long-term improvements in OQ 45.Q sores students may have retained since their time in wilderness therapy (e.g., "How much did this program prepare you for your life following your completion of the program?"). As with the Adult Q-I and Adult Q-D, a "1" indicates low preparedness and a "10" indicates high preparedness, though no formal qualitative descriptors were provided to participants.

NATSAP SQ-I (Staff Questionnaire – Initial). The NATSAP Staff Questionnaire – Initial (NATSAP SQ-I; Appendix E) was administered to a student's clinician at the time of the student's intake. This initial survey tracks the primary and secondary reasons for referral (e.g., a depressive or anxiety disorder), the referral source, and if the client is arriving from another NATSAP-affiliated program.

NATSAP SQ-D (Staff Questionnaire – Discharge). The NATSAP Staff Questionnaire –

Discharge (NATSAP SQ-D; Appendix F) was administered to a student's clinician at the time of a student's graduation from their wilderness therapy program. This survey monitors a student's progress, or lack thereof, with questions related to how much the clinician believes the student benefited from the program (e.g., "Please rate the client's personal effort in their therapeutic work while at the program" from a scale of "None" to "Exceptional"). Moreover, if a student's caregivers were involved in treatment, the NATSAP SQ-D asks about the specifics of that involvement, including which types of interventions family members participated in and the degree to which parents were adherent to treatment recommendations.

Chapter IV: Results

This chapter presents the data cleaning and analysis process. It also reports the study results. All relevant tables and figures are presented at the end of this chapter. Data cleaning, normality assumption checking, and statistical analyses were all performed using SPSS Version 27.

Data Cleaning

Before analyses began, the data were cleaned. The original dataset contained 720 participants; however, 341 participants were removed because 1) they were missing either OQ 45.2 intake or discharge scores (or both), 2) they were not within the restricted age range of 18 to 25 years-old at intake, and/or 3) they provided clearly-disingenuous answers (e.g., "I identify as a block of cheddar cheese" in response to a question about gender identity). The final sample consisted of 379 young adult wilderness therapy graduates. Of the 341 participants excluded, 89 were missing intake data and 224 were missing discharge data, and the rest were excluded for the reasons previously mentioned. Since almost 50% of participants were excluded for these reasons and since the author did not have access to the individual item responses for the OQ 45.2 Intake or Discharge, no analyses of missing items (e.g., Little's Missing Completely at Random test, or MCAR; Little & Rubin, 2014) could be run.

Participants who were removed were compared to participants who met all study criteria. Using a chi-square test of independence, the group frequency of the (either queer or straight) included participants (N = 379) was compared to the group frequency of the excluded participants (N = 341). A chi-square test comparing the gender identities of respondents found a statistically significant difference between those who were included in the study and those who were excluded from it, $X^2(6, N = 720) = 16.61$, $p < .001$. Similarly, a chi-square test comparing the sexual

orientations of respondents found a statistically significant difference between those who were included in the study and those who were excluded from it, $X^2(5, N = 720) = 31.93$, $p < .001$. There were insufficient data on race/ethnicity, the only other identity-based variable that was collected, to analyze differences in included versus excluded participants based on demographic variables. The implications of these findings are discussed in Chapter V: Discussion.

Normality Assumptions

After ineligible participants were removed, data were assessed to determine if they met normality assumptions. All variables of interest (OQ 45.2 Intake, Discharge, and Change scores) met standards for univariate normality (namely, skewness < 3.0, kurtosis < 10.0; Weston & Gore, 2006). The data were then tested for outliers using a significant cutoff value of Mahalanobis D^2 ($p < .001$). No outliers in the cleaned sample were identified. As such, the data met multivariate normality assumptions.

Descriptive Statistics

Frequencies by gender and sexual orientation are reported in Tables 2 and 3. Descriptive statistics (means, medians, and standard deviations) for the relevant outcome variables were also calculated and are presented in Tables 4 and 5. Moreover, internal consistencies for the OQ 45.2 Intake and Discharge subscales (Symptom Distress, Interpersonal Relations, and Social Role) were computed. The alpha for the OQ 45.2 Intake subscales was .71, while the alpha for the OQ 45.2 Discharge subscales was .78, indicating acceptable reliability (Ponterotto & Rucksdeschel, 2007).

Comparative Analyses

Hypotheses 1 and 2 were tested by running independent and paired samples t-tests, respectively, in SPSS 27.0. Hypothesis 1 predicted that, in line with extensive literature on the relationship between queer minority stress deleterious psychological outcomes (for instance,

Baams et al., 2015; Feinstein et al., 2020; Meyer, 2003), compared to their straight counterparts, queer young adults' OQ 45.2 total intake scores would be lower. Analyses revealed that, compared to queer young adults' intake scores, there was no statistically significant difference between queer young adults' intake scores (M = 78.27, SD = 23.86) and those of their straight counterparts (M = 75.87, SD = 23.60; $t(377) = -.83$, $p = .41$ with a Cohen's d (Cohen, 1988) of .10. As the intake scores between queer and straight young adults were indistinguishable, *the evidence does not support Hypothesis 1*. Table 6 depicts these results.

In terms of Hypothesis 2, it was predicted that, following prior literature on treatment outcomes for queer young adults when they are exposed to treatments with core similarities to those of wilderness therapy (such as leaving harmful and invalidating environments; Hoag et al., 2014), queer young adults' OQ 45.2 discharge scores would be significantly lower than their OQ 45.2 intake scores. According to a paired samples t-test, OQ 45.2 intake scores (M = 78.27, SD = 23.86) and OQ 45.2 discharge scores (M = 50.33, SD = 19.51) were significantly different $t(85) = 11.42$, $p = < .001$ with a Cohen's d of 1.28, indicating that the score difference between the two time periods of the group were larger than one standard deviation (Cohen, 1988). As such, *the evidence supports Hypothesis 2*. Stated differently, queer young adult wilderness therapy students reported statistically significant drops in OQ 45.2 scores at discharge compared to intake. These changes are also clinically significant: On average, queer young adults started treatment with OQ 45.2 total scores of 78.27, which is in the Moderate range of psychological distress (Burlingame, 2004). Moreover, participants' Reliable Change Index (RCI) scores averaged 27.94, which is above the threshold difference of 14 required to indicate clinically significant change (Beckstead et al., 2003; Burlingame, 2004). Please see Table 7 for these results.

These analyses were run for straight students as well. Similarly to with queer students, using a paired samples t-test, it was found that straight students' OQ 45.2 intake scores (M = 75.87,

SD = 23.60) were significantly different than their discharge scores (*M* = 50.11, *SD* = 23.14), *t*(293) = 16.40, *p* = < .001. The effect size for this comparative analysis was 1.10, also indicating that the difference between intake and discharge scores was greater than one standard deviation, though this effect size was smaller than that of queer students. Table 8 reports these results.

Exploratory Analyses

Beyond testing for both hypotheses, several exploratory analyses were conducted. These analyses included bivariate correlation analyses that examine the OQ 45.2 subscales in relation to each other, ANOVAs that assessed potential significant covariates, and a spaghetti plot to chart mental health outcomes at the six and 12-month follow-up marks.

Correlation Analyses. Relationships between OQ 45.2 subscales were explored using bivariate correlation analyses run using SPS 27.0. Correlation analyses measures the strength of the relationship between two variables by providing a correlation coefficient, *r*, which ranges absolute -1 to 1. Numbers closer to the absolute value of 1 indicate a stronger relationship; note, also, that a correlation coefficient can also be negative. A positive relationship indicates that as one variable increases, so does the value of the other variable, while a negative number indicates that as one variable increase, the value of the other variable decreases.

The strength of a bivariate correlations was compared to benchmarks for small (*r* = .10), medium (*r* = .30) and large (*r* = .50) effect sizes (Cohen, 1992). Results indicate significant correlations between each of the OQ 45.2 subscales at intake and at discharge. Please see Tables 4 and 5 for the intake and discharge correlations, respectively. First intake and then discharge bivariate correlations are discussed. Moreover, the dummy-coded, categorical Group variable (where 0 indicated a straight identity and 1 indicated a queer one) was included in bivariate analyses.

In terms of the OQ 45.2 intake scores, (1) *Symptom Distress* yielded a significant large

positive correlation with *Interpersonal Relations, r*(377) = .68, $p < .01$, and a significant large positive correlation with *Social Role r*(377) = .63, $p < .01$. (2) *Interpersonal Relations* had a significant large positive correlation with *Social Role, r*(377) = .58, $p < .01$. In terms of OQ 45.2 discharge scores, (1) *Symptom Distress* yielded a significant large positive correlation with *Interpersonal Relations, r*(377) = .75, $p < .01$, and a significant large positive correlation with *Social Role r*(377) = .74, $p < .01$. (2) *Interpersonal Relations* had a significant large positive correlation with *Social Role, r*(377) = .70, $p < .01$.

Checking for Confounding Variables and Covariates. One-way between-subjects ANOVAs were conducted to compare the effects of attrition rates and of primary diagnosis on change scores. There was not a significant effect of attrition rates on change scores [F(3, 375) = .67, p = .57]. In addition, there was not a significant effect of a participant's primary diagnosis on change scores [F(14, 364) = .68, $p = .79$]. Stated differently, neither a person's post-wilderness therapy response rate nor their primary diagnosis significantly impacted their OQ 45.2 change scores. Tables 9 and 10 report these results. These results are reported in Tables 9 and 10.

Participants' ages, length of stay, and gender were also assessed as potential covariates. These results are presented in Tables 11, 12, and 13. According to these between-subjects comparisons, age was a significant covariate on the relationship between participants' change scores and their queer or straight identity [F(1, 377) = 14.64, $p < .001$], while length of stay in the program was not a significant covariate on the relationship between participants' change scores and their queer or straight identity [F(1, 377) = .06, $p = .81$). Finally, gender identity was not a significant covariate on the relationship between participants' changes scores and their queer or straight identity [F(1,377) = .01, $p = .92$]. The implications of these analyses will be discussed in the next chapter. These results are graphically depicted in Figures 1, 2, and 3, respectively.

Spaghetti Plot. Finally, SPSS version 27.0 was used to graph a spaghetti plot of the post-

wilderness therapy OQ 45.2 outcome data for both queer and non-queer participants. Spaghetti plots are used to conduct exploratory analyses to examine if the means of individual outcomes follow a particular trend (Liu et al., 2012). This method of analysis was chosen because significant participant drop-off at the six-and 12-month follow-up periods meant that the dataset lacked sufficient statistical power for any post-wilderness therapy inferential procedures, with retention rates of 13.19% and 5%., respectively. The spaghetti plot is presented in Figure 4. The data that do exist reflect a decrease in self-reported psychological distress (indicated by lower OQ 45.2 scores) for most participants and that, broadly speaking, students continue to report reduced amounts of psychological distess up to the 365-day follow-up.

Of the 19 participants who answered at all time points, five identified as queer. Their post-wilderness therapy outcomes are plotted in Figure 3, where each line on the plot represents a person. This subset of the data is too small to use for inferential analyses. The trend suggests a general decrease psychological distress from intake to discharge, followed by retention the gains made in wilderness therapy. Notably, straight wilderness therapy students reported similar trends in mental health symptoms. Potential reasons reason behind such a steep participant drop-off will be addressed in the discussion.

Summary of Findings. The findings of the comparative analyses were mixed in terms of their support for the author's two hypotheses. According to a non-significant independent samples t-test, the data did not support Hypothesis 1 (that queer and straight young adults would have different OQ 45.2 intake scores). This outcome was contrary to literature suggesting that queer young adults experience greater psychological distress than straight ones (Budge et al., 2013; Breslow et al., 2015; Meyer, 2003; Painter et al., 2018) and the consequent prediction that queer young adults would start treatment at more clinically elevated levels than their straight counterparts.

As evidenced by a statistically significant paired samples t-test, there was a drop between OQ 45.2 intake and discharge scores. Thus, the data supported Hypothesis 2, which states that queer young adults would report statistically and clinically significant reductions in psychological distress. This result aligns with prior literature on wilderness therapy outcomes that suggests that wilderness therapy is an effective treatment intervention for young adults and provides evidence that wilderness therapy may also be useful for queer young adults (Hoag et al., 2013; Hoag, 2014; Combs, 2016; Russell, 2005; Roberts et al., 2016).

Overall, the study's results provide preliminary support for wilderness therapy's effectiveness at treating queer young adults with a variety of presenting, change that remains relatively consistent post-wilderness therapy. Though limited, the results suggest that wilderness therapy is as effective for queer participants as it is for straight ones. The following chapter discusses these results in relation to clinical practice, future research, and wilderness therapy's place in the field of psychology.

Chapter V: Discussion

This chapter focuses on the results, implications, and limitations of this dissertation. Regarding queer young adults' experiences in wilderness therapy, contrary to the dissertation's first hypothesis, the data suggest that there is no difference in intake psychological distress between queer and straight young adult wilderness therapy clients (called "students" in wilderness therapy jargon and referred to as such hereafter). Consistent with the dissertation's second hypothesis, queer young adults reported statistically significant changes (decreases) in OQ 45.2 scores, suggesting lower levels of psychological distress at discharge compared to at intake. Preliminary analyses—discussed later in this chapter—also examined overall trends in the data with the use of bivariate correlations and spaghetti plots.

In addition to addressing which hypothesis the data supported and which hypothesis they did not, this chapter contextualizes this dissertation's results, which examined the mental health outcomes of queer young adult wilderness therapy students using a national sample collected by the Outdoor Behavioral Health Council. There are several subsections in this chapter. They are, in order: a summary of the research study, an overview of findings, implications for research and practice, study limitations and future directions, and summary and conclusions.

Summary of the Research Study

This dissertation examined the experiences of a minority population—queer young adults—in wilderness therapy, a relatively new treatment modality characterized by communal living in nature within an empirically-based therapeutic setting (Russell, 2001). Specifically, this dissertation expanded existing wilderness therapy literature by looking at the mental health outcomes of queer young adult wilderness therapy students. Minority stress theory (Meyer, 2003) formed the theoretical foundation of this project and its first hypothesis.

Overview of Findings

This section details the statistical significance and theoretical implications of the dissertation's findings within the context of its overall aim: to expand the literature on wilderness therapy, which is still in a nascent stage. Two main hypotheses were examined. Comparative analyses yielded mixed results in terms of support for the author's hypotheses.

Hypothesis 1. Hypothesis 1 stated that queer and straight young adults would have different OQ 45.2 intake scores. Contrary to this hypothesis, queer and straight young adults' intake scores were nearly identical, a finding that was inconsistent with previous literature demonstrating that queer adults of all ages experience greater degrees of psychological distress than straight young adults (Budge et al., 2013; Breslow et al., 2015; Meyer, 2003; Painter et al., 2018). This hypothesis was formulated using minority stress theory (Meyer, 2003) insofar as, because they hold a marginalized identity, queer people are oppressed in ways that straight people are not (via homophobia, transphobia, biphobia, heterosexism, and so on). Higher levels of minority stress are associated with deleterious mental health outcomes, which are in turn associated with higher rates of depression, suicidality, and substance use (e.g., Mongelli et al., 2019).

This result was surprising—especially within the context of prior literature on other treatment modalities demonstrating that non-tailored treatments administered to queer participants can be less effective than when they are administered to straight ones (Kidd et al., 2016; Klotzbaugh & Spencer, 2020; Lyons et al., 2015; Riggle et al., 2014; Rimes et al., 2018; Robertson et al., 2015; Senreich, 2009). Since wilderness therapy is an emergency intervention, it is possible that by the time participants have reached a level of crisis that warrants enrolling in a wilderness therapy program, their mental health symptoms are so acute that the contribution minority stress

adds is comparably negligible. Similarly, perhaps the sample is self-selected and thereby skewed to the extent that only people in the highest levels of distress enroll in wilderness therapy.

Another possible explanation is that wilderness therapy enrollees are different than the general population because of their treatment history. Indeed, most wilderness therapy students have a mental health treatment history; for instance, one study found that 89.7% of 401 randomly sampled adolescents enrolled in wilderness therapy had had at least one prior outpatient experience (Bettmann et al., 2014). This number is strikingly high in comparison to a national sample of adolescents, 13.7% of whom had received either inpatient or outpatient mental health treatment in the 12 months before data were collected (Lipari et al., 2016). One reason for this difference is because wilderness therapy is often a last resort treatment option, meaning that almost every enrollee has had at least one prior treatment experience.

Finally, perhaps people who end up in wilderness therapy tend to be wealthier (given how expensive wilderness therapy is), and research has demonstrated a correlation between social class and mental health literacy (Holman, 2015). Thus, it could be the case that young adults who enter wilderness therapy grow up in more mental health-literate households, a factor that may buffer the impact of minority stress processes insofar as greater mental health literacy is associated with a higher chance of engaging in help-seeking behaviors (Hom et al., 2015; Thai & Nguyen, 2018;).

Hypothesis 2. After testing intake OQ 45.2 scores, queer participants' intake scores were compared to their discharge scores. This second analysis found significant differences between these two time points, suggesting that queer wilderness therapy students tended to report relative decreases in post-discharge psychological distress compared to intake psychological distress. Beyond having statistical significance, outcomes held clinical significance as well: OQ 45.2, and thus self-reported psychological distress, scores dropped by an average of more than 14 points, indicating clinically significant improvement (Beckstead et al., 2003; Burlingame et al., 2004).

This result was unsurprising when considering the previous literature on wilderness therapy. Although that literature has not specifically addressed queer students' mental health outcomes, prior studies have consistently demonstrated wilderness therapy's effectiveness with young adults (Hoag et al., 2013; Hoag, 2014; Combs, 2016; Russell, 2005; Roberts et al., 2016). Furthermore, as stated in the introduction, there are many mechanisms of change within wilderness therapy that have worked with therapy clients more generally, including removing participants from harmful home environments, group and individual psychotherapy across a variety of treatment orientations, and daily exercise (Bador, 2020; Hoag et al., 2014; Maxam, 2013; Sturm et al., 2012). These treatment methods have been found to work with queer individuals as well (Pachankis et al., 2018; Hall et al., 2019). Moreover, in some cases, the interventions that help make wilderness therapy unique are particularly effective for queer students, such as removing clients from invalidating environments and an emphasis on mentorship (both student-to-student and staff-to-student; Hoag et al., 2014; McDermott et al., 2021; Sarna et al., 2021). Perhaps these reasons are part of why the effect size for queer students was larger than it was for straight ones.

This does not mean that straight students did report significant changes in psychological distress. As with queer students, straight students reported statistically and clinically significant reductions in psychological distress as measured by drops in scores across all three OQ 45.2 subscales. This study's findings closely align with those highlighted in prior wilderness therapy literature (e.g., Bettmann et al., 2017; Curtis et al., 2018; Roberts et al., 2017; Tucker et al., 2018).

Bivariate Correlations. No formal hypotheses were made regarding bivariate correlations. However, correlational analyses were run to gain a more complete understanding of the data. Based on these results, the subscales of the OQ 45.2 (Symptom Distress, Interpersonal Relations, and Social Role) positively correlated with each other both within intake and discharge responses. Stated differently, bivariate correlational analyses indicate that psychological distress

according to each of the three OQ 45.2 subscales at intake and discharge increased as the others increased. Practically, these findings imply that psychological distress in one domain tended to correlate with psychological distress in each of the others. This finding is consistent with prior studies that have observed similar correlations between subscales when surveying young adults (e.g., Schulenberg, 2004).

Covariates. Comparative analyses were also run to assess if attrition rates and primary diagnoses impacted the change in psychological distress that participants reported. Findings indicate that neither attrition rates nor primary diagnosis impacts participants' self-reported changes in psychological distress.

Age, length of stay, and gender identity were also analyzed as covariates that impacted the relationship between psychological distress and identity (queer or not). They were chosen because they were the three variables that were reliably filled out. According to analyses, only a student's age impacted their psychological distress, and this impact varied according to if the student was queer or straight.

Neither length of stay nor gender identity has been identified as a covariate in prior wilderness therapy literature. In terms of length of stay, research consistently finds that treatment gains plateau five or six weeks into treatment (Hoag et al., 2013; Roberts et al., 2016; Tucker et al., 2018), which matches this study's findings to the extent that 95% of participants were enrolled in their programs for at least five weeks, with the remaining five remaining percent of participants leaving after four.

As for the impact of gender on outcomes, several wilderness therapy studies have noted that women reported greater levels of psychological distress at intake, but that by discharge, men and women reported similar levels of distress (no data were reported on TGNB students; Hoag et al., 2013; Lambert et al., 2004; Magle-Haberek et al., 2013; Russell, 2003). It is unclear why

gender was not a significant covariate in this study given literature suggesting that mental health perceptions, treatment utilization, and diagnoses vary by gender identity, most likely due to socialization (Lee et al., 2020; Oswalt et al., 2020; Smith et al., 2018; Rosenfield & Mouzon, 2013). One explanation for why this study's findings are different might be because of its restricted sample. To reiterate, wilderness therapy students are mostly White and mostly middle class or wealthier; as such, other identity aspects might reduce gender-based differences around mental health perceptions.

Regarding age as a covariate, one meta-analysis of wilderness therapy outcomes found age to be the only significant moderator of outcomes (Bowen & Neill, 2013), but the study's authors did not explain why this might be the case. This finding is striking because age has been found to impact not only attitudes toward treatment, but also the likelihood that someone will seek mental health care (Forbes et al., 2017; Gonzalez et al., 2011). In a treatment setting where most participants go unwillingly or with at least some resistance, one explanation for the impact of age on psychological distress is the context in which they go or are sent. Indeed, there is a significant difference between an 18-year-old who is forced to go to wilderness therapy instead of to their first year of college and a 25-year-old who has been living at home with their parents for several years and understands the need for the extreme intervention of wilderness therapy. Prior research has demonstrated that treatment resistance, defined as behaviors intended to disrupt treatment outcomes (such as acting with hostility toward a therapist, refusing to speak to others, and so forth), is associated with poorer therapy outcomes (Beutler et al., 2001; Braga et al., 2019).

As differences relate to a queer or straight identity, it could be that the effects of minority stress—though in this study they may be largely obfuscated by the acute level of general psychological distress under which wilderness therapy students enter their programs—differentially affects young adults of different ages. According to existing literature, as LGBT

people age, they tend to develop effective coping strategies for combating minority stress-related mental health effects (Cortes et al., 2019; Vale & Bisconti, 2021). While 18-25 is a relatively small age range, because of how psychologically stressful those years can be (Arnett, 2000; Ghobadzadeh et al., 2019; Lee & Dik, 2017), there might be significant differences in coping strategies between the youngest and oldest wilderness therapy students. For instance, it is likely that the youngest students had yet to complete high school when they began wilderness therapy, while some of the oldest students may have graduated from college.

Further research is required to tease out the nuance within these findings. For instance, while age emerged as a covariate and gender and length of stay did not, it remains unclear *why* these variables behaved the way they did. It will thus be important for research to include measures designed to capture these constructs. One potential scale used in future research could be the Daily Heterosexist Experiences Questionnaire (Balsam et al., 2013), a 50-item scale that has been well-validated for use with adults and that asks after queer minority stress-related experiences (Morrison et al., 2016; Peterson et al., 2017). Future studies can also take advantage of the NATSAP questionnaires administered to study participants (Appendices B and C), which asked students to respond to statements such as, "It makes sense for me to be in this therapeutic program" at intake and, "How much effort did you put into your treatment at the program you just completed?" at discharge.

Preliminary Follow-Up Analyses. The last group of analyses conducted were on participant follow-up responses at six and 12-months using spaghetti plots. These plots charted all 19 participants (queer and straight) who answered at each of the four time points (intake, discharge, six-month follow-up, and 12-month follow-up) as well as all five queer participants for whom follow-up data were available. Based on the available data, the participants who did respond generally reported a reduction in psychological distress that persisted at least until 12 months after

they graduated from their wilderness therapy programs, although they reported a spike in mental health symptoms at the six-month follow-up mark. This outcome was expected because of prior wilderness therapy literature reflects these trends (Hoag et al., 2013; Roberts et al., 2017; Tucker et al., 2018), including the symptom spike at six months. One possibility for this trend is that data were not collected immediately after discharge, and so any increase in symptoms from the distress of leaving a wilderness therapy program and returning to the rest of the world (Bolt, 2016) might be subsumed within the six-month follow-up data. More research on this topic is needed, and one of the main barriers to this research will be in collecting follow-up data from enough participants. According to researchers who have collected follow-up data, response rates can be dramatically improved by implementing an "interactive follow-up process" (Combs, 2016, p. 20) characterized by personally reaching out to graduates and directly working with students' aftercare programs.

Limitations and Implications

Implications for practice and research. The study's findings carry implications for queer and straight individuals both inside and outside of wilderness therapy. To begin with implications for wilderness therapy conducted with queer students, it is well-documented that queer young adults experience disproportionate rates of mental and physical health challenges, including depression, anxiety, opioid misuse, and suicide attempts (Girouard et al., 2019; Haas et al., 2010; Haas et al., 2014; Kaniuka et al., 2019; King et al., 2008). This disparity, coupled with the fact that effective and affirming mental and physical health care is often difficult for queer people to come by (Keuroghlian et al., 2017)—especially in rural areas of the US (Poquiz et al., 2021)—suggests the need for more types of interventions that are suited to meet queer peoples' needs. Given this study's results, wilderness therapy may be uniquely situated to address them.

First, according to the present study, queer wilderness therapy students reported clinically and statistically significant improvements in mental health at discharge compared to at intake.

While preliminary, spaghetti plot data suggest that not only are these gains meaningful, but also that queer wilderness therapy graduates tend to maintain their gains for at least one-year post-discharge. Unfortunately, the data are too sparse and general to ascertain what about wilderness therapy is effective within this study—though daily group therapy, weekly individual therapy, living in a new environment, and rigorous physical exercise are possibilities—and so treatment recommendations are rooted in research-backed conjecture. To begin, as Hoag and colleagues (2014) noted, one crucial aspect of wilderness therapy is that it removes participants from harmful home environments, including homophobic and/or transphobic ones. This same logic can be applied to straight individuals insofar as they are also removed from toxic home and school environments. That is not to say that wilderness therapies are guaranteed to create accepting spaces; however, they have the advantages of exerting more control over what is said and done in treatment, as well as of being able to facilitate safe communication between their students (notably, the same could be said for other minority identities, such as for people of color and neurodiverse people.)

Practically, this work could include providing psychoeducation to students and to their parent(s)/caregiver(s), which has been effective in reducing psychological distress for both parties (Goodman & Israel, 2020; Hart et al., 2021; Robert-Paul et al., 2017; Riley et al., 2013). For students, topics might include basic terminology and unique challenges queer people often face, and for parents, focus can be on how to support their child and on dispelling common myths about queer individuals (that they will not have families, that they are simply seeking attention, and so on). Furthermore, even if queer-related issues are not a primary concern for a given client, it is recommended that wilderness programs continue to acknowledge this important part of their student's identity and integrate it into treatment; for instance, if they have not done so already, wilderness therapy programs can fold identity education and processing into their curricula by

borrowing from *multicultural psychotherapy*, a framework defined by social justice and identity saliency (Sue et al., 2021).

Relatedly, wilderness therapy programs often have family therapy components in which the student's parents or caregivers are required to complete coursework focused on repairing the rupture within the family, speak weekly with a student's primary therapist, and attend their child's graduation from wilderness therapy ("Families," 2021). Some wilderness programs provide families with the option of completing a post-discharge, three-to-four-day intensive with their child to better understand how to meet their child's needs ("Families," 2021). Given the extent to which parents, and sometimes siblings, are involved in a student's treatment, it is also recommended that wilderness therapy programs educate concerned or confused family members about queerness to help reduce any negative reactions to their student's identity. Indeed, educating caregivers on their children's identities and issues is predictive of positive long-term outcomes (Lester et al., 2016; Smokowski et al., 2015).

A third practical implication is that, according to the study's results, queer and straight wilderness therapy students enroll in wilderness programs with similar average levels of psychological distress, which was contrary to the author's hypothesis. As previously stated, students may enter wilderness therapy in such high levels of psychological and physical distress that symptoms stemming from minority stress are indiscernible from others. Another possibility is that because the instruments administered were not designed to measure minority stress, there is no way to know details about their reason for entering wilderness therapy beyond the presenting concern listed on the data given to the author. One way to address this limitation would be to include minority stress-oriented measures, like the Daily Heterosexist Experiences Questionnaire (Balsam et al., 2013), in future studies. Indeed, it is paramount that mental health providers quickly ascertain the underlying reasons that someone is in treatment. It would, therefore, behoove

wilderness therapy programs to generate a means of discerning how salient—whether that is via a comprehensive clinical intake, additional intake surveys, or both—a person's queer identity is to the course of their treatment, and to do so several times throughout a student's stay in their program.

In addition to implications for practice, the current study holds several implications for future research. It is important to note that research on wilderness therapy is still in its early stages, with most research being published after the turn of the century (e.g., Russell, 2000). Given this inherent limitation, the primary implication for wilderness therapy research is that *more* is needed. Not only is more research needed in general, but more *specific* research on potential moderators and mediators to wilderness therapy mental health outcomes for queer and straight wilderness therapy participants is also needed. Potential variables can include demographic variables (social class, race, ability status, size) as potential moderators and internal processes (minority stress, self-esteem, attachment styles, trauma histories) as potential mediators. These variables are important to measure because of how extensively previous literature has established their role in mental well-being (Barnes et al., 2013; Cumming et al., 2012; Kessler et al., 2017; Merianos et al., 2013; Mongelli et al., 2019; Palitsky et al., 2013; Sheperis & Sheperis, 2018; Timmerman & Volpe, 2021) and because, to the best of the author's knowledge, they have not yet been explored or are underexplored in wilderness therapy literature.

Second, the study's results underscore the need for future research that a) centers queer young adults' wilderness therapy experiences and b) continues to compare outcomes between queer and non-queer students. Again, only one study has explicitly looked at queer students' wilderness therapy outcomes, and this study was presented in a conference and was not formally published (Wright et al., 2017). To that end, as previously stated, future research can incorporate measures that assess minority stress, such as the Daily Heterosexist Experiences Questionnaire

(Balsam et al., 2013).

Study limitations and future directions. This study's results must be interpreted relative to its limitations. First, this study provides evidence for the usefulness of wilderness therapy for queer students, but only in a limited sense. No data were collected during participants' time in wilderness therapy, thereby obscuring information on the nuances of participant progress. Follow-up data are also sparse, with 12-month response rates as low as 5% for eligible participants. To that end, future research would benefit from further integrating psychological measures into the course of treatment. Indeed, several key variables had over 98% of answers missing (i.e., race/ethnicity), thereby rendering any analyses futile, and other demographic variables were not asked about (i.e., social class, ability status, trauma history). One such way could be to allow students to see their results and to reflect on their change, or lack thereof, while they are still in their wilderness therapy programs and after they have graduated from them, thereby using the study as an optional additional aspect of treatment so long as those who opt out of the study are given a comparable reward and are not penalized for refusing to participate. Moreover, wilderness programs can work more intentionally with aftercare and stepdown programs to follow students throughout their treatment journey, a practice often referred to as the "Golden Thread" of treatment (Curtis et al., 2018).

Yet another limitation of wilderness therapy, and thus of the study, is that it is comprised of predominantly White students. Since wilderness therapy programs are so expensive and scholarships are scarce, over 80% of students who participate in wilderness therapy research are White (Hoag et al., 2011; Hoag et al., 2013; Russell et al., 2008). Moreover, many of the families who can afford to send their child to a wilderness therapy program take out second mortgages, empty college funds, and make other drastic financial decisions to afford the cost (Kaplan, 2020). Since people of color are disproportionately impacted by poverty and are less likely to seek

treatment (Denavas-Walt & Proctor, 2015; Reeves et al., 2016), they are grossly underrepresented in wilderness therapy literature and likely in this study. It must be noted that the racial and ethnic distribution of the participants included in this study is not available because there were insufficient data to run those descriptive statistics; however, it is likely that this sample, which was gathered from the private pay programs accredited with the OBH (S. Javorski, personal communication, September 16, 2020; A. Werman, personal communication, August 29, 2020), is also predominantly White. These results, therefore, cannot be generalized to wilderness therapy students of color, nor can any literature on wilderness therapy published to-date. This limitation will remain in place until wilderness therapy becomes more affordable, and therefore more accessible to communities of color.

This second limitation has concerning implications for practice. Research on treatment outcomes by race has found that people of color who receive mental health treatment value cultural competency, discussions of race/ethnicity, and racial match, and that clients of color matched with providers who did not acknowledge the mental health toll of living in a racialized society (Jones, 2003; Williams, 2018) reported worse treatment outcomes than those matched with knowledgeable therapists (Meyer & Zane, 2013). The need for multiculturally competent therapists increases when treating queer clients of color, who live as both racial and sexual minorities (Cyrus, 2017; see Crenshaw, 1989 for a discussion of intersectionality). That is not to say that wilderness therapy programs are multiculturally incompetent; rather, more research will be needed to discern how effective wilderness therapy is for students of color, and to do so, programs must create ways to make themselves more financially accessible, or this problem will persist.

A third study limitation is that of low participant retention rates. Only 19 of the 379 (approximately 5%) participants in the study provided sufficient data for six and 12-month follow-up analyses. These retention rates are like those in other wilderness therapy studies, though the

follow-up data that were collected exist are promising upon conducting a preliminary analysis (they are charted in Figures 3 and 4.) Having such small participant response rates, however, raises concerns: Are those who responded through the 12-month follow-up mark people who were most satisfied with treatment, and thereby most likely to respond, skewing the results? Did these 19 graduates have unique aftercare plans that made it easier or more likely for them to respond? Relatedly, what were students' aftercare plans? And what privileges/restrictions were placed on them while they were in aftercare that made it harder/easier or more/less likely for them to respond? Future research can address this limitation by emphasizing and pouring additional resources into participant follow-up, as well as by following students throughout the treatment process (in line with the notion of the Golden Thread; Curtis et al., 2018). Specifically, though laborious, researchers can involve the aftercare programs wilderness therapy students tend to go to once they graduate. In doing so, it may be easier to track students as they live their lives post-wilderness. Researchers can pair this tactic with online surveying, which has historically generated higher response rates e.g., Hoag et al., 2013). It is unclear which methods the researchers who gathered this dissertation's data used, although based on attrition rates, a more involved follow-up process is needed.

Beyond after-care related attrition concerns, another limitation of this study is that almost 50% of its participants were excluded for missing intake, discharge, gender, and/or sexual orientation data. Moreover, a greater ratio (compared to the total number of participants) of queer individuals were included than they were excluded. No clear reason for this finding emerges. One reason for this difference could have been that queer respondents might have taken the questions on gender and sexual orientation more seriously, thereby leading to fewer cases of exclusion. There may have also been an aspect of wilderness therapy that correlated with a higher likelihood that queer students would remain to complete their wilderness therapy programs, such being more

motivated to remove themselves from their home environment. Since this study is the first of its kind to compare straight and queer participants, more research into the day-to-day experiences of wilderness students is needed; for instance, future studies could compare OQ 45.2 intake and discharge response rates with self-reported levels of treatment satisfaction.

A final limitation is that there was no way to discern which participants were enrolled in wilderness therapy with each other, and relatedly, the group composition (mostly queer, mostly straight, half-and-half, and so on). This information is key because there is little literature on the role that mixed group therapy experiences play on mental health. One such study examined treatment outcomes in a mixed sexual orientation men's group and found that queer and straight group members were able to challenge their biases about other group members and engage in healing interactions with members of their out-group (i.e., those who did not share their sexual orientation; Provence et al., 2014). Further research on specific group compositions and outcomes is thus needed. Specifically, this research could look at group configurations (no queer participants, one queer participant, many queer participants, all queer participants, etc.) to see if outcomes vary accordingly.

To adequately fill these gaps in the literature, more studies are needed. One study this author would run would look exclusively at queer wilderness therapy students' changes in psychological distress as they relate to the specific therapeutic constructs of group cohesion and therapeutic alliance, with minority stress as a mediator on the relationship between the therapeutic constructs (group cohesion and therapeutic alliance) and psychological distress. The author would use the Therapeutic Alliance Quality Scale (Bickman et al., 2010), the Group Climate Questionnaire (MacKenzie, 1983), the Daily Heterosexist Experiences Questionnaire (Balsam et al., 2013), and the Outcomes Questionnaire 45.2 (Lambert & Burlingame, 1996), with data collected not only at intake and discharge, but also at milestone timepoints during participants'

wilderness therapy stays (which would vary depending upon the wilderness program(s) studied). This study would aim to simultaneously address several shortcomings in the literature: the lack of research on queer folks, on therapeutic constructs, and on outcomes at more frequent time points.

Summary and Conclusions

The current study examined the mental health outcomes of queer young adult wilderness therapy graduates. Its purpose was to join the burgeoning field of wilderness therapy with the established one on LGBTQ mental health needs and outcomes. The sample consisted of 379 wilderness therapy graduates from over a dozen OBH-accredited wilderness therapy programs across the country, and data were collected between February of 2019 and August of 2020. Minority stress theory (Meyer, 2003) was used to frame this study's hypotheses. Through comparative analyses, bivariate correlations, and preliminary follow-up analyses, the study compared treatment intake OQ 45.2 scores between LGBTQ and straight students and compared queer students' intake and discharge OQ 45.2 scores, with the OQ 45.2 serving as a measure of psychological distress.

The study's results provide support for wilderness therapy's efficacy with queer young adults, as well as evidence that queer adults are in as much distress as straight ones are at intake. Furthermore, because both queer and straight adults report similar intake and discharge scores, it is possible that wilderness therapy is (close to) as effective for queer young adults as it is for straight ones, although more intentional research into similarities and differences between these groups is needed.

Findings also included bidirectional support between psychological distress related to the subscales of the OQ 45.2: symptom prevalence (Symptom Distress), interpersonal conflict (Interpersonal Relations), and dissatisfaction with social role fulfillment (Social Role). There was also support for age as a covariate in the relationship between length of stay and changes in

psychological distress, represented with the OQ 45.2 change score.

Moreover, although no formal hypotheses were made about straight students' outcomes, results indicate that straight students reported clinically and statistically significant reductions in psychological distress at intake compared to at discharge.

This study is the first of its kind to a) compare intake psychological distress between queer and straight young adults and b) specifically look at queer young adults' wilderness therapy outcomes. As wilderness therapy programs become a more popular treatment alternative to traditional residential or inpatient options, more research concerned with other subsets of the overall population will be needed, such as people of color. This is important so that as the field of wilderness therapy grows, it can do so in a way that allows it to treat a more diverse client base. Part of this growth will be to make wilderness therapy programs financially accessible.

Given the study's results, there is nascent evidence in support of wilderness therapy's effectiveness in treating queer young adults. However, future research into the role that minority stress plays in wilderness therapy mental health outcomes is needed. This research must look at outcome data relative to different aspects of identity (race, gender, social class, sexual orientation, ability status, trauma history, family structure, and so on) and, where applicable, via a minority stress frame.

Despite the preliminary nature of this study's results, they suggest that wilderness therapy's future may be bright. Indeed, there is something romantic about treatment in the Rocky Mountains of Colorado or the high deserts of Utah, where students spend their time hiking, camping, and sleeping beneath the stars. Robert Service's (1907) "Call of the Wild" captures this idea:

They have cradled you in custom, they have primed you with their preaching,

They have soaked you in convention through and through;

They have put you in a showcase; you're a credit to their teaching –

But can't you hear the Wild? – it's calling you.

Let us probe the silent places, let us seek what luck betide us;

Let us journey to a lonely land I know.

There's a whisper on the night-wind, there's a star agleam to guide us.

And the Wild is calling, calling… let us go.

For queer folks, there is a promise that the wilderness offers them: the opportunity to connect with their desires, bodies, and identities apart from the environment in which they have spent most of their lives. That is not to say that prejudice and hate will not follow them—wilderness therapy programs are part of, not apart from, society—or that the world will suddenly accept them once they graduate from their programs. Rather, wilderness therapies offer LGBTQ students a space to re-author what queerness means to them. Assuming one can afford the steep cost, that opportunity might be worth the price of admission.

References

(n.d.). *Hanblečeya – crying for a vision*. Akta Lakota Museum & Cultural Center. https://aktalakota.stjo.org/site/News2?page=NewsArticle&id=8672

(n.d.). *Outline of the accreditation process*. Outdoor Behavioral Healthcare Center. https://aee.memberclicks.net/assets/Accreditation/Outline%20of%20AEE%20Accreditation%20Process.pdf

(2008). *Health and safety of participants attending wilderness therapy residential treatment programs for troubled youth on public lands*. U.S. Department of the Interior Bureau of Land Management. https://www.blm.gov/policy/im-2008-141

(2014). *Serious mental health challenges among older adolescents and young adults*. Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/report/serious-mental-health-challenges-among-older-adolescents-and-young-adults

(2017). *Who we treat.* Second Nature Wilderness Family Therapy. https://www.second-nature.com/programs/student-profile

(2019). *Program cost, insurance, and financing information*. RedCliff Ascent Wilderness Therapy. https://www.redcliffascent.com/admissions/financialinfo/

(2020). *Accreditation*. Outdoor Behavioral Healthcare Council. https://obhcouncil.com/accreditation/

(2020). *Adolescent profile*. Open Sky Wilderness Therapy. https://www.openskywilderness.com/our-programs/adolescent-profile/

(2020). *Adventure therapy for young adults from South Carolina*. Trails Carolina. https://trailscarolina.com/b/adventure-therapy-young-adults/south-carolina/

(2020). *Adventure therapy young adults.* Trails Carolina. https://truenorthwilderness.com/young-adult/

(2020). *Canine therapy*. New Vision Wilderness Therapy. https://newvisionwilderness.com/11-2/canine-therapy/

(2020). *Clinical approach*. Open Sky Wilderness Therapy. https://www.second-nature.com/resources/clinical-approach

(2020). *Equine therapy*. blueFire Wilderness Therapy. https://bluefirewilderness.com/why-choose-best-wilderness-therapy-programs/equine-therapy/

(2020). *Financing options*. Summit Achievement. https://www.summitachievement.com/programs/summit-program/fees-financing/

(2020). *First Light young adults*. First Light Wilderness Therapy: A New Vision Program. https://newvisionwilderness.com/first-light-wilderness-therapy/first-light-young-adults/

(2020). *Healthy living*. Open Sky Wilderness Therapy. https://www.openskywilderness.com/healthy-living/

(2020). *History*. Outward Bound. https://www.outwardbound.org/about-outward-bound/outward-bound-today/history/

(2020). *Individual and group therapy.* Open Sky Wilderness Therapy. https://www.openskywilderness.com/therapy/

(2020). *Our clinical approach to wilderness therapy*. Summit Achievement. https://www.summitachievement.com/why-us-therapy-treatment/clinical-approach-troubled-youth-treatment/

(2020). *Our clinical model*. blueFire Wilderness Therapy. https://bluefirewilderness.com/our-troubled-youth-programs/clinical/

(2020). *Sample daily schedule.* Open Sky Wilderness Therapy. https://www.openskywilderness.com/sample-daily-schedule/

(2020). *The therapy experience*. RedCliff Ascent Wilderness Therapy Program. https://www.redcliffascent.com/therapy-experience/

(2020). *Therapeutic approach*. ANASAZI Foundation. https://www.anasazi.org/therapeuticapproach.html

(2020). *Therapeutic methods.* Elements Wilderness Program. https://www.elementswilderness.com/therapy/therapeutic-methods/

(2020). *Therapeutic model*. New Vision Wilderness Therapy. https://newvisionwilderness.com/11-2/therapeutic-model/

(2020). *Therapeutic work at Trails Carolina.* Trails Carolina. https://trailscarolina.com/adventure-therapy-programs/

(2020). *Vantage Point.* Aspiro. https://aspiroadventure.com/who-we-help/vantage-point/

(2020). *Why Second Nature?*. Second Nature Wilderness Therapy. https://www.second-nature.com/about/why-second-nature

(2020). *Wilderness therapy programs: A comprehensive guide for parents*. Aspiro. https://aspiroadventure.com/wp-content/uploads/2019/03/Wilderness-Therapy-Program.pdf

(2020). *Young adult program.* True North Wilderness Program. https://truenorthwilderness.com/young-adult/

(2020). *Young adult profile*. Open Sky Wilderness Therapy. https://www.openskywilderness.com/our-programs/young-adult-student-profile/

(2021). *Families*. Open Sky Wilderness Therapy. https://www.openskywilderness.com/family-services/

Alden, L. E., Wiggins, J. S., & Pincus, A. L. (1990). Construction of circumplex scales for the Inventory of Interpersonal Problems. *Journal of Personality Assessment, 55*(3&4), 521-536. https://doi.org/10.1207/s15327752jpa5503&4_10

Anderson, S. (August 12, 2014). *When wilderness boot camps take tough love too far*. The Atlantic. https://www.theatlantic.com/health/archive/2014/08/when-wilderness-boot-camps-take-tough-love-too-far/375582/

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469-480. https://doi.org/10.1037//0003-066X.55.5.4

Arnow, B. A., Steidtmann, D., Blasey, C., Manber, R., Constantino, M. J., Klein, D. N., Markowitz, J. C., Rothbaum, B. O., Thase, M. E., Fisher, A. J., & Kocsis, J. H. (2013). The relationship between the therapeutic alliance and treatment outcome in two distinct psychotherapies for chronic depression. *Journal of Consulting and Clinical Psychology, 81*(4), 627-638. https://doi.org/10.1037/a0031530

Baams, L., Grossman, A. H., & Russell, S. T. (2015). Minority stress and mechanisms of risk for depression and suicidal ideation among lesbian, gay, and bisexual youth. *Developmental Psychology, 51*(5), 688-696. https://dx.doi.org/10.1037/a0038994

Bador, K., & Kerekes, N. (2020). Evaluation of an integrated intensive cognitive behavioral therapy treatment within addiction care. *The Journal of Behavioral Health Sciences & Research, 47*(1) 102-212. https://dooi.org/10.1007/s11414-019-09657-5

Baer, R.A., Smith, G.T., Hopkins, J., Krietemeyer, J., & Toney L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27–45. https://doi.org/10.1177/1073191105283504

Bain, C. L., Grzanka, P. R., & Crowe, B. J. (2016). Toward a queer music therapy: The

implications of queer theory for radically inclusive music therapy. *The Arts in Psychotherapy, 50,* 22-33. https://doi.org/10.10106/j.aip.2016.03.004

Balsam, K. F., Beadnell, B., & Molina, Y. (2013). The Daily Heterosexist Experiences Questionnaire: Measuring minority stress among lesbian, gay, bisexual, and transgender adults. *Measurement and Evaluation in Counseling and Development, 46,* 3-25. https://doi.org/10.1177/0748175612449743

Barnes, D. M., Keyes, K. M., & Bates, L. M. (2013). Racial differences in depression in the United States: How do subgroup analyses inform a paradox?. *Social Psychiatry and Psychiatric Epidemiology, 48,* 1941-1949. https://doi.org/10.1007/s00127-013-0718-7

Beard, C., Kirakosian, N., Silverman, A. L., Winer, J. P., & Wadsworth, L. P. (2017). Comparing treatment response between LGBQ and heterosexual individuals attending a CBT – and DBT-skills-based partial hospital. *Journal of Consulting and Clinical Psychology, 85*(2), 1171-1181. https://dx.doi.org/10.1037/ccp0000251

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. Psychological Corporation.

Beck, A. T., Ward, C. H., Mendleson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*(6), 561–571. https://doi.org/10.1001/archpsyc.1961.01710120031004

Beck, A. T., Weissman, A., Lesster, D., & Trexler, L. (1974). The measure of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology, 42*(6), 861-864. https://doi.org/10.1037/h0037562

Becker, S. P. (2010). Wilderness therapy: Ethical considerations for mental health professionals. *Child Youth Care Forum, 39,* 47-61. https://doi.org10.1006/s10566-099-9085-7

Beckstead, D. L., Hatch, A. L., Lambert, M. J., Eggett, D. L., Goates, M. K., & Vermeersch,

D.A. (2003). Clinical significance of the outcome questionnaire (OQ 45.2). *The Behavior Analyst Today, 4*(1), 86-97.

Benotsch, E.G., Zimmerman, R., Cathers, L., McNulty, S., Pierce, J., Heck, T., Perrin, P.B., & Snipes, D. (2013). Non-medical use of prescription drugs, polysubstance use, and mental health in transgender adults. *Drug and Alcohol Dependence, 132*, 391–394. https://dx.doi.org/10.1016/j.drugalcdep.2013.02.027

Berking, M., Ebert, D., Cuijpers, P., & Hofmann, S. G. (2013). Efficacy of inpatient cognitive behavioral therapy for major depressive disorder: A randomized controlled trial. *Psychotherapy and Psychosomatics, 82*, 234-245. https://doi.org/10.1159/000348448

Bettmann, J. E., Gillis, H. L., Speelman, E. A., Parry, K. J., Case, J. M. (2016). A meta-analysis of wilderness therapy outcomes for private pay clients. *Journal of Child and Family Studies, 25*, 2659-2673. https://doi.org/10.1007/s10826-016-0439-0

Bettmann J. E., Kouris, G. M., Anderson, I. M., & Casselman, B. (2021). Wilderness as healing environment: Treating adolescent substance misuse in wilderness therapy. *The Psychoanalytic Study of the Child, 71*, 249-264. https://doi.org/10.1080/00797308.2020.1859270

Bettmann, J. E., Russell, K. C., & Parry, K. J. (2013). How substance abuse skills, readiness to change and symptom reduction impact change processes in wilderness therapy participants. *Journal of Child and Family Studies, 22*, 1039-1050. https://doi.org/1007/s10826-012-9665-2

Bettmann, J. E., Tucker, A., Behrens, E., & Vanderloo, M. (2017). Changes in late adolescents and young adults' attachment, separation, and mental health during wilderness therapy. *Journal of Child and Family Studies, 26*, 511-522. https://doi.org/10.1007/s10826-016-0577-4

Bettmann, J. E., Tucker, A. R., Tracy, J., & Parry, K. J. (2014). An exploration of gender, client history, and functioning in wilderness therapy participants. *Residential Treatment for Children & Youth, 31*, 155-170.

Beutler, L. E., Rocco, F., Moleiro, C. M., & Talebi, H. (2001). Resistance. *Psychotherapy Research, Practice, and Training, 38*. 431-446. https://doi.org/10.1037/0033-3204.38.4.431

Bickman, L., Athay, M. M., Riemer, M., Lambert, E. W., Kelley, S. D., & Vides de Andrade, A. R. (2012). The Peabody Treatment Progress Battery: History and methods for developing a comprehensive treatment battery for youth mental health. *Administration and Policy in Mental Health and Mental Services, 39*, 3-12. https://doi.org/10.1007/s10488-012-0404-1

Bica, T., Castelló, R., Toussaint, L. L., & Montesó-Curto, P. (2017). Depression as a risk factor of organic diseases: An international integrative review. *Journal of Nursing Scholarship, 49(4), 389-399. https://doi.org/10.1111/jnu.12303*

Bierma, P. (January 1, 2020). *Death trip: Wilderness therapy programs claim they'll straighten out your troubled teen with tough love and survival training. Some kids never come back.* HealthDay. https://consumer.healthday.com/encyclopedia/children-s-health-10/misc-kid-s-health-news-435/death-trip-648083.html

Blumenfield, M., Suojanen, J. K., & Weiss, C. (2012). Public awareness about the connection between depression and physical health: Specifically heart disease. *Psychiatric Quarterly, 83*, 259-269. https://doi.org/10.1007/s11126-011-9199-6

Bockting, W. O., Miner, M. H., Swinburne Romine, R. E., Hamilton, A., & Coleman, E. (2013). Stigma, mental health, and resilience in an online sample of the US transgender population. *American Journal of Public Health, 103*, 943–951. https://dx.doi.org/10.2105/AJPH.2013.301241

Bolt, K. (2016). Descending from the summit: Aftercare planning for adolescents in wilderness therapy. *Contemporary Family Therapy, 38*, 62-74. https://doi.org/10.1007/s10591-016-9375-9

Bonner, M., & Uy, M. (June 5, 2020). *Everything you need to know about the Fab Five's boyfriends and husbands*. Cosmopolitan. https://www.cosmopolitan.com/entertainment/a23303308/fab-five-boyfriends-husbands-queer-eye/

Boswell, D. L., White, J. K., Sims, W. D., Harrist, R. S., & Romans, J. C. (2013). Reliability and validity of the Outcome Questionnaire-45.2. *Psychological Reports: Mental & Physical Health, 112*, 3, 689-693. https://doi.org/10.2466/02.08.PR0.112.3.689-693

Bowen, D. J., & Neill, J. T. A meta-analysis of adventure therapy outcomes and moderators. (2015) *The Open Psychology Journal, 6*, 28-53. https://doi.org/10.2174/1874350120130802001

Bowen, D. J., Neill, J., & Crisp, S. (2016). Wilderness adventure therapy effects on the mental health of youth participants. *Evaluation and Program Planning, 58*, 49-58. https://doi.org/10.1016/j.evalprogplan.2016.05.005

Bowen, S., Chawla, N., Collins, S. E., Witkiewitz, K., Hsu, S., Grow, J., Clifasefi, S., Garner, M., Douglass, A., Larimer, M., & Marlatt, A. (2009). Mindfulness-based relapse prevention for substance use disorders: A pilot efficacy trial. *Substance Use, 30*(4), 295-305. https://doi.org/10.1080/08897070903250084

Braga, C., Ribeiro, A. P., Sousa, I. & Gonçlaves, M. M. (2019). Ambivalence predits symptomatology in cognitive-behavioral and narrative therapies: An exploratory study. *Frontiers in Psychology, 10*, 1244. https://doi.org/10.3389/fpsyg.2019.01244

Bratman, G. J., Hamilton, J. P., & daily, G. C. (2012). The impacts of nature experience on

human cognitive function and mental health. *Annals of the New York Academy of Sciences, 1249*, 118-36. https://doi.org/10.1111.j.1479-6632.2011.06400.x

Breslow, A. S., Brewster, M. E., Velez, B. L., Wong, S., Geiger, E., & Soderstrom, B. (2015). Resilience and collective action: Exploring buffers against minority stress for transgender individuals. *Psychology of Sexual Orientation and Gender Diversity, 2*, 253–265. https://dx.doi.org/ 10.1037/sgd0000117

Brewster, M. E., Velez, B. L., Mennicke, A., & Tebbe, E. (2014). Voices from beyond: A thematic content analysis of transgender employees' workplace experiences. *Psychology of Sexual Orientation and Gender Diversity, 1*(2), 159-169. https://dx.doi.org/10.1037/sgd0000030

Brown, K.W., & Ryan, R.M. (2003). The benefits of being present: The role of mindfulness in psychological well-being. *Journal of Personality and Social Psychology, 84*, 822–848. https://doi.org/10.1037/0022-3514.84.4.822

Budge, S. L., Adelson, J. L., & Howard, K. A. S. (2013). Anxiety and depression in transgender individuals: The roles of transition status, loss, social support, and coping, *Journal of Consulting and Clinical Psychology, 81*(3), 545-557. https://doi.org/10.1037/a0031774

Burlingame, G. M., McClendon, D. T., & Yang, C. (2018). Cohesion in group therapy: A meta-analysis. *Psychotherapy, 55*(4), 384-398. https://dx.doi.org.ezproxy.cul.columbia.edu/10.1037/pst0000173

Burlingame, G.M., Wells, M.G., & Lambert, M.J. (1996). *Youth Outcome Questionnaire*. American Professional Credentialing Services.

Burlingame, G.M., Wells, M.G., Lambert, M., & Cox, J. (2004). Youth Outcome Questionnaire: Updated psychometric properties. In M. Maruish (Ed.), *The use of psychological testing for treatment planning and outcomes assessment* (pp. 235-273). Erlbaum.

Casey, L. S., Reisner, S. L., Findling, M. G., Blendon, R. J., Benson, J. M., Sayde, J. M., & Miller, C. (2019). Discrimination in the. United States: Experiences of lesbian, gay, bisexual, transgender, and queer Americans. *Health Services Research, 54*, 1454-1466. https://doi.org.10.1111/1475-6773.13229

Chaudoir, S. R., Wong, K., & Pachankis, J. E. (2017). What reduces minority stress? A review of the intervention 'toolkit'. *Journal of Social Issues, 73*(3), 586-617. https://doi.org/10.1111/josi.12233

Christenson, J. D., & Gutierrez, D. M. (2017). Investigating family therapy with qualitative, quantitative, and mixed methods in adolescent residential treatment programs. In J. Christenson & A. Merritts (Eds.), *Family therapy with adolescents in residential treatment: Focused issues in family therapy*. Springer. https://doi.org/10.1007/978-3-319-51747-6_20

Cochran, S. D. (2001). Emerging issues in research on lesbians' and gay men's mental health: Does sexual orientation really matter?. *American Psychologist, 56*11, 931-947. https://doi.org/10.1037/0003-066x.56.11.931

Cochran, S. D., Ackerman, D., Mays, V. M., & Ross, M. W. (2004). Prevalence of non-medical drug use and dependence among homosexually active men and women in the US population. *Addiction,* 99, 989−998. https://doi.org/10.1111/j.1360-0443.2004.00759.x

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.) Lawerence Erlbaum Associates.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159. https://doi.org/10.1037//0033-2909.112.1.155

Combs, K. M. (2016). What does it take to get post-discharge data?. *Journal of Therapeutic Schools and Programs, 8,* 18-22. https://doi.org/10.19157/JTSP.issue.08.01.04

Cooper, Z.Z., & Fairburn, C. (1987). The eating disorder examination: A semi-structured interview for the assessment of the specific psychopathology of eating disorders. *International Journal of Eating Disorders*, *6*, 1–8. https://doi.org/10.1002/1098-108x(198701)6:1<1::aid-eat2260060102>3.0.co;2-9

Cortes, J., Fletcher, T., Latini, D. M., & Kauth, M. R. (2019). Mental health differences between older and younger lesbian, gay, bisexual, and transgender veterans: Evidence of resilience. *Clinical Gerontologist, 42*(2), 162-171. https://doi.org/10.1080/07317115.2018.1523264

Craig, S. L., Austin, A., & Alessi, E. (2013). Gay affirmative cognitive behavioral therapy for sexual minority youth: A clinical adaptation. *Clinical Social Work Journal*, *41*(3), 258–266. https://doi.org/10.1007/s10615-012-0427-9

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum, 1*(80), 140-167. https://doi.org/10.4324/9780429500480-5

Cronon, W. (1996). The trouble with wilderness; or, getting back to the wrong nature. *Environmental History, 1*, 7-28.

Cumming, S. P., Smith, R. E., Grossbard, J. R., Smoll, F. L., & Malina, R. M. (2012). Body size, coping strategies, and mental health in adolescent female athletes. *International Journal of Sports Science & Coaching*, *7*(3), 515-526. https://doi.org/10.1260/1747-9541.7.3.515

Curtis, A., Briggs, J., & Behrens, E. (2018). Young adults in residential and outdoor behavioral health programs: Preliminary outcomes from the Practice Research Network of the National Association of Therapeutic Schools and Programs. *Journal of Therapeutic Schools and Programs*, *1*(1), 66-92. https://doi.org/10.19157/jtsp.issue.10.01.03

Cyrus, K. (2017). Multiple minorities as multiply marginalized: Applying the minority tress

theory to LGBTQ people of color. *Journal of Gay & Lesbian Mental Health, 21*(3), 194-202. https://doi.org/10.1080/19359705.2017.132079

Davis-Berman, J., & Berman, D. S. (1989). The wilderness therapy program: An empirical study of its effects with adolescents in an outpatient setting. *Journal of Contemporary Psychotherapy, 19,* 270–281. https://doi.org/10.1007/bf00946092

DeAngelis, T. (2013). Therapy gone wild. *Monitor on Psychology, 44*(8), 48.

Denavas-Walt, C., & Proctor, B. D. (September, 2015). *Income and poverty in the United States: 2014*. United States Census Bureau. https://www.census.gov/population/projections/data/national/2014.html

Derogatis, L. R., Lipman, R. S., & Covi, L. (1973). SCL-90: An outpatient psychiatric rating scale: Preliminary report. *Psychopharmacology Bulletin, 9,* 13–28.

Dobud, W. (2017). Towards an evidence-informed adventure therapy: Implementing feedback-informed treatment in the field. *Journal of Evidence-Informed Social Work, 14*(3), 172-182. https://doi.org/10.1080/23761407.2017.1304310

Douglas, L. J., Jackson, D., Woods, C., & Usher, K. (2019). Rewriting stories of trauma through peer-to-peer mentoring for and by at-risk young people. *International Journal of Mental Health Nursing, 28,* 744-756. https://doi.org/10.1111/inm.12579

Dunn, T. W., Burlingame, G. M., Walbridge, M., & Crum, M. J. *Clinical Psychology and Psychotherapy, 12,* 388-401. https://doi.org/10.1002/cpp.461

Durlak, J., A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45,* 294-309. https://doi.org/10.1007/s10464-010-9300-6

Duvivier, R. J., & Wiley, E. (2016). Meeting the unique health-care needs of LGBTQ people.

The Lancet. https://doi.org/10.1016/S0140-6736(16)00013-1

Elderton, A., Clarke, S., Jones, C., & Stacey. J. (2013). Telling our story: A narrative therapy approach to helping lesbian, gay, bisexual and transgender people with a learning disability identify and strengthen positive self-identity stories. *British Journal of Learning Disabilities, 42,* 301-307. https://doi.org/10.1111/bld.12075

English, D., Rendina, H. J., & Parsons, J. T. (2018). The effects of intersecting stigma: A longitudinal examination of minority stress, mental health, and substance use among Black, Latino, and multiracial gay and bisexual men. *Psychology of Violence, 8*(6), 669-679. https://doi.org/10.1037/vio0000218

Evans, B., & Colls, R. (2009). Measuring fatness, governing bodies: The spatialities of the Body Mass Index (BMI) in anti-obesity politics. *Antipode, 41*(5), 1051-1083. https://doi.org/10.1111/j.1467-8330.2009.00706.x

Exworthy, T., & Wilsom, S. (2010). Escapes and absconding form secure psychiatric units. *The Psychiatrist, 34*, 81-82. https://doi.org/10.1192/pb.bp.108.024372

Feinstein, B. A., & Dyer, C. (2017). Bisexuality, minority stress, and health. *Current Sexual Health Reports 9*(1), 42-49. https://doi.org/10.1007/s11930-017-0096-3

Feinstein, B. A., Xavier Hall, C. D., Dyar, C., & Davila, J. (2020). Motivation for sexual identity concealment and their associations with mental health among bisexual, pansexual, queer, and fluid (bi+) individuals. *Journal of Bisexuality*, 1-18. https://doi.org/10.1080/15299716.2020.1743402

Fernee, C. R., Gabrielsen, L. E., Andersen, A. J. W., & Mesel, T. (2017). Unpacking the black box of wilderness therapy: A realist synthesis. *Qualitative Health Research, 27*, 114-129. https://doi.org/10.1177/1049732316655776

Flannery, B.A., Volpicelli, J.R., & Pettinati, H.M (1999). Psychometric properties of the Penn Alcohol Craving Scale. *Alcoholism: Clinical and Experimental Research, 23*, 1289-1295. https://doi.org/10.1111/j.1530-0277.1999.tb04349.x

Flores, A. R., Brown, T. N. T., & Herman, J. L. (2016). *Race and ethnicity of adults who identify as transgender in the United States*. The Williams Institute. https://williamsinstitute.law.ucla.edu/wp-content/uploads/Race-Ethnicity-Trans-Adults-US-Oct-2016.pdf

Forbes, M. K., Crome, E., Sunderland, M., & Wuthrich, V. M. (2017). Perceived needs for mental health care and barriers to treatment across age groups. *Aging & Mental Health, 21*(10), 1072-1078. https://doi.org/10.1080/13607863.2016.1193121

Frimpong, E. Y., Rowan, G. A., Williams, D., Li, M., Solano, L., Chaudhry, S., & Radigan, M. (2020). Health disparities, inpatient stays, and emergency room visits among lesbian, gay, and bisexual people: Evidence from a mental health system. *Psychiatric Services, 72*(2), 128-135. https://doi.org/10.1176/appi.ps.201900188

Frost, D. M., Lehavot, K., & Meyer, I. H. (2015). Minority stress and physical health among sexual minority individuals. *Journal of Behavioral Medicine, 38*(1), 1-8. https://doi.org/10.1007/s10865-013-9523-8

Gabrielsen, L. E., Harper, N. J., & Fernee, C. R. (2019). What are constructive anxiety levels in wilderness therapy? An exploratory pilot study. *Complementary Therapies in Clinical Practice, 37*, 51-57. https://doi.org/10.1016/j.ctcp.2019.08.007

Garner, D., & Garfinkel, P. (1979). The Eating Attitudes Test: An index of the symptoms of anorexia nervosa. *Psychological Medicine, 9*(2):273–279. https://doi.org/10.1017/s0033291700030762

Garrison, S. M., Doane, M. J., & Elliot, M. (2018). Gay and lesbian experiences of

discrimination, health, and well-being: Surrounding the presidential election. *Social Psychological and Personality Science, 9*(2), 131-142. https://doi.org/10.1177/1948550617732391

Gass, M. A., Gillis, H. L., & Russell, K. C. (2012). *Adventure therapy: Theory, research, and practice*. Routledge.

Ghobadzadeh, M., McMorris, B. J., Sieving, R. E., Porta, C. M., Brady, S. S. (2019). Relationships between adolescent stress, depressive symptoms, and sexual risk behavior in young adulthood: A structural equation modeling analysis. *Journal of Pediatric Health Care*, *33*(4), 394–403. https://doi.org/10.1016/j.pedhc.2018.11.006

Girouard, M. P., Goldhammer, H., & Keuroghlian, A. S. (2019). Understanding and treating opioid use disorders in lesbian, gay, bisexual, transgender, and queer populations. *Substance Use*, *40*(3), 335-339. https://doi.org/10.1080/08897077.2018.1544963

GLAAD. (July 23, 2020). *Trump Accountability Project (TAP)*. https://www.glaad.org/tap/donald-trump

Golightley, S. (2020). Troubling the 'troubled teen' industry: Adult reflections on youth experiences of therapeutic boarding schools. *Global Studies of Childhood, 10*(1), 53-63. https://doi.org/10.177/204361069900514

Gonzalez, J. M., Alegria, M., Prihoda, T. J., Copeland, L. A., & Zeber, J. E. (2011). How the relationship of attitudes toward mental health treatment and service use differs by age, gender, ethnicity/race and education. *Social Psychiatry and Psychiatric Epidemiology, 46*, 45-57. https://doi.org/10.1007/s00127-009-0168-4

Goodman, J. A., & Israel, T. (2020). An online intervention to promote predictors of supportive parenting for sexual minority youth. *Journal of Family Psychology, 34*, 90-100. http://dx.doi.org/10.1037/fam0000614

Gordon, B., Jacobs, J. M., & Wright, P. M. (2016). Social and emotional learning through a teaching personal and social responsibility based after-school program for disengaged middle-school boys. *Journal of Teaching in Physical Education, 2016, 35*, 358-369. https://dx.doi.org/10.1123/jtpe.2016-0106

Greenfield, B. (2020). *Transgender celeb Laverne Cox talks about her greatest challenge: "Getting out of my own way."* Huffpost. https://bit.ly/3aTa5cf

Griffon, G. (2017). Queer. In *A dictionary of gender studies* (1st edition). https://doi.org/10.1093/acref/9780191834837.001.0001

Haas, A. P., Eliason, M., Mays, V. M., Mathy, R. M., Cochran, S. D., D'Augelli, A. R., Silverman, M. M., Fisher, P. W., Hughes, T., Rosario, F. M., Russell, S. T., Malley, E., Reed, J., Litts, D. A., Haller, E., Sell, R. L., Remafedi, G., Bradford, J., Beautrais, A. L., … Clayton, P. J. (2010). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: Review and recommendations. *Journal of Homosexuality, 58*, 10- 51. https://doi.org/10.1080/00918369.2011.534038

Haas, A. P., Rodgers, P. L., & Herman, J. L. (2014). *Suicide attempts among transgender and gender non-conforming adults: Findings of the national transgender discrimination survey*. The Williams Institute. https://escholarship.org/uc/item/8xg8061f

Hall, A., Ofei-Tenkorang, N. A., Machan, J. T., & Gordon, C. M. (2016). Use of yoga in outpatient eating disorder treatment: A pilot study. *Journal of Eating Disorders, 4*(38), 1-8. https://doi.org/10.1186/s40337-016-0130-2

Hall, W. J., Rosado, B. R., & Chapman, M. V. (2019). Findings from a feasibility study of an adapted cognitive behavioral therapy group intervention to reduce depression among LGBTQ (lesbian, gay, bisexual, transgender, or queer) young people. *Journal of Clinical Medicine, 8,* 249. https://doi.org/10.3390/jcm8070949

Harper, N. J. (2009a). Family crisis and the enrollment of children in wilderness treatment. *Journal of Experiential Education, 31*(3), 447-450. https://doi.org/10.1177/105382590803100318

Harper, N.J. (2009b). The relationship of the therapeutic alliance to outcome in wilderness treatment. *Journal of Adventure Education and Outdoor Learning, 9,* 45-59. https://doi.org/10.1080/14729670802460866.

Harper, N. J., Mott, A. J., & Obee, P. (2019). Client perspectives on wilderness therapy as a component of adolescent residential treatment for problematic substance use and mental health issues. *Children and Youth Services Review, 105,* https://doi.org/10.1016/j.childyouth.2019.104450

Hart, T. A., Noor, S. W., Vernon, J. R., Antony, M. M., Gardner, S., & O'Cleirigh, C. (2020). Integrated cognitive-behavioral therapy for social anxiety and HIV/STI prevention for gay and bisexual men: A pilot intervention trial. *Behavior Therapy, 51*, 503-517. https://doi.org/10.1016.j.beth.2019.09.001

Hart, T. A., Tulloch, T. G., & O'Cleirigh, C. (2014). Integrated cognitive behavioral therapy for social anxiety and HIV prevention for gay and bisexual men. *Cognitive and Behavior Practice, 21*(2), 149-160. https://doi.org/10.1016/j.cbpra.2013.07.001

Hart, T. A., Vernon, J. R. G., & Hart, T. L. (2021). Cognitive behavioral therapy for lesbian, gay, bisexual, and transgender populations. In A. Wenzel (Ed.), *Handbook of cognitive behavioral therapy: Applications* (pp. 795–822). American Psychological Association. https://doi.org/10.1037/0000219-026

Hatzenbuehler, M. L., & Pachankis, J. E. (2016). Stigma and minority stress as social determinants of health among lesbian, gay, bisexual, and transgender youth: Research evidence and clinical implications. *Pediatric Clinics of North America, 63,* 985-997.

https://dx.doi.org/10.1016/j.pcl.2016.07.003

Hazlett-Stevens, H. (2018). Mindfulness-based stress reduction in a mental health outpatient setting: Benefits beyond symptom reduction. *Journal of Spirituality in Mental Health, 20(3)*, 272-292. https://doi.org/10.1080/19349637.2017.1413963

Heck, N. C. (2015). The potential to promote resilience: Piloting a minority stress-informed, GSA-based, mental health promotion program for LGBTQ youth. *Psychology of Sexual Orientation and Gender Diversity, 2*(3), 225-231. https://doi.org/doi:10.1037/sgd0000110

Heo, M., Irvin, E., Ostrovsky, N., Isasi, C., Blank, A., Lounsbury, D. W., Fredericks, L., Yom, T., Ginsberg, M., Hayses, S., & Wylie-Rosett, J. (2016). *Journal of School Health, 86*(2), 84-95. https://doi.org/10.1111/josh.12355

Herman, J. L., Flores, A. R., Brown, T. N. T., Wilson, B. D. M., & Conron, K. J. (2017). *Age of individuals who identify as transgender in the United States*. The Williams Institute. https://williamsinstitute.law.ucla.edu/wp-content/uploads/Age-Trans-Individuals-Jan-2017.pdf

Hinrichs, K. L. M., & Donaldson, W. (2017). Recommendations for use of affirmative psychotherapy with LGBT older adults. *Journal of Clinical Psychology: In Session, 73*(8), 945-953. https://doi.org/10.1002.jclp.22505

Hoag, M. J., Massey, K. E., & Roberts, S. D. (2014). Dissecting the wilderness therapy client: Examining clinical trends, findings, and patterns. *Journal of Experiential Education, 34*(7), 382-396. https://doi.org/10/1177/1053825914540837

Hoag, M. J., Massey, K. E., Roberts, S., Logan, P., & Poppleton, L. (2011, September). *What changes in wilderness therapy: Moving beyond outcome* [Conference session]. Meeting of the Utah Regional National Association of Therapeutic Schools and Journals, Provo, UT. USA.

Hoag M. J., Massey K. E., Roberts, S. D., Logan P. (2013). Efficacy of wilderness therapy for young adults: A first look. *Residential Treatment for Children & Youth, 30*, 294-205. https://doi.org/10.1080/0886571X.2013.852452

Hogue, A., Dauber, S., Stambaugh, L. F., Cecero, J. J., & Liddle, H. A. (2006). Early therapeutic alliance and treatment outcomes in individual and family therapy for adolescent behavior problems. *Journal of Consulting and Clinical Psychology*, *74*(1), 121–129. https://doi.org/10.1037/022-066X.71.1.121

Holman, D. (2015). Exploring the relationship between social class, mental illness stigma and mental health literacy using British national survey data. *Health (London)*, *19*(4), 413-429. https://doi.org/10.1177/1363459314554316

Hom, M. A., Stanley, I. Ah., & Joiner Jr., T. E. (2015). Evaluating factors and interventions that influence help-seeking and mental health service utilization among suicidal individuals: A review of the literature. *Clinical Psychology Review, 40*, 28-39. https://doi.org/10.1016/j.cpr.2015.05.006

Hope, D. A., Heimberg, R. G., & Turk, C. L. *Managing social anxiety: A cognitive-behavioral therapy approach* (2nd edition). Oxford.

Horvath, A. O. (2001). The alliance. *Psychotherapy, 38*(4), 365-372. https://doi.org/10.1037/033-3204.38.4.365

Hottes, T. S., Bogaert, L. Rhodes, A. E. Brennan, D. J., & Gesink, D. (2016). Lifetime prevalence of suicide attempts among sexual minority adults by study sampling strategies: A systematic review and meta-analysis. *American Journal of Public Health, 106*(5), e1-e12. https://doi.org/10.2105/ajph.2016.303088a

Housten, P. D., Knabb, J. J., Welsh, R. K., Houskamp, B. M., & Brokaw, D. (2010). Wilderness therapy as a specialized competency. *International Journal of Psychology Studies, 2*(2), 52-64. https://doi.org/10.5539/ijps.v2n2p52

Hughto, J. M. W., Reisner, S. L., & Pachankis, J. E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science & Medicine, 147*, 222-231. https://dx.doi.org/10.1016/j.socscimed.2015.11.1010

Human Rights Campaign. (2020). Maps of laws & policies. https://www.hrc.org/state-maps

Hyde, J. (November 12, 2015). *Life and death in a troubled teen boot camp: A tragic accident exposes the dangers of an out-of-control billion-dollar industry*. Rolling Stone. https://www.rollingstone.com/culture/culture-news/life-and-death-in-a-troubled-teen-boot-camp-31639/

Jaffe, S. (2020). LGBTQ discrimination in US health care under scrutiny. *The Lancet, 395*, 1961. https://doi.org/10.1016/s0140-6736(20)31446-x

Janofsky, M. (2001, July 15). *States pressed as three boys die at boot camps*. New York Times. https://www.nytimes.com/2001/07/15/us/states-pressed-as-3-boys-die-at-boot-camps.html

Jepsen, E. K. K., Langeland, W., Sexton, H., & Heir, T. (2013). Inpatient treatment for early sexually abused adults: A naturalistic 12-month follow-up study. *Psychological Trauma: Theory, Research, Practice, and Policy, 6*(2), 142-151. https://dx.doi.org/10.1037/a0031646

Johnson, E. G., Davis, E. B., Johnson, J., Pressley, J. D., Sawyer, S., & Spinazzola, J. (2020). The effectiveness of trauma-informed wilderness therapy with adolescents: A pilot study. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. https://doi.org/10.1037/tra0000595

Jones, J. (2003). Constructing race and deconstructing racism. In G. Bernal, J. E. Trimble, A. K. Burew, & F. Leong (Eds.), *Handbook of racial and ethnic minority psychology* (pp. 276-306). Thousand Oaks, CA: Sage.

Joyce-Beaulieu, D, & Sulkowski, M. L. (2015). *Cognitive behavioral therapy in K-12 school settings: A practitioner's toolkit*. Springer Publishing.

Kabat-Zinn, J. (2005). *Wherever you go, there you are: Mindfulness meditation in everyday life*. (10th edition). Hachette Books.

Kaniuka, A., Pugh, K. C., Jordan, M., Brooks, B., Dodd, J., Mann, A. K., Williams, S. L., & Hirsch, J. K. (2019). Stigma and suicide risk among the LGBTQ population: Are anxiety and depression to blame and can connectedness to the LGBTQ community help?. *Journal of Gay & Lesbian Mental Health, 23*(2), 205-220. https://doi.org/10.1080/19359705.2018.1560385

Kaplan, A. (January 29, 2020). *Does science support the 'wilderness' in wilderness therapy?*. Undark. https://undark.org/2020/01/29/does-science-support-the-wilderness-in-wilderness-therapy/

Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Degenhardt, L., de Girolamo, G., Dinolova, R. V., Ferry, F., Florescu, S., Gureje, O., Haro, J. M., Huang, Y., Karam, E. G., Kawakami, N., Lee, S., Lepine, J-P., Levinson, D., Navarro-Mateu, F., … & Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotrauatology, 8*(supplement 5), 1353383. https://doi.org/10.1080/20008198.2017.1353383

Keuroghlian, A. S., Ard, K. L., & Makadon, H. J. (2017). Advancing health equity for lesbian, gay, bisexual and transgender (LGBT) people through sexual health education and LGBT-affirming health care environments. *Sexual Health, 14*, 119-122.

https://dx.doi.org/10.1071/SH16145

Keuroghlian, A. S., Reisner, S. L., White, J. M., & Weiss, R. D. (2015). Substance use and treatment of substance use disorders in a community sample of transgender adults. *Drug and Alcohol Dependence, 152*, 139-146. https://dx.doi.org/10.1016/j.drugalcdep.2015.04.008

Khalsa, S. B. S., Hickey-Schultz, L., Cohen, D., & Cope, S. (2012). Evaluation of the mental health benefits of yoga in a secondary school: A preliminary randomized controlled trial. *The Journal of Behavioral Health Services & Research, 39*, 80-90. https://doi.org/10.1007/s11414-011-9249-8

Kidd, S. A., Howison, M., Philling, M., Ross, L. E., & McKenzie, K. (2016). Severe mental illness in LGBT populations: A scoping review. *Psychiatric Services, 67*(7), 779-783. https://doi.org/10.1176/appi.ps.201500209

King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC Psychiatry*, *70*(8), 1–17. https://doi.org/10.1186/1471-244X-8-70

Klein, A. A., & Ross, B. L. (2014). Substance use and mental health severity among LGBTQ individuals attending Minnesota model-based residential treatment. *Journal of Gay & Lesbian Social Services*, *26*(3), 303-317. https://doi.org/10.1080/10538720.2014.924459

Klodnick, V. V., Sabella, K., Brenner, C. J., Krzos, I. A., Ellison, M. L., Kaeser, S. M., Davis, M., & Fagan, M. A. (2015). Perspectives of young emerging adults with serious mental health conditions on vocational peer mentors. *Journal of Emotional and Behavioral Disorders*, *23*(4), 226-237. https://doi.org/10.1177/1063426614565052

Klotzbaugh, R., & Spencer, Gl. (2020). Lesbian, gay, bisexual, and transgender inpatient

satisfaction survey: Results and implications. *Journal of Patient Experience, 7*(1), 83-88. https://doi.org/10.1177/2374373518809503

Knapp. S. J., VandeCreek. L. D., & Fingerhunt, R. (2017). *Practical ethics for psychologists*. American Psychological Association.

Kosciw, J. G., Greytak, E. A., Zongrone, A. D., Clark, C. M., & Truong, N. L. (2017). *The 2017 National School Climate Survey: The experiences of lesbian, gay, bisexual, transgender, and queer youth in our nation's schools*. GLSEN. https://files.eric.ed.gov/fulltext/ED590243.pdf

Krakauer, J. (October, 1995). *Loving them to death*. Outside. https://www.outsideonline.com/1914826/loving-them-death

Lambert, M. J., Burlingame, G. M., Umphress, V., Hansen, N. B., Vermeersch, D. A., Clouse, G. C., & Yanchar, S. C. (1996). The reliability and validity of the Outcome Questionnaire. *Clinical Psychology & Psychotherapy, 3*(4), 249-258. https://doi.org/10.1002/(SICI)1099-0879(199612)3:4<249::AID-CPP106>3.0.CO;2-S

Lambert, M. J., Gregersen, A. T., & Burlingame, G. M. (2004). The Outcome Questionnaire-45. In M. E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcomes assessment: Instruments for adults* (p. 191–234). Lawrence Erlbaum Associates Publishers.

Lee, C., & Ostergard, R. L. Jr. (2017). Measuring discrimination against LGBTQ people: A cross-national analysis. *Human Rights Quarterly, 39*, 37-72. https://doi.org/10.1353/hrq.2017.0001

Lee, C. Y. S., Dik, B. J. (2017). Associations among stress, gender, sources of social support, and health in emerging adults. *Stress and Health*, *33*(4), 378–388. https://doi.org/10.1002/smi.2722

Lee, H. Y., Hwang, J., Ball, J. G., Lee, J., Yu, Y., & Albright, D. L. (2020). Mental health literacy affects mental health attitude: Is there a gender difference?. *American Journal of Health and Behavior, 44*(3), 283-294. https://doi.org/10.5993/AJHB.44.3.1

Lemoire, S. J., & Chen, C. P. (2005). Applying person-centered counseling to sexual minority adolescents. *Journal of Counseling & Development, 83*, 146-154. https://doi.org/10.1002/j.1556-6678.2005.tb00591.x

Lestetr, P., Liang, L-J., Milburn, N., Mogil, C., Woodward, K., Nash, W., Aralis, H., Sinclair, M., Seeman, A., Klosinski, L., Beardslee, W., & Saltzman, W. (2016). Evaluation of a family-centered preventive intervention for military families: Parent and child longitudinal outcomes. *Journal of the American Academy of Child & Adolescent Psychiatry,* 55, 14-24. https://doi.org/10.1016/j.jaac.2015.10.009

Levitt, H. M., Minami, T., Greenspan, S. B., Puckett, J. A., Henretty, J. R., Reich, C. M., & Berman, J. S. (2016). How therapist self-disclosure relates to alliance and outcomes: A naturalistic study. *Counselling Psychology Quarterly*, *29*(1), 7-28. https://doi.org/10.4324/9781315229034-2

Lipari, R. N., Hedden, S., Glau, G., & Rubenstein, L. (2016). *Adolescent mental health service use and reasons for using services in specialty, educational, and general medical settings.* SAMSA. https://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html

Little, R. J., & Rubin, D. B. (2014). *Statistical analysis with missing data*. Wiley & Sons.

Liu, S., Rovine, M. J., & Molenaar, P. C. M. (2012). Selecting a linear mixed model for longitudinal data: Repeated measures analysis of variance, covariance pattern model, and growth curve approaches. *Psychological Methods*, *17*, 15-30. https://doi.org/10.1037/a0026971

Livingston, N. A., Christianson, N., & Cochran, B. N. (2016). Minority stress, psychological distress, and alcohol misuse among sexual minority young adults: A resiliency-based conditional process analysis. *Addictive Behaviors, 63*, 125-131. https://dx.doi.org/10.1016/j.addbeh.2016.07.011

Loftin, M. (February 10, 2020). *How to talk with your young adult about wilderness therapy*. Open Sky Wilderness Therapy. https://www.openskywilderness.com/talk-young-adult/

Lubans, D., Richards, J., Hillman, C., Faulkner, G., Beauchamp, M., Nilsson, M., Kelly, P., Smith, J., Raine, L., & Biddle, S. (2016). Physical activity for cognitive and mental health in youth: A systematic review of mechanisms. *Pediatrics, 138*(3), 1-15. https://pediatrics.aappublications.org/content/138/3/e20161642

Ludgya, S., Gerber, M., Herrmann, C., Brand, S., & Pühse, U. (2018). Chronic effects of exercise implemented during school-break time on neurophysiological indices of inhibitory control in adolescents. *Trends in Neuroscience and Education, 10*, 1-7. https://doi.org/10.1016/j.tine.2017.11.001

MacKenzie, K. R. (1983). The clinical application of a group climate measure. In R. R. Dies, & K. R. MacKenzie (Eds.), *Advances in group psychotherapy: Integrating research and practice* (pp. 159-170). International Universities Press.

Magle-Haberek, N. A., Tucker, A. R., & Gass, M. A. (2012). Effects of program differences with wilderness therapy and residential treatment center (RTC) programs. *Residential Treatment for Children & Youth, 29*, 202-218. https://doi.org/10.1080/0886571X.2012.697433

Maffei, C., Cavicchioli, M., Movalli, M., Cavallaro, R., & Fossati, A. (2018). Dialectical Behavioral Therapy skills training in alcohol dependence treatment: Findings based on an

open trial. *Substance Use & Misuse, 53*(14), 2368-2385. https://doi.org.10.1080/10826084.2018.1480035

Maxan, E., Kinley, J. L., Williams, J., & Reyno, S. M. (2013). Intensive group psychotherapy: Fostering resilience in patients with Axis I and Axis II disorders. *International Journal of Mental Health Promotion, 15*(2), 121-130. https://doi.org/10.1080/14623730.2013.808851

McCarthy, M. A., Fisher, C. M., Irwin, J. A., Coleman, J. D., & Pelster, A. D. K. (2015). Using the minority stress model to understand depression in lesbian, gay, bisexual, and transgender individuals in Nebraska. *Journal of Gay & Lesbian Mental Health, 18*, 346-360. https://doi.org/10.1080/19359705.2014.908445

McCullough, R., Dispenza, F., Parker, L. K., Viehl, C. J., Chang, C. Y., & Murphy, T. M. (20167). The counseling experiences of transgender and gender nonconforming clients. *Journal of Counseling & Development, 95*, 423-434. https://doi.org/10.1002/jcad.12157

McDermott, E., Gabb, J., Eastham, R., & Hanbury, Al. (2021). Family trouble: Heteronormativity, emotion work and queer youth mental health. *Health, 25*(2), 177-195. https://doi.org/10.11077/1363459319860572

Mears, R. & Jago, R. (2016). Effectiveness of after-school interventions at increasing moderate-to-vigorous physical activity levels in 5- to 18-year olds: A systematic review and meta-analysis. *British Journal of Sports Medicine, 50*, 1315-1320. https://doi.org/10.1136/bjsports-2015-094976

Melendez-Torres, GJ., & Bonell, C. (2014). Systematic review of cognitive behavioural interventions for HIV risk reduction in substance-using men who have sex with men. *International Journal of STD & AIDS, 25*(9), 627-635. https://doi.org/10.1177/0956462413515638

Mereish, E. H., O'Cleirigh, C., & Bradford, J. B. (2014). Interrelationships between LGBT-based victimization, suicide, and substance use problems in a diverse sample of sexual and gender minorities. *Psychology Health & Medicine*, *19*, 1–13. https://dx.doi.org/10.1080/13548506.2013.780129

Mereish, E. H., Peters, J. R., & Yen, S. (2019). Minority stress and relational mechanisms of suicide among sexual minorities: Subgroup differences in the associations between heterosexist victimization, shame, rejection sensitive, and suicide risk. *Suicide and Life-Threatening Behavior, 49*(2), 547-560. https://doi.org/10.1111/sltb.12458

Merianos, A. L., Nabors, L. A., Vidourek, R. A., & King, K. A. (2013). The impact of self-esteem and social support on college students' mental health. *American Journal of Health Studies, 28*, 27-34.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Meyer, O. L., & Zane, N. (2013). The influence of race and ethnicity in clients' experience of mental health treatment. *Journal of Community Psychology, 41*(7), 884-901. https://doi.org/10.1002/jcop.21580

Mezey, G., Durkin, C., Dodge, L., & White, S. (2015). Never ever? Characteristics, outcomes and motivations of patients who abscond or escape: A 5-year review of escapes and absconds from two medium and low secure forensic units. *Criminal Behavior and Mental Health, 25*, 440-450. https://doi.org/10.1002/cbm

Mizock, L., & Lundquist, C. (2016). Missteps in psychotherapy with transgender clients: Promoting gender sensitivity in counseling and psychological practice. *Psychology of*

Sexual Orientation and Gender Diversity, 3(2), 148-155. https://dx.doi.org/10.1037/sgd0000177

Monahan, J. (1984). The prediction of violent behavior: Towards a second generation of theory and policy. *American Journal of Psychiatry, 141*, 10–15. https://doi.org/10.1176/ajp.141.1.10

Mongelli, F., Perrone, D., Balducci, J., Saccetti, A., Ferrari, S., Mattei, G., Galeazzi, G. M. (2019). Minority stress and mental health among LGBT populations: An update on the evidence. *Minerva Psichiatrica, 60*, 27-50. https://doi.org/10.23736/S0391-1772.18.01995-7

Morrison, T. G., Bishop, C. J. Morrison, M. M., & Parker-Taneo, K. (2016). A psychometric review of measures assessing discrimination against sexual minorities. *Journal of Homosexuality, 63*(8), 1086-1126. https://doi.org/10.1080/00918369.2015.1117903

Mygind, L. E., Ejeldsted, R., Hartmeyer, E., Mygind, M., Bølling, M., & Bentsen, P. (2019). Mental physical and social health benefits of immersive nature-experience for children and adolescents: A systematic review and quality assessment of the evidence. *Health and Place, 58*, 102-36. https://doi.org.10.1016/j.healthplace.2019.05.014

Neunhäuserer, D., Sturm, J., Baumgartlinger, M. M., Niederseer, D., Ledl-Kurkowski, E., Steidle, E., Plöderl, M., Fartacek, C., Kralovec, K., Fartacek, R., & Niebauer, J. (2013). Hiking in suicidal patients: Neutral effects on markers of suicidality. *The American Journal of Medicine, 126*(10), 927-930. https://dx.doi.org/10.1016/j.amjmed.2013.05.008

Norton, C.L., & Peyton, J. (2017). Mindfulness-based practice in outdoor behavioral healthcare. *Journal of Therapeutic Schools and Programs, 9*(1), 7-20. https://doi.org/10.19157/JTSP.issiue.09.01.02

Nurenberg, J. R., Schleifer, S. J., Shaffer, T. M., Yellin, M., Desai, P. J., Amin, R., Bouchard, A.,

& Montalvo, C. (2015). Animal-assisted therapy with chronic psychiatric inpatients: Equine-assisted psychotherapy and aggressive behavior. *Psychiatric Services, 66*(1), 80-86. https://doi.org/10.1176/appi.ps.201300524

Oswalt, S., Lederer, A. M., Steich-Chestnut, K., Day, C., Halbritter, A., & Ortiz, D. (2020). Trends in college students' mental health diagnoses and utilization of services, 2009-2015. *Journal of American College Health, 68*, 41-51. https://doi.org/10.1080/07448481.2018.1515748

Pachankis, J. E. (2014). Uncovering clinical principles and techniques to address minority stress, mental health, and related health risks among gay and bisexual men. *Clinical Psychology: Science and Practice*, *21*(4), 313–330. https://doi.org/10.1111/cpsp.12078

Pachankis, J. E., Hatzenbuehler, M. L., Rendina, H. J. Safren, S. A. (2015). LGB-affirmative cognitive-behavioral therapy for young adult gay and bisexual men: A randomized controlled trial of a transdiagnostic minority stress approach. *Journal of Counseling and Clinical Psychology*, *83*(5), 875-889. https://dx.doi.org/10.1037/ccp0000037

Pachankis, J. E., McConocha, E. M., Reynolds, J. S., Winston, R., Adeyinka, O., Harkness, A., Burton, C. L., Behari, K., Sullivan, T. J., Eldahan, A. I., Esserman, D. A., Hatzenbuehler,& Safren, S. A. (2019). Project ESTEEM protocol: A randomize controlled trial of an LGBTQ-affirmative treatment for young adult sexual minority men's mental and sexual health. *BMC Public Health, 19*(1086), 1-12. https://doi.org/10.1186/s12889-019-7346-4

Pachankis, J. E., Williams, S. L., Behari, K., Job, S., McConocha, E. M., & Chaudoir. S. R. (2020). Brief online interventions for LGBTQ young adult mental behavioral health: A randomized controlled trial in a high-stigma, low-resource context. *Journal of Consulting and Clinical Psychology*, *88*(5), 429-444. https://dx.doi.org/10.1037/ccp0000497

Painter, K. R., Scannapieco, M., Blau, G., Andre, A., & Kohn, K. (2018). Improving the mental health outcomes of LGBTQ youth and young adults: A longitudinal study. *Journal of Social Service Research, 44*(2), 223-235. https://doi.org/10.1080/01488376.2018.1441097

Palitski, D., Mota, N., Afifi, T. O., Downs, C. A., & Jitender, S. (2013). The association between adult attachment style, mental disorders, and suicidality findings from a population-based study. *The Journal of Nervous and Mental Disease*, *201*(7), 579-586. https://doi.org/10.1097/NMD.0b013e31829829ab

Palkki, J., & Caldwell, P. (2018). "We are often invisible": A survey on safe spaces for LGBTQ students in secondary school choral programs. *Research Studies in Music Education, 40*(1), 28-49. https://doi.org/10.1177/1321103X117734973

Parent, M. C., Arriaga, A. S., Gobble, T., & Wille, L. (2019). Stress and substance use among sexual and gender minority individuals across the lifespan. *Neurobiology of Stress, 10*, 100146. https://doi.org/1016/j.ynstr.2018.100146

Paulik, G., Simcocks, A., Weiss, L., & Albert, S. (2010). Benefits of a 12-week mindfulness group program for mental health consumers in an outpatient setting. *Mindfulness, 1*, 215-226. https://doi.org/10.1007/s12671-010-0030-5

Penner, L., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology, 56*, 365-92. https://doi.org/10.1146/annurev.psych.56.091103.070141

Peterson, C. H., Dalley, L., Dombrowski, S. C., & Maeir, C. (2017). A review of instruments that measure LGBTQ affirmation and discrimination constructs in adults. *Journal of LGBT Issues In Counseling, 11*(4), 230-246. https://doi.org/10.1080/15538605.2017.1380555

Ponterotto, J. G., & Ruckdeschel, D. E. (2007). An overview of the coefficient alpha and a

reliability matrix for estimating adequacy of internal consistency coefficients with psychological research measures. *Perceptual Motor Skills, 105*, 997–1014. https://doi.org/10.2466/PMS.105.7.997-1014

Poquiz, J., Moser, C. N., Grimsttad, F., Boman, K., Sonneville, S. A., Turpin, A., & Egan, A. M. (2021). Gender-affirming care in the Midwest: Reaching rural populations. *Journal of Rural Mental Health, 45*(2), 121-128. https://doi.org/10.1037/rmh0000174

Probuda, T., Crothers, L., Goldblum, P., & Dilley, J. W., & Koopman, C. (2008). Effects of time-limited dynamic psychotherapy on distress among HIV-seropositive men who have sex with men. *AIDS Patient Care and STDs, 22*(7), 561-567. https://doi.org/10.1089/apc.2007.0250

Provence, M. M., Rochlen, A. B., Chester, M. R., & Smith, R. E. "Just one of the guys": A qualitative study of gay men's experiences in mixed sexual orientation men's groups. *Psychology of Men & Masculinity, 15*(4), 427-436. https://doi.org/10.103u/a0035026

Reback, C.J. & Fletcher, J.B. (2014). HIV prevalence, substance use, and sexual risk behaviors among transgender women recruited through outreach. *AIDS and Behavior, 18*, 1359–1367. https://dx.doi.org10.1007/s10461-013-0657-z

Reese, R. F., Hadeed, S., Craig, H., Beyer, A., & Gosling, M. (2018). EcoWellness: Integrating the natural world into wilderness therapy settings with intentionality. Journal of *Adventure Education and Outdoor Learning, 19*(3), 202-215. https://doi.org/10.1080/14729679.2018.1508357

Reeves, R., Rodrigue, E., & Kneebone, E. (2016). *Five evils: Multidimensional poverty and race in America.* Brookings. https://www.brookings.edu/wp-content/uploads/2016/06/ReevesKneeboneRodrigue_MultidimensionalPoverty_FullPaper.pdf

Reisner, S. L., Vetters, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., Mimiaga, M. J. (2015). Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. *Journal of Adolescent Health, 56,* 274-279. https://dx.doi.org/10.1016/j.adohealth.014.10.2634

Rensen, E. (July 7, 2016). *I went into the woods a teenage drug addict and came out sober. Was it worth it?*. Vox. https://www.vox.com/2016/7/7/12081150/wilderness-therapy

Riggle, E. D. B., Gonzalez, K. A., Rostosky, S. S., & Black, W. W. (2014). Cultivating positive LGBTQA identities: An intervention study with college students. *Journal of LGBT Issues in Counseling, 8*(3), 264-281. https://doi.org/10.1080/15538605.2014.933468

Riggle, E. D. B., Rostosky, S. S., Black, W. W., & Rosenkrantz, D. E. (2016). Outness, concealment, and authenticity: Associations with LGB individuals' psychological distress and well-being. *Psychology of Sexual Orientation and Gender Diversity, 4*(1), 54-62. https://dx.doi.org/10.1037/sgd0000202

Riley, E. A., Sitharthan, G., Clemson, L., & Diamond, M. (2013). Recognizing the needs of gender-variant children and their parents. *Sex Education, 13*(6), 466-659. https://doi.org/10.1080/14681811.2013.796287

Rimes, K. A., Broadbent, M., Holden, R., Rahman, Q., Hambrook, D., Hatch, S. L., & Wingrove, J. (2018). *Behavioral and Cognitive Psychotherapy, 46*(3), 332-349. https://doi.org.10.1017/S135246581000583

Ritschel, L. A., Cheavens, J. S., & Nelson, J. (2012). Dialectical behavioral therapy in an intensive outpatient program with a mixed-diagnostic sample. *Journal of Clinical Psychology, 68*(3), 221-235. https://doi.org/10.1002/jclp.20863

Rivas, M. (June 29, 2020). *Jari Jones' body-positive Calvin Klein billboard "is like looking into the future"*. Bustle. https://www.bustle.com/style/jari-jones-calvin-klein-billboard-is-like-looking-into-the-future-she-says-27638332

Robert-Paul, J., Vencill, J. A., & Johnson, P. J. (2017). Impact of stress and strain on current LGBT health disparities. In Eckstrand, K. L., & Potter, J. (Eds.), *Trauma, resilience, and health promotion in LGBT patients* (pp. 35-48). Springer.

Roberts, S. D., Stroud, D., Hoag, M. J., & Combs, K. M. (2016). Outdoor behavioral health care: Client and treatment characteristics effects on young adult outcomes. *Journal of Experiential Education, 39*(3), 288-302. https://doi.org/10.1177/1053825916655445

Roberts, S. D., Stroud, D., Hoag, M. J., & Massey, K. E. (2017). Outdoor behavioral health care: A longitudinal assessment of young adult outcomes. *Journal of Counseling & Development, 95*, 45-55. https://doi.org/10.1002/jcad.12116

Roe, S. (2017). "Family support would have been like amazing": LGBTQ youth experiences with parental and family support. *The Family Journal: Counseling and Therapy for Couples and Families, 25*, 55-62. https://doi.org/10.1177/1066480716679651

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology, 21*(2), 95-103.

Rood, B. A., Maroney, M. R., Puckett, J. A., Berman, A. K., Reisner, S. L., & Pantalone, D. W. (2017). *American Journal of Orthopsychiatry, 87*(6), 704-713. https://dx.doi.org/10.1037/ort0000303

Rosenfield, S., & Mouzon, D. (2013). Gender and mental health. In C. S. Aneshensel, J. C. Phelan & A. Bierman (Eds.), *Handbook of the sociology of mental health* (pp. 277-296). Springer.

Rosner, R., Lumbeck, G., & Geissner, E. (2011). Effectiveness of an inpatient group therapy for

comorbid complicated grief disorder. *Psychotherapy Research, 21*(2), 210-218. https://doi.org/10.1080/10503307.2010.545839

Ross, L. E., Doctor, F., Dimito, A., Kuehl, D., & Armstrong, M. S. (2008). Can talking about oppression reduce depression?: Modified CBT group treatment for LGBT people with depression. *Journal of Gay & Lesbian Social Services*, *19*(1), 1–15. https://doi.org/10.1300/J041v19n01_01

Russell, K. C. (2000). Exploring how the wilderness therapy process relates to outcomes. The *Journal of Experiential Education, 23*, 170-176. https://doi.org/10.1177/105382590002300309

Russell, K. C. (2001). What is wilderness therapy?. *Journal of Experiential Education, 24*(2), 70-79. https://doi.org/10.1177/105382590102400203

Russell, K. C. (2003). Assessment treatment outcomes in outdoor behavioral healthcare using the Youth Outcome Questionnaire. *Child and Youth Care Forum, 32*(6), 355-381. https://doi.org/10.1023/b:ccar.0000004507.12946.7e

Russell, K. C. (2005). Two years later: A qualitative assessment of youth well-being and the role of aftercare in outdoor behavioral healthcare treatment. *Child & Youth Care Forum, 34*(3), 209-239. https://doi.org/10.1007/s10566-005-3470-7

Russell, K. C., & Farnum, J. (2004). A concurrent model of the wilderness therapy process. *Journal of Adventure Education and Outdoor Learning, 4*, 39-55. https://doi.org/10.1080/14729670485200411

Russell, K. C., & Hendee, J. C. (2000). Wilderness therapy as an intervention and treatment for adolescents with behavioral problems. *USDA Forest Services Proceedings, RMRS-P-14*, 136-141. https://www.fs.fed.us/rm/pubs/rmrs_p014/rmrs_p014_136_141.pdf

Russell, K. C., & Phillips-Miller, D. (2002). Perspectives on the wilderness therapy process and its relation to outcome. *Child & Youth Care Forum, 31*, 415-437

Russell, K. C., & Walsh, M. A. (2011). An exploratory study of a wilderness adventure program for young offenders. *Journal of Experiential Education, 33*(4), 398-401. https://doi.org/10.1089/eco.2010.0035

Russell, K. C., Gillis, H. L., & Lewis, T. G. (2008). A five-year follow-up of a survey of North American outdoor behavioral healthcare programs. *Journal of Experiential Education, 31*, 55–77. https://doi.org/10.5193/jee.31.1.55

Russell, K. C., Gillis, H. L. L., & Heppner, W. (2016). An examination of mindfulness-based experiences through adventure in substance use disorder treatment for young adult males: A pilot study. *Mindfulness, 7*, 320-328. https://doi.org/10.1007/s12671-015-0441-4

S.B.-524, 2016 Biennium, 2016 Reg. Sess. (Cal. 2016). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB524

Santos, G.M., Rapues, J., Wilson, E.C., Macias, O., Packer, T., Colfax, G., Raymond, H.F. (2014). Alcohol and substance use among transgender women in San Francisco: prevalence and association with human immunodeficiency virus infection. *Drug and Alcohol Review, 33*, 287–295. https://dx.doi.10.1111/dar.12116

Sarna, V., Dentato, M. P., DiClemente, C. M., & Richards, M. H. (2021). The importance of mentors and mentoring programs for LGBT+ undergraduate students. *College Student Affairs Journal, 39*(2), 180-199.

Schrepfer, S. R. (2005). *Nature's altars: Mountains, gender, and American environmentalism.* University Press of Kansas.

Schulenberg, S. E. (2004). A psychometric investigation of logotherapy measures and the Outcome Questionnaire (OQ-45.2). *North American Journal of Psychology, 6*(3), 477-495.

Senreich, E. (2009). A comparison of perceptions, reported abstinence, and completion rates of gay, lesbian, bisexual, and heterosexual clients in substance abuse treatment. *Journal of Gay & Lesbian Mental Health, 13*(3), 145-169. https://doi.org/10.1080/19359700902870072

Service, R. (1907). *The call of the wild*. https://quod.lib.umich.edu/a/amverse/BAD8607.0001.001/1:10?rgn=div1;view=fulltext

Shearer, A., Herres, J., Kodish, T., Squitieri, H., James, K., Russon, J., Atte, T., & Diamond, G.S. (2016). Differences in mental health symptoms across lesbian, gay, bisexual, and ques- tioning youth in primary care settings. *The Journal of Adolescent Health: Official Publication of The Society for Adolescent Medicine, 59*(1), 38–43. https://doi.org/10.1016/j. jadohealth.2016.02.005

Shelton, J., DeChants, J., Bender, K., Hsu, H-T., Maria, D. S., Petering, R., Ferguson, K., Narendorf, S., & Barman-Adhikari, A. (2018). Homelessness and housing experiences among LGBTQ young adults in seven U.S. cities. *Cityscape: A Journal of Policy Development Research, 20*(3), 9-33.

Sheperis, C., & Sheperis, D. (2018). Social class and mental health. In Sturm, D. C., & Gibson, D. M. (Eds.), *Social Class and the helping professions: A clinician's guide to navigating the landscape of class in America,* (pp. 115-135). Routledge.

Silenzio, V. M., Pena, J. B., Duberstein, P. R., Cerel, J., & Knox, K. L. (2007). Sexual orientation and risk factors for suicidal ideation and suicide attempts among adolescents and young adults. *American Journal of Public Health, 97*(11), 2017–2019.

https://doi.org/10.2105/ajph.2006.095943

Skidmore, K. P. (June 25, 2017). *Stealing wisdom: Cultural appropriation and misrepresentation within adventure therapy and outdoor education*. OutdoorEd. https://www.outdoored.com/articles/stealing-wisdom-cultural-appropriation-and-misrepresentation-within-adventure-therapy-and

Small, C., Pistrang, N., Huddy, Vyv, & Williams, C. (2018). Individual psychological therapy in an acute inpatient setting: Service user and psychologist perspectives. *Psychology and Psychotherapy: Theory, Research, and Practice, 91*, 417-433. https://doi.org/10.1111/papt.12169

Smith, T. E., Abraham, M., Bolotnikova, N. V., Donahue, S. A., Essock, S. M., Olfson, M., Shao, W., Wall, M. M., & Radigan, M. (2017). Psychiatric inpatient discharge planning practices and attendance at aftercare appointments. *Psychiatric Services, 68*(1), 92-95. https://doi.org/10.1176/appi.ps.201500552

Smokowki, P. R., Bacallao, M. L., Cotter, K. L., & Evans, C. B. R. (2015). The effects of positive and negative parenting practices on adolescent mental health outcomes in a multicultural sample of rural youth. *Child Psychiatry & Human Development, 46*, 333-345. https://doi.org/10.007/s10578-014-0474-2

Sneider, I. (December 13, 2017*). The troubled teen industry: The politics of abuse within therapeutic boarding schools*. Medium. https://medium.com/@sneii748/the-troubled-teen-industry-the-politics-of-abuse-within-therapeutic-boarding-schools-d343435e5d36

Snow, A., Cerel, J., Loeffler, D. N., & Flaherty, C. (2019). Barriers to mental healthcare for transgender and gender-nonconforming adults: A systematic literature review. *Health & Social Work, 44*(3), 149-155. https://doi.org/10.1093/hsw/hlz016

Snyder, C.R., Irving, L.M., & Anderson, J.R. (1991). Hope and health. In C.R. Snyder & D.R.

Forsyth (Eds.), *Handbook of social and clinical Psychology: The health perspective* (pp. 285–305). Pergamon Press.

Sobell, L.C., Brown, J.L., Gloria, I., & Sobell, M.B. (1996). The reliability of the Alcohol Timeline Followback when administered by telephone and by computer. *Drug and Alcohol Dependence, 42*, 49–54. https://doi.org/10.1016/0376-8716(96)01263-x

Solomon, S. (November 30, 2016). *The legal industry for kidnapping teens*. Vice. https://www.vice.com/en_us/article/jm5ng4/the-legal-industry-for-kidnapping-teens

Souza, J. (April 11, 2019). *The art of empathetic listening – Bill Miller*. Pacific Quest. https://pacificquest.org/2019/04/11/the-art-of-empathic-listening-bill-miller/

Spielberger, C.D., Gorsuch, R.L., Lushene, R., Vagg, P.R., & Jacobs G.A. (1983). *Manual for the State-Trait Anxiety Inventory*. Consulting Psychologists Press.

Staples, J. M., Neilson, E. C., Bryan, A. E. B., George, W. H. (2018). The role of distal minority stress and internalized transnegativity in suicidal ideation and nonsuicidal self-injury among transgender adults. *Journal of Sex Research, 55*(4-5), 591-603. https://doi.org/10.1080/00224499.2017.1393651

Starks, T. J., Gilbert, B. O., Fischer, A. R., Weston, R., & DiLalla, D. L. (2009). Gendered sexuality: A new model and measure of attraction and intimacy. *Journal of Homosexuality, 56*, 14-30. https://doi.org/10.1080/00918360802551399

Story, M. R., Finlayson, B., Creger, L., & Bunce, E. (2018). The impact of chronic health conditions as an underlying challenge in couple's wellbeing. *Contemporary Family Therapy, 40*, 318-325. https://doi.org/10.1007/s10591-018-9466-x

Stroop, J. R. (1935). Studies of interference in serial verbal interactions. *Journal of Experimental Psychology, 18*(6), 643-662. https://doi.org/10.1037/h0054651

Sturm, J., Pløderl, M., Fartacek, C., Kralovek, K., Neunhäuserer, D., Niderseer, D., Hitzl, W.,

Niebauer, J., Schiepek, G., & Fartacek, R. (2012). Physical exercise through mountain hiking in high-risk suicidal patients. A randomized crossover trial. *Acta Pschiatria Scandinavica, 126*, 467-475. https://doi.org/10.1111/j.1600-0447.2012.01860.x

Su, D., Irwin, J. A., Fisher, C., Ramos, A., Kelley, M., Mendoza, D. A. R., & Coleman, J. D. (2016). Mental health disparities within the LGBT population: A comparison between transgender and nontransgender individuals. *Transgender Health, 1*(1), 12-20. https://doi.org/10.1089/trgh.2015.0001

Sue, D. W., Sue, D., Neville, H. A., & Smith, L. H. (2021). *Counseling the culturally diverse* (8th ed.). Wiley.

Sutter, M., & Perrin, P. B. (2016). Discrimination, mental health, and suicidal ideation among LGBTQ people of color. *Journal of Counseling Psychology, 63*(1), 98-105. https://dx.doi.org/10.1037/cou0000126

Testa, R. J., Jimenez C. L., & Rankin, S. (2014). Risk and resilience during transgender identity development: The effects of awareness and engagement with other transgender people on affect. *Journal of Gay & Lesbian Mental Health, 18*(1), 31-46. https://doi.org.101080/19359705.2013.805177

Thai, Q. C., & Nguyen, T. H. (2018). Mental health literacy: Knowledge of depression among undergraduate students in Hanoi, Vietnam. *International Journal of Mental Health Systems, 12*(19), 1-8. https://doi.org/10.1186/s13033-018-0195-1

Timmerman, J. R., & Volpe, V. (2021). Aspects of campus climate and mental health threats: The role of hypervigilance. *Journal of American College Health,* 1-10. https://doi.org/10.1080/07448481.2021.1904954

Timmins, L., Rimes, K., & Rahman, Q. (2017). Minority stressors and psychological distress in transgender individuals. *Psychology of Sexual Orientation and Gender Diversity, 4*(3), 328-340. https://dx.doi.org/10.1037/sgd0000237

Tucker, A., Norton, C. L., DeMille, S. M., & Hobson, J. (2016). The impact of wilderness therapy: Utilizing an integrated care approach. *Journal of Experiential Education, 39*, 15-30. https://doi.org/10.1177/1053825915607536

Tucker, A. R., Bettmann, J. E., Norton, C. L., & Comart, C. (2015). The role of transport use in adolescent wilderness treatment: Its relationship to readiness to change and outcomes. *Child Youth Care Forum, 4*, 671-686. https://doi.org/10.1007/s10566-015-9301-6

Tucker, A. R., Combs, K. M., Bettmann, J. E., Chang, T-H., Graham, S., Hoag, M., & Tatum, C. (2018). Longitudinal outcomes for youth transported to wilderness therapy programs. *Research on Social Work Practice, 28*(4), 438-451. https://doi.org/10.1177/1049731516647486

Tucker, A. R., Javorski, S., Tracy, J., & Beale, B. (2013). The use of adventure therapy in community-based mental health: Decreases in problem severity among youth clients. *Child Youth Care Forum, 42*, 155-179. https://doi.org/10.1007/s10566-012-9190-x

Tucker, A. R., Norton, C. L., Stifler, J., Gass, M. A., & Bostick, K. (2020). Best practices for working with clients who identify as transgender in outdoor behavioral healthcare. *Journal of Therapeutic Schools and Programs, 12*, 53-69. https://doi.org/10.19157/JTSP.isse.12.01.04

Tucker, A. R., Smith A., & Gass. M. A. (2014). How presenting problems and individual characteristics impact successful treatment outcomes in residential and wilderness treatment programs. *Residential Treatment for Children & Youth, 31*, 135-153. https://doi.org10.1080/0886571X.2014.918446

Umphress, V. J., Lambert, M J., Smart, SD. W., Barlow, S. H., & Clouse, G. (1997). Concurrent and construct validity of the Outcome Questionnaire. *Journal of Psychoeducational Assessment, 1*5, *40-55.*

U.S. Department of Health and Human Services. (June 12, 2020*). HSS finalizes rule on Section 1577 protecting civil rights in health care, restoring the rule of law, and relieving Americans of billions in excessive costs*. https://www.hhs.gov/about/news/2020/06/12/hhs-finalizes-rule-section-1557-protecting-civil-rights-healthcare.html

Vale, M. T., & Bisconti, T. L. (2021). Age differences in sexual minority stress and the importance of friendship later in life. *Clinical Gerontologist, 44*(3), 235-248. https://doi.org/10.1080/07317115.2020.1836107

Vermeersch, D. A., Lambert, M. J., & Burlingame, G. M. (2000). Outcome Questionnaire: Item sensitivity to change. *Journal of Personality Assessment, 74*, 242-261. https://doi.org/10.1207/S15327752JPA7402_6

Vigod, S. N., Kurdyak, P. A., Dennis, C-L., Leszcz, T., Taylor, V. H., Blumberger, D. M., & Seitz, D. P. (2013). Transitional interventions to reduce early psychiatric readmissions in adults: Systematic review. *The British Journal of Psychiatry, 202*, 187-194. https://doi.org/10.1192/bjp.bp.112.115030

Webb, C. A., Beard, C., Kertz, S. J., Hsu, K. J., & Björgvinsson, C. (2016). Differential role of CBT skills, DBT skills and psychological flexibility in predicting depressive versus anxiety symptom improvement. *Behaviour Research and Therapy, 81*, 12-20. https://doi.org/10.1111/josi.12230

Weston, R., & Gore Jr, P. A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist, 34*(5), 719–751. https://doi.org/10.1177/0011000006286345

Wilderness Act, 16 U.S.C., § 1131-1136 (1964). https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd645666.pdf

Williams, D. R. (2018). Stress and the mental health of populations of color: Advancing our understanding of race-related stressors. *Journal of Health and Social Behavior, 59*(4), 466-485. https://doi.org/10.1177/0022146518814251

Williams, S. L., Mann, A. K., & Fredrick. E. G. (2017). Proximal minority stress, psychosocial resources, and health in sexual minorities. *Journal of Social Issues, 7*3(3), 529-544. https://doi.org/10.1111/josi.12230

Witcomb, G. L., Bouman, W. P., Claes, L., Brewin, N., Crawford, J. R., & Arcelus, J. (2018). Levels of depression in transgender people and its predictors: Results of a large matched control study with transgender people accessing clinical services. *Journal of Affective Disorders*, 235, 308-315. https://doi.org/10.1016/j.jad.2018.02.051

Woodford, M. R., Weber, G., Nicolazzo, Z., Hunt, R., Kulick, A., Coleman, T., Coulombe, S., & Renn, K. A. (2018). Depression and attempted suicide among LGBTQ college students: Fostering resilience to the effects of heterosexism and cisgenderism on campus. *Journal of College Student Development, 59*(4), 421-438. https://doi.org/10.1353/csd.2018.0040

Wordsworth, W. (1978). *Lines composed a few miles above Tintern Abbey, on revisiting the banks of the Wye during a tour*. https://www.poetryfoundation.org/poems/45527/lines-composed-a-few-miles-above-tintern-abbey-on-revisiting-the-banks-of-the-wye-during-a-tour-july-13-1798

Wright, H., Behrens, E. & Raleigh, S. (2017). *Study A. The relationship of risk and protective factors to young adult outcomes in NATSAP programs* [symposium presentation]. Wilderness Therapy Symposium Research Preconference 2017.

Zung, W.W. (1971). A rating instrument for anxiety disorders. *Psychosomatics: Journal of Consultation Liaison Psychiatry, 12*(6), 371–379. https://doi.org/10.1016/s00333182(71)71479-0

Table 1

Core Treatment Aspects of Some OBH-Accredited Wilderness Therapy Programs

Program Name	Psychiatric Services	Individual and Group Therapy	Physical Activities	Treatment Orientations Used*
Open Sky Wilderness Therapy	Yes	Yes	Backpacking	CBT, DBT, family systems theory
Summit Achievement Wilderness Therapy	Yes	Yes	Backpacking, snowshoeing, canoeing, rock climbing	Family systems theory, interpersonal therapy, milieu therapy
ANASAZI Foundation	Yes	Yes	Backpacking	DBT, emotions-focused family therapy
Elements Wilderness Program	Yes	Yes	Rock climbing, ropes courses, canyoneering	DBT, Seven Challenges substance use curriculum
RedCliff Ascent Wilderness Therapy Program	Yes	Yes	Backpacking	CBT, DBT, family therapy

*Derived from program websites. May not be an inclusive list.

Tables

Table 2

Demographic Frequencies

Demographic Variable	Response Categories	*n*	%*
Gender Identity	Cisgender man	275	73
	Cisgender woman	86	23
	Transgender	5	1
	Gender fluid	3	1
	Genderqueer	6	2
	Questioning	4	1
Sexual Orientation	Heterosexual	293	77
	Gay or lesbian	8	2
	Bisexual	43	11
	Queer	19	5
	Questioning	13	3
	Did not specify	3	1

*Due to rounding, percentages do not add up to 100.

Table 3

Frequency Crosstabulation of Gender by Sexual Orientation

	Heterosexual	Non-heterosexual	Total
Cisgender	293	68	361
Transgender/gender non-binary	3	15	18
Total	296	83	379

Table 4

Bivariate Correlations and Descriptive Statistics for OQ 45.2 Intake Subscales and Group

	M	*Md*	*SD*	1	2	3
1. Symptom Distress	44.41	45	15.00	-		
2. Interpersonal Relations	16.96	17	6.65	.68**	-	
3. Social Role	15.04	15	4.86	.63**	.58**	-

Note. N = 379.

*$p < .05$, ** $p < .01$.

Table 5

Bivariate Correlations and Descriptive Statistics for OQ 45.2 Discharge Subscales and Group

	M	*Md*	*SD*	1	2	3
1. Symptom Distress	27.91	28	13.39	-	.	
2. Interpersonal Relations	11.93	12	6.62	.75**	-	
3. Social Role	10.32	10	4.75	.74**	.70**	-

Note. N = 379. 0 = straight and 1 = queer.

*$p < .05$, ** $p < .01$.

Table 6

Independent Samples T-Test Results Comparing Straight and Queer Young Adults' OQ 45.2 Total Intake Scores

	n	*M*	*SD*	*t*	*p*	*Cohen's d*
Group	-	-	-	-.83	.41	.10
Straight	293	75.87	23.60	-	-	-
Queer	86	78.27	23.86	-	-	-

Note: N = 379

Table 7

Paired Samples T-Test Results Comparing Queer Young Adults' OQ 45.2 Total Intake and Discharge Scores

	M	*SD*	*t*	*p*	*Cohen's d*
OQ 45.2 Intake Total	78.27	23.86	11.42	< .001	1.28
OQ 45.2 Discharge Total	50.33	19.51	-	-	

Note: N = 86.

Table 8

Paired Samples T-Test Results Comparing Straight Young Adults' OQ 45.2 Total Intake and Discharge Scores

	M	*SD*	*t*	*p*	*Cohen's d*
OQ 45.2 Intake Total	75.78	23.60	16.40	< .001	1.10
OQ 45.2 Discharge Total	50.11	23.14	-	-	

Note: N = 293

Table 9

ANOVA Source Table for Attrition on OQ 45.2 Total Change Scores

Source	*SS*	*df*	*F*	*p*
Intercept	87686.71	1	128.24	< .001
Attrition	1365.17	3	.67	.57
Residuals	253775.49	378		
Total	516466	379		

Table 10

ANOVA Source Table for Primary Diagnosis on OQ 45.2 Total Change Scores

Source	*SS*	*df*	*F*	*p*
Intercept	29226.45	1	42.78	< .001
Primary Diagnosis	6539.05	14	.68	.79
Residuals	248601.61	364		
Total	516466	379		

Table 11

ANCOVA Source Table for Group on OQ 45.2 Total Change Scores with Age as a Covariate

Source	*SS*	*df*	*F*	*p*
Intercept	6540.88	1	9.38	.002
Age	10203.64	1	14.64	< .001
Group	713.57	1	1.02	.31
Residuals	262156.16	376		
Total	279614.25	379		

Table 12

ANCOVA Source Table for Group on OQ 45.2 Total Change Scores with Length of Stay as a Covariate

Source	*SS*	*df*	*F*	*p*
Intercept	249675.52	1	344.74	< .001
Length of Stay	41.28	1	.06	.81
Group	233.73	1	.32	.57
Residuals	2732318.52	376		
Total	2982269.05	379		

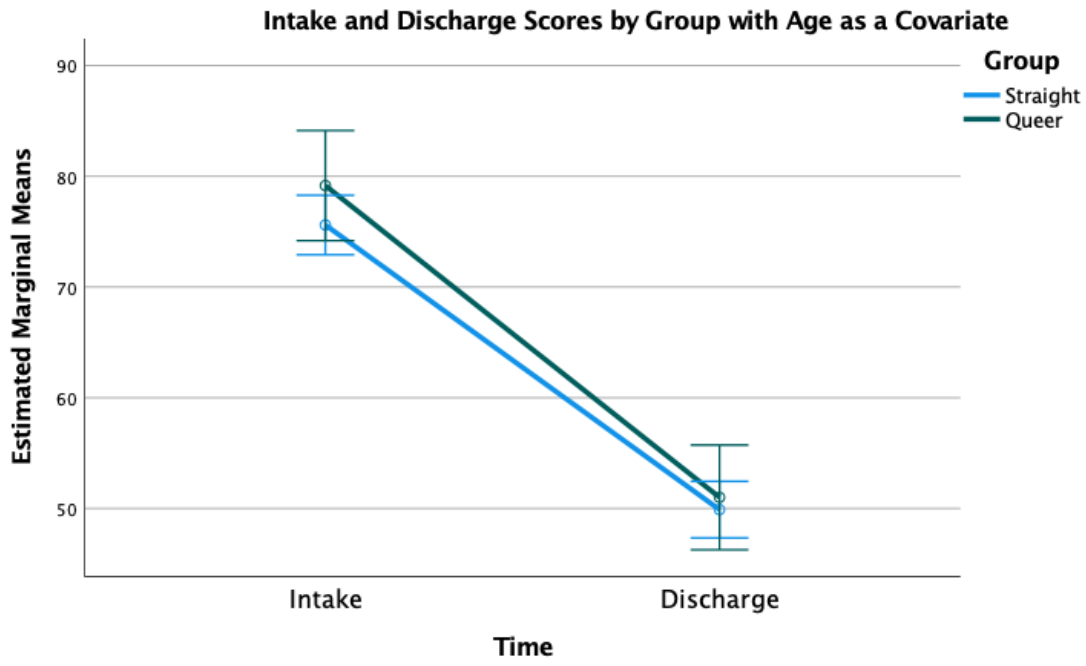
Table 13

ANCOVA Source Table for Group on OQ 45.2 Total Change Scores with Gender as a Covariate

Source	*SS*	*df*	*F*	*p*
Intercept	48544.498	1	670.738	< .001
Gender Identity	6.701	1	.009	.92
Group	148.025	1	.204	.65
Residuals	272353.093	376		
Total	321052.317	379		

Figures

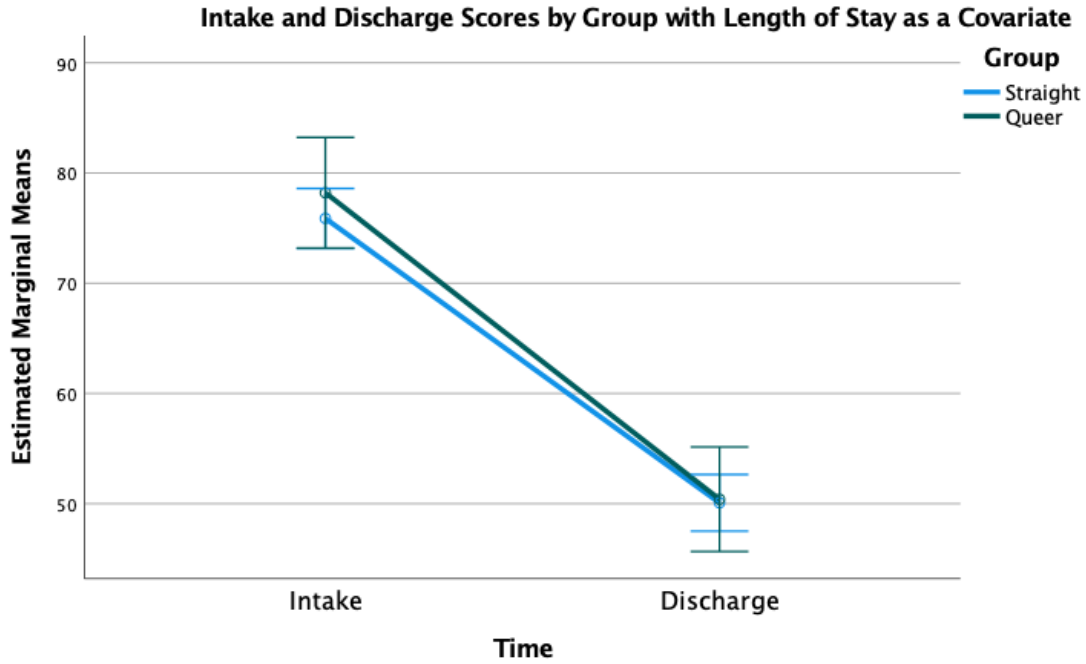
Figure 1



Covariates appearing in the model are evaluated at the following values: age = 20.7966

Error bars: 95% CI

Figure 2



Covariates appearing in the model are evaluated at the following values: length of stay (weeks) = 10.9639

Error bars: 95% CI

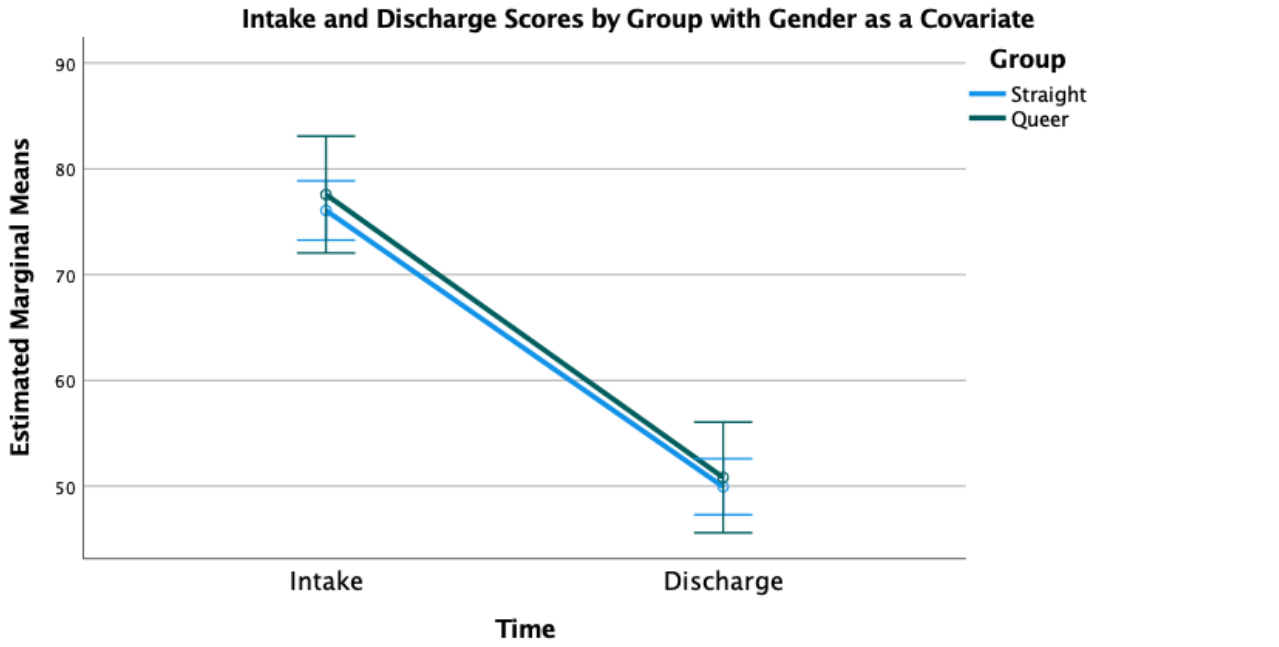
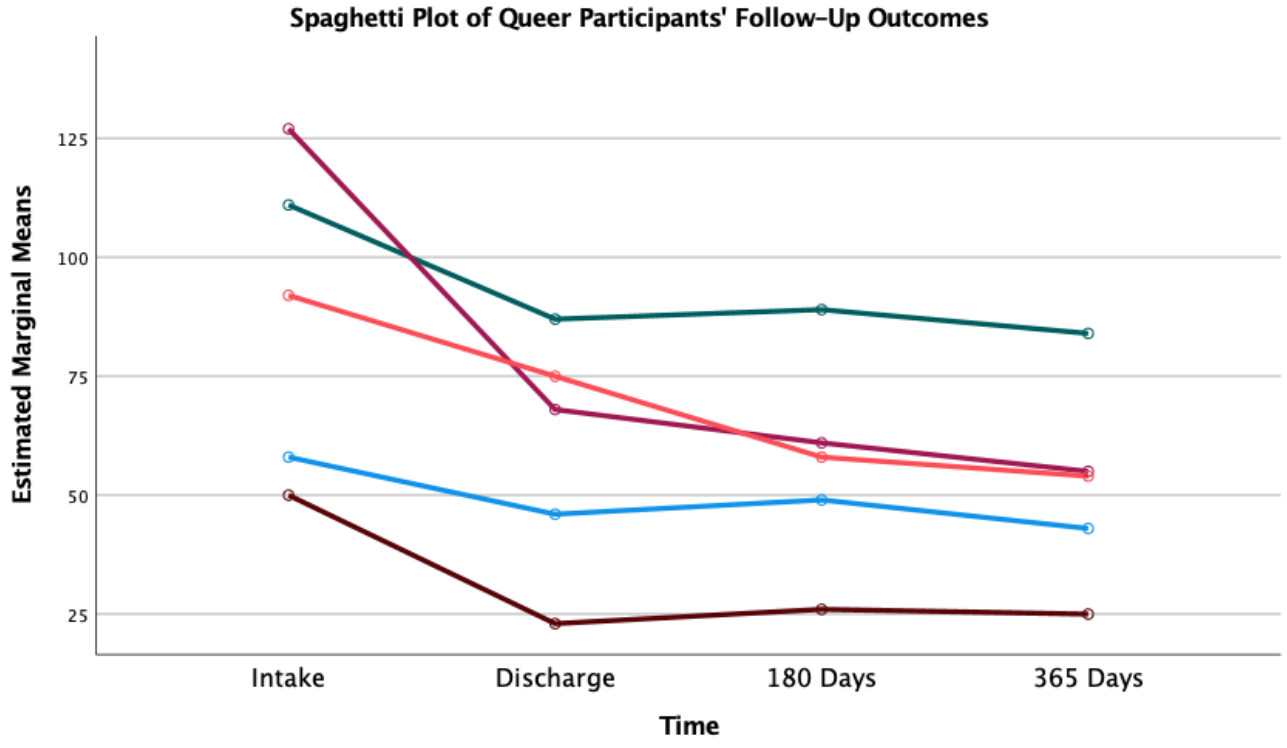

Intake and Discharge Scores by Group with Gender as a Covariate
Group
Straight
Queer
Estimated Marginal Means
90
80
70
60
50
Intake
Discharge
Time
Covariates appearing in the model are evaluated at the following values: Which of the following choices best describe your gender identity? = 1.39
Error bars: 95% CI

Figure 4


Spaghetti Plot of Queer Participants' Follow-Up Outcomes
Estimated Marginal Means
125
100
75
50
25
Intake
Discharge
180 Days
365 Days
Time


Spaghetti Plot of Queer and Straight Young Adults' Follow-Up Outcome
125

Appendices

Appendix A: Outcomes Questionnaire 45.2 (OQ 45.2)

Outcome Questionnaire (OQ®-45.2)

Instructions: Looking back over the last week, including today, help us understand how you have been feeling. Read each item carefully and mark the box under the category which best describes your current situation. For this questionnaire, work is defined as employment, school, housework, volunteer work, and so forth. Please do not make any marks in the shaded areas.

Name:_____ Age:____yrs.

Sex

ID#_____ M ☐ F ☐

Session #_____ Date____/____/____

	Never	Rarely	Sometimes	Frequently	Almost Always	*SD IR SR* DO NOT MARK BELOW
1. I get along well with others	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
2. I tire quickly	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
3. I feel no interest in things	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
4. I feel stressed at work/school	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
5. I blame myself for things	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
6. I feel irritated	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
7. I feel unhappy in my marriage/significant relationship	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
8. I have thoughts of ending my life	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
9. I feel weak	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
10. I feel fearful	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
11. After heavy drinking, I need a drink the next morning to get going. (If you do not drink, mark "never")	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
12. I find my work/school satisfying	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
13. I am a happy person	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
14. I work/study too much	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
15. I feel worthless	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
16. I am concerned about family troubles	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
17. I have an unfulfilling sex life	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
18. I feel lonely	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
19. I have frequent arguments	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
20. I feel loved and wanted	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
21. I enjoy my spare time	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
22. I have difficulty concentrating	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
23. I feel hopeless about the future	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
24. I like myself	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
25. Disturbing thoughts come into my mind that I cannot get rid of	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
26. I feel annoyed by people who criticize my drinking (or drug use). (If not applicable, mark "never")	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
27. I have an upset stomach	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
28. I am not working/studying as well as I used to	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
29. My heart pounds too much	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
30. I have trouble getting along with friends and close acquaintances	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
31. I am satisfied with my life	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
32. I have trouble at work/school because of drinking or drug use. (If not applicable, mark "never")	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
33. I feel that something bad is going to happen	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
34. I have sore muscles	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
35. I feel afraid of open spaces, of driving, or being on buses, subways, and so forth.	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
36. I feel nervous	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
37. I feel my love relationships are full and complete	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
38. I feel that I am not doing well at work/school	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
39. I have too many disagreements at work/school	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
40. I feel something is wrong with my mind	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
41. I have trouble falling asleep or staying asleep	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
42. I feel blue	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
43. I am satisfied with my relationships with others	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	
44. I feel angry enough at work/school to do something I might regret	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
45. I have headaches	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	
						+ +
						Total=

For More Information Contact:
OQ MEASURES LLC
E-MAIL: INFO@OQMEASURES.COM
WEB: WWW.OQMEASURES.COM
TOLL-FREE: 1-888-MH SCORE (1-888-647-2673)
FAX: 801-990-4236

Appendix B: NATSAP Adult Q-I (Adult Questionnaire – Initial)

(only relevant items are included)

Name:_____ Date: _____

Please circle your answer to these questions based on when you were admitted to the current program

1. Which of the following options best describe your gender identity?
    a. Male
    b. Female
    c. Transgender
    d. Gender Fluid
    e. I identify as (please specify) _____
    f. I am not sure

2. Which of the following choices best describe your sexual orientation?
    a. Heterosexual (Straight)
    b. Homosexual (Gay or Lesbian)
    c. Bi-Sexual
    d. I identify as (please specify) _____
    e. I am not sure

3. What is your current relationship status? Please circle one.
    a. Single
    b. Married/In a committed relationship
    c. Divorced
    d. Separated
    e. Widowed

4. During the 30 days prior to any inpatient treatment, how many days did you use any drug or alcohol?
    a. Daily
    b. A couple of times a week
    c. Once a week
    d. A couple of times a month
    e. Once a month
    f. Less than once a month
    g. Not at all

5. Please identify your drug of choice (please circle one):
    a. Not applicable (I do not use any substances/drugs/alcohol)
    b. Alcohol
    c. Marijuana/Cannabis

d. Hallucinogens (LSD, PCP, mushrooms, ecstasy, etc.)
e. Cocaine
f. Opioids (Percocet, Dilaudid, Demoral, Heroin, etc.)
g. Amphetamines (Ritalin, Benzedrine, Aderol, etc.)
h. Tranquilizers (Benzodiazepines, Valium, Xanax, Diazepam, "Roofies", etc.)
i. Inhalants (glue, gasoline aerosols, paint thinner, etc.)
j. Prescription medication not prescribed to me that is not listed above
k. Other (please describe) _____

6. Prior to coming to this program, what type of therapy or treatment were you receiving? Please circle all that apply.
   a. None
   b. Outpatient Individual Therapy
   c. Outpatient Family Therapy
   d. Outpatient Group Therapy
   e. Day treatment program/Intensive Outpatient
   f. Residential therapeutic program
   g. Wilderness therapy
   h. Psychiatric Hospitalization
   i. Substance Abuse Treatment
   j. Transitional Program
   k. 12 Step program (AA, NA, OA, GA)
   l. Other (please specify): _____

7. It makes sense for me to be in this therapeutic program (far left represents strongly disagree and far right represents strongly agree):

   [Sliding bar unavailable]

8. I would like to make positive change in my life? (far left represents strongly disagree and far right represents strongly agree):

   [Sliding bar unavailable]

9. Prior to coming to this program, how much therapeutic progress do you believe you have made by previously engaging in therapy? (far left represents no progress and far right represents a lot of progress):

   [Sliding bar unavailable]

10. How much therapeutic progress do you believe you need to make at this current program? (far left represents no progress and far right represents a lot of progress):

    [Sliding bar unavailable]

11. What precipitated you coming to treatment (please circle all that apply)
    a. Court Order

b. Parental/guardian boundary (they will no longer support me if I don't attend this program)
c. Family/Friend suggestions
d. Independent Personal Decision
e. Work Related Mandate/Recommendation
f. School Recommendation
g. Therapist Recommendation
h. Current Academic Status/Standing
i. Other (please specify): _____

Appendix C: NATSAP Adult Q-D (Adult Questionnaire – Discharge)

(only relevant items are included)

Name:_____ Date: _____

Please circle your answer to these questions based on when you completed this program

1. After discharge, where will you be living?
    a. Living with parents
    b. Living with another relative
    c. Living independently
    d. A therapeutic program (please list which program
    e. An academic boarding school or college
    f. Other (please specify) _____

2. Which of the following choice best describe your gender identity?
    a. Male
    b. Female
    c. Transgender
    d. Gender Fluid
    e. I identify as (please specify) _____
    f. I am not sure

3. Which of the following choices best describe your sexual orientation?
    a. Heterosexual (Straight)
    b. Homosexual (Gay or Lesbian)
    c. Bi-Sexual
    d. I identify as (please specify) _____
    e. I am not sure

4. How much effort did you put into your treatment at the program you just completed? (far left represents no effort and far right represents maximum effort):

    [Sliding bar unavailable]

5. Currently, how would you describe your problems compared to when you entered the program? (far left represents no progress and far right represents a lot of progress):

    [Sliding bar unavailable]

6. Which of the following services do believe have contributed the most to your therapeutic progress? Please rate your top three. (1 meaning contributed the most, 2, 3…)
    a. Individual therapy with your primary therapist
    b. ____ Group therapy
    c. ____ Family therapy
    d. ____ Peers

e. ____ Working with direct care staff (residential staff, field staff, etc.)
f. ____ Experiential activities (i.e. hiking, rock climbing, bow drilling, skiing, equine work, international trips, etc.)
g. ____ Community service
h. ____ Academic support
i. ____ Life skills training
j. ____ Community living/therapeutic milieu
k. ____ Student Leadership
l. ____ On-site employment
m. ____ Job skills training/Vocational support

10. How much has this program has prepared you for this next step in your life? (far left represents not at all prepared and far right represents very prepared):

    [Sliding bar unavailable]

11. How successful will you be in your next step following your completion of this program? (far left represents not successful and far right represents very successful):

    [Sliding bar unavailable]

Appendix D: NATSAP Adult Q-PD (Adult – Post Discharge)

(only relevant items are included)

Name:_____ Date: _____

Please circle your answer to these questions based on your life today

1. Which of the following choice best describe your gender identity?
    a. Male
    b. Female
    c. Transgender
    d. Gender Fluid
    e. I identify as (please specify) _____
    f. I am not sure

2. Which of the following choices best describe your sexual orientation?
    a. Heterosexual (Straight)
    b. Homosexual (Gay or Lesbian)
    c. Bi-Sexual
    d. I identify as (please specify) _____
    e. I am not sure

3. In the past 6 months, what type of therapy or treatment have you participated in? Please circle all that apply.
    a. None
    b. Outpatient Individual Therapy
    c. Outpatient Family Therapy
    d. Outpatient Group Therapy
    e. Day treatment program/Intensive Outpatient
    f. Residential therapeutic program
    g. Psychiatric Hospitalization
    h. Wilderness Therapy
    i. Substance Abuse Treatment
    j. 12 Step program (AA, NA, OA, GA)
    k. Other (please specify): _____

9. Currently, how would you describe your problems compared to when you completed the program? (far left represents much worse and far right represents much better):

    [Sliding bar unavailable]

10. How much did this program prepare you for your life following your completion of the program? (far left represents not at all prepared and far right represents very prepared):
    [Sliding bar unavailable]

11. How successful have you been in your life following your completion of this program?

(far left represents not at all successful and far right represents highly successful):

[Sliding bar unavailable]

12. How often are you practicing the therapeutic tools you learned from this program in your everyday life? (far left represents not at all and far right represents all the time):

[Sliding bar unavailable]

Appendix E: NATSAP SQ-I (Staff Questionnaire – Initial)

(only relevant items are included)

Client ID: _____ Admission Date _____Date of Survey _____
Please provide the DSM diagnostic category for the primary diagnosis being used for initial treatment planning.

1. What, if any, is the client's primary reason for referral?
    a. Autism Spectrum Disorder and/or Other Neurodevelopmental Disorder
    b. Attention Deficit Hyperactivity Disorder
    c. Specific Learning Disorders
    d. Schizophrenia and Other Psychotic Disorders
    e. Bi-polar and Related Disorders
    f. Depressive Disorders
    g. Anxiety Disorders
    h. Trauma and Stress Related Disorders
    i. Eating Disorders
    j. Obsessive-Compulsive and Related Disorders
    k. Gender Dysphoria Disorders
    l. Disruptive Impulse Control and Conduct Disorders
    m. Substance Related and Addictive Disorders
    n. Personality Disorders/Traits
    o. Other (please specify)

2. What, if any, is the client's secondary reason for referral?
    a. Autism Spectrum Disorder and/or Other Neurodevelopmental Disorder
    b. Attention Deficit Hyperactivity Disorder
    c. Specific Learning Disorders
    d. Schizophrenia and Other Psychotic Disorders
    e. Bi-polar and Related Disorders
    f. Depressive Disorders
    g. Anxiety Disorders
    h. Trauma and Stress Related Disorders
    i. Eating Disorders
    j. Obsessive-Compulsive and Related Disorders
    k. Gender Dysphoria Disorders
    l. Disruptive Impulse Control and Conduct Disorders
    m. Substance Related and Addictive Disorders
    n. Personality Disorders/Traits
    o. Other (please specify)

3. What was the source of referral for this client?
    a. Educational Consultant
    b. Internet Search

c. Private Clinical Professional
d. Program of previous placement
e. Referral from previous client
f. School district referral
g. Returning client
h. Justice System referral
i. Other (please specify)

Appendix F: NATSAP SQ-D (Staff Questionnaire – Discharge)

(only relevant items are included)

Client ID: _____ Discharge Date: _____ Date of Survey: _____

1. Client's condition at discharge:
    a. Maximum benefit/graduation
    b. Premature, against program advice
    c. Premature, but with program approval
    d. Transferred to another program
    e. Other (please specify)

2. Estimated percentage of program completed:
    a. Less than 25%
    b. 25%
    c. 50%
    d. 75%
    e. 100%

3. Please rate the client's personal effort in their therapeutic work while at the program:
    a. None
    b. Low
    c. Moderate
    d. High
    e. Exceptional

4. Please rate the parents' personal effort in their therapeutic work at home or on their own:
    a. None
    b. Low
    c. Moderate
    d. High
    e. Exceptional

5. Did the client's parents come to visit during the course of treatment?
    a. _____ Yes b._____No If yes, please answer the questions below:

6. How many times did the client's parents come to visit during treatment? _____

7. On average, how long did the parents stay during each visit (hours)? _____

8. While visiting, on average how many hours did the parents participate in therapy with their child?
    a. None
    b. 1 hour
    c. 2 hours
    d. 3-4 hours

e. 5-7 hours
f. 8 hours or more

9. Please rate the parents' personal effort in on-site family therapy and other interventions:
    a. None
    b. Low
    c. Moderate
    d. High
    e. Exceptional

10. Which types of family interventions did the family participate in (check all that apply):
    a. ___ Telephonic family therapy
    b. ___ Video family therapy
    c. ___ Therapy including other important family members (siblings, step-parents, grandparents, etc.)
    d. ___ Letter writing
    e. ___ Recreational on site family visits
    f. ___ Therapeutic on-site visits (on-site family therapy)
    g. ___ Family pass near campus w/therapeutic goal
    h. ___ Family pass w/out therapeutic goals
    i. ___ Family home passes with supervision/professional support
    j. ___ Family home passes without supervision/professional support
    k. ___ Family seminars/support groups
    l. ___ Parent coaching
    m. ___ Multi-family therapy
    n. ___ Psychoeducational trainings
    o. ___ Impact/Intervention letters
    p. ___ Writing a family story
    q. ___ Communication training/skill building
    r. ___ Exploring the family story/experience (i.e. family sculpture, genograms, writing the family story, evaluating family roles).
    s. ___ Home structure/rules evaluation
    t. ___ Other (please specify):

    _____

11. How often did the parents follow your and your team's therapeutic recommendations throughout treatment?
    a. The parents followed recommendations
    b. The parents followed most of the recommendations, including aftercare recommendations
    c. The parents followed most of the recommendations, but did not follow aftercare recommendations
    d. The parents did not follow most of the recommendations, but did follow aftercare recommendations
    e. The parents did not follow most of the recommendations, and did not follow aftercare recommendations
    f. No, the parents did not follow any of the recommendations

12. Client's condition at discharge:
    a. Maximum benefit/graduation
    b. Premature, against program advice
    c. Premature, but with program approval
    d. Transferred to another program
    e. Other (please specify)

13. Estimated percentage of program completed:
    a. Less than 25%
    b. 25%
    c. 50%
    d. 75%
    e. 100%

14. Please rate the client's personal effort in their therapeutic work while at the program:
    a. None
    b. Low
    c. Moderate
    d. High
    e. Exceptional

15. Please rate the parents' personal effort in their therapeutic work at home or on their own:
    a. None
    b. Low
    c. Moderate
    d. High
    e. Exceptional

16. Did the client's parents come to visit during the course of treatment?

    a. _____ Yes b._____No If yes, please answer the questions below:

17. How many times did the client's parents come to visit during treatment? _____

18. On average, how long did the parents stay during each visit (hours)? _____

19. While visiting, on average how many hours did the parents participate in therapy with their child?
    a. None
    b. 1 hour
    c. 2 hours
    d. 3-4 hours
    e. 5-7 hours
    f. 8 hours or more

20. Please rate the parents' personal effort in on-site family therapy and other interventions:
    a. None

b. Low
c. Moderate
d. High
e. Exceptional

21. Which types of family interventions did the family participate in (check all that apply):
    a. ___ Telephonic family therapy
    b. ___ Video family therapy
    c. ___ Therapy including other important family members (siblings, step-parents, grandparents, etc.)
    d. ___ Letter writing
    e. ___ Recreational on site family visits
    f. ___ Therapeutic on-site visits (on-site family therapy)
    g. ___ Family pass near campus w/therapeutic goal
    h. ___ Family pass w/out therapeutic goals
    i. ___ Family home passes with supervision/professional support
    j. ___ Family home passes without supervision/professional support
    k. ___ Family seminars/support groups
    l. ___ Parent coaching
    m. ___ Multi-family therapy
    n. ___ Psychoeducational trainings
    o. ___ Impact/Intervention letters
    p. ___ Writing a family story
    q. ___ Communication training/skill building
    r. ___ Exploring the family story/experience (i.e. family sculpture, genograms, writing the family story, evaluating family roles).
    s. ___ Home structure/rules evaluation
    t. ___ Other (please specify):

22. How often did the parents follow your and your team's therapeutic recommendations throughout treatment?
    a. The parents followed recommendations
    b. The parents followed most of the recommendations, including aftercare recommendations
    c. The parents followed most of the recommendations, but did not follow aftercare recommendations
    d. The parents did not follow most of the recommendations, but did follow aftercare recommendations
    e. The parents did not follow most of the recommendations, and did not follow aftercare recommendations
    f. No, the parents did not follow any of the recommendations