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A follow-up study exploring the transformative effects of wilderness therapy on adolescents with histories of trauma : a project based upon an investigation at Catherine Freer Wilderness Therapy Programs, Albany, Oregon

George Carter Herrity

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A Follow-up Study Exploring the Transformative Effects of Wilderness Therapy on Adolescents with Histories of Trauma

ABSTRACT

This quantitative, quasi-experimental study examined 57 adolescents, ages 13 to 18, who attended the Catherine Freer Wilderness Therapy Program 21-day trek. The program is based in Albany, Oregon. The purpose of this study was to conduct a follow-up to Ganapol's (2008) study in order to further assess the treatment modality, wilderness therapy, through the lens of trauma. More specifically, this study focused on wilderness therapy's potential to act as a transformative experience for adolescents with histories of trauma. For use in this research, the phenomenological term, transformative experience, corresponds to a decrease in trauma symptomatology, an increase in psychological resilience, and an increase in psychosocial functioning. These psychological constructs were measures pre- / post-treatment using Likert-type scales, and the global assessment of functioning scale (GAF) (DSM IV-TR, 2000).

Three hypotheses were investigated in this study: 1) Wilderness therapy programs would provide transformative experiences for adolescents with trauma histories. 2) There would be differences in the transformative experiences between adolescents with trauma histories and adolescents without. 3) There would be demographical trends between the groups of individuals with histories of trauma and those without. This study did not find evidence to support the first hypothesis. Evidence, based on significant differences in all three measures, suggests that individuals without trauma histories experienced

statistically significant transformative experiences while those with trauma histories did not. It should be noted, however, that participants with histories of trauma were seen to have a significant increase in their psychosocial functioning. Regarding the third hypothesis, 70% of female participants had histories of trauma whereas only 46% of males fit this category. Of additional note, female participants reported greater frequency of sexual abuse (6:1) than male participants. Based on this study's assessment, it can be reasonably concluded that wilderness therapy acts as a transformative experience for those without trauma histories, however, this study suggests that wilderness therapy functions less so as a transformative experience for those with histories of trauma.

A FOLLOW-UP STUDY EXPLORING THE TRANSFORMATIVE EFFECTS OF WILDERNESS THERAPY ON ADOLESCENTS WITH HISTORIES OF TRAUMA

A project based upon an investigation at Catherine Freer Wilderness Therapy Programs, Albany, Oregon, submitted in partial fulfillment of the requirements for the degree of Master of Social Work.

George C. Herrity

Smith College School for Social Work
Northampton, Massachusetts 01063

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TABLE OF CONTENTS

LIST OF TABLES

Table

CHAPTER I

INTRODUCTION

In general, wilderness therapy programs exist as a means for helping families attend to difficulties they have with their adolescent children. In other words, parents, who perceive their adolescent children as having unmanageable difficulties, will sometimes look to wilderness therapy programs during periods of crises. In many cases, parents hope an intervention of this modality will act as a corrective experience thereby altering the child's presenting problem. Even though these statements are generalizations regarding families who turn to wilderness therapy, the adolescents who attend these programs present with widely different symptom pictures and psychiatric disorders.

In modern society, trauma exposure is becoming more widely respected as a predictor of psychological risk (Allen, 2001). Recent literature in the field of trauma studies, suggests a correlation between adolescent resiliency and how individuals are affected by trauma (Ahern, 2006; Connor & Davidson, 2003; Neill & Dias, 2001). Through treatment, however, development of resilience has been found to lead to greater global functioning and psychosocial functioning (Connor & Davidson, 2003). Presently, only two studies have empirically investigated the efficacy of wilderness therapy programs increasing resilience (Arbour, 2007; Neil & Dias, 2001). The work of these studies suggests a need for more research looking at wilderness therapy as a resiliency-building treatment modality for adolescents with trauma histories. Additionally, when considering the presence of wilderness therapy in delivering mental health care to over

10,000 of our nation's at-risk youth annually (Russell, 2003), it seems only logical then, that further investigation of youths' experiences with trauma who attend these programs be conducted. Current literature lacks a comprehensive study looking at wilderness therapy programs' effectiveness in treating adolescents with trauma histories.

An investigation of this subject should initially look at numbers—for example, how many adolescents entering these programs have trauma histories? To date, there has only been one study which attempted to examine this phenomenon (Ganapol, 2008). However, the study's sample size consisted of only 32 individuals from one wilderness therapy program. There is need for follow-up research. To justify the relevance for looking more deeply at the issue of whether or not wilderness therapy programs successfully treat trauma, the existence of trauma histories among wilderness students must be established. Once the prevalence of trauma histories among wilderness therapy clientele is better known, the following question will become relevant: Can wilderness therapy programs provide a transformative experience for adolescents with trauma histories? In this study, transformative experience is defined as a reduction in trauma symptomatology, an increase in psychological resilience and an increase in psychosocial functioning. This question and two others are investigated in this study: 1) Are there differences in the experience of wilderness therapy between adolescents who report trauma histories and adolescents who do not? and 2) Are there demographical trends between the two groups of individuals?

This study examined 57 adolescents who participated in a 21-day wilderness therapy program by administering psychometric measures pre- and post- exposure to treatment. Data pertaining to participants' trauma symptomatology, psychological

resilience, and psychosocial functioning were collected pre- and post- treatment. Additionally, demographic data including: age, gender, race, DSM IV-TR (2000) diagnoses, prior treatment history, and presence of trauma history were collected.

The results of this study have clear implications not only for social work practice, but, they will provide much needed data to inform future wilderness therapy program development as well as staff and therapist intervention techniques.

CHAPTER II

LITERATURE REVIEW

This chapter will have three sections. I will begin with an overview and general description of wilderness therapy. Next, I will explore trauma. This section will include attachment and developmental trauma, adolescence and resiliency, as well as treatment issues regarding trauma. In the third section, I seek to bring trauma and wilderness therapy together as it relates to this specific study.

Wilderness Therapy

Wilderness therapy programs treat a wide variety of individuals. One company's website profiles potential clients as: "ages 13 to 18…experiencing low self-esteem… rebellious, angry, defiant…suffering from attention deficit…recovering from sexual abuse…struggling with attachment disorders…impulsive or hyperactive…poor academic achievement…depressed or emotionally troubled… [and] abusing alcohol or drugs (cfreer.com/child-profile/). According to a census study conducted by Russell (2003) which contacted 116 wilderness therapy companies nationwide of which approximately 74 percent participated, the author found that they serve over 10,000 at-risk youth annually. A common characteristic among parents or guardians who send their children to wilderness therapy tends to be a general feeling that their child is "beyond parental control" (cfreer.com/child-profile/) and therefore seek additional help in respect to intervening in their child's life.

In the broad field of wilderness experience programs (WEPS), it is important to differentiate wilderness therapy in order to understand how it exists as a distinct treatment modality. There are many terms used in reference to WEPS such as adventure therapy, wilderness vision questing, adventure challenge programs, reflective experience programs, however, the term wilderness therapy refers to a specific treatment modality (Russell & Hendee, 1999). Whereas adventure therapy which is also referred to as the wilderness experience program (WEP) industry, wilderness therapy is what many refer to when thinking about adventure therapy (Bandoroff & Newes, 2004). In a paper by Russell and Phillips-Miller (2002), the authors referenced a definition for quality wilderness therapy put forth by Russell (2001) with the following four concepts, based on others' works:

1. The design of the program should be therapeutically based, with the assumptions made clear and concise, in order to best determine target outcomes and evaluate the effectiveness of the treatment (Bandoroff & Scherer, 1994).

2. The careful selection of candidates should be based on a clinical assessment and should include the creation of an individual treatment plan for each participant. (Davis-Berman & Berman, 1994).

3. The provision of individual and group psychotherapy should be facilitated by qualified professionals, with an evaluation of an individual's progress a critical component of the program.

4. At the conclusion of the program, qualified staff should work with appropriate professionals to create an aftercare plan that is best suited for the individual to maintain any therapeutic progress that has been made. (Russell & Phillips-Miller, 2002, pp. 416-417).

While practice and theory vary among programs (Russell & Phillips-Miller, 2002), the concepts outlined above will be used to define wilderness therapy in this study.

Programs vary in duration—lasting from seven to 60 days (Bandoroff & Newes, 2004). Wilderness therapy utilizes specific intervention techniques tailored to engendering therapeutic change and has been seen to affect change in short periods of time (Bandoroff & Newes, 2004). Bandoroff and Newes (2004) encapsulate the benefits of the wilderness therapy intervention as they note:

> Operating as a small, self-sufficient team in a wilderness environment requires mutual decision making which demands trust, cooperation, effective communication and good problem-solving. The members of the group are dependent upon each other for their success as well as their survival. This promotes empathy, sharing, support, and patience and fosters a strong sense of community (p. 11).

In an overview of the definition of wilderness therapy, Russell (2001) typifies wilderness therapy as a phase-oriented treatment approach. The author states that the phases generally consist of: "…(a) a cleansing phase, which occurs early in the program, (b) a personal and social responsibility phase: a particular emphasis once the cleansing phase is well underway or complete, and (c) a transition and aftercare phase." (p. 75).

Many entering wilderness therapy programs have histories of substance abuse but a wide range of clinical diagnoses are present as well (Bandoroff & Newes, 2004; Russell, 2001). In addition to the removal illegal substances, the "cleansing phase" removes cultural distractions like media and dress, and incorporates self-care techniques aimed at promoting nutrition and physical activity (Russell, 2001). The second phase has a strong therapeutic emphasis on clients taking personal accountability for themselves through social interaction with other wilderness therapy group members (Russell, 2001).

In this way, group members influence positive growth in each other through social interaction as opposed to being influenced solely by program staff or authority heads. Emotional growth is fostered as well by working through anger and other intense feelings in the supportive environment of a group (Russell, 2001). Conducting immersive therapy in a survival-oriented outdoor setting promotes the use of natural consequences for therapeutic self-learning, also. In the final phase as Russell (2001) outlined, clients focus on self-reflection of both, their learning in the program and their transition to either returning home or to an after-care program.

Group psychotherapy, facilitated by trained professionals is one of the key modes of treatment intervention for wilderness therapy programs (Russell, 2001). In wilderness therapy, group psychotherapy and group living promote growth in one's self-awareness so that when clients leave their respective program they leave with a feeling of achievement and a sense they can overcome other challenges in life (Russell, 2001). In regards to treatment outcomes, Russell (2001) writes:

> This sense of accomplishment is combined with physical health and well-being, which may help clients feel better about themselves, leading to increases in self-esteem and the first steps towards personal growth. The process also teaches clients how to access and express their emotions, and why talking about feelings is important. An enhanced self-concept represents a sense of empowerment and resiliency (p. 75).

Trauma

This section on trauma will begin by defining trauma, will explore attachment and developmental trauma, resiliency, and treatment.

Defining Trauma

In 2006 alone, the U.S. Department of Health and Human Services Administration on Children, Youth and Families (2008) reported that there were six million cases of alleged maltreatment of children. It is estimated, however, that the actual numbers of maltreated children is much higher (Putnam, 2006). A recent study conducted in North Carolina compared the official cases of physical abuse of children to that of mother-reported cases which met the state's statute definitions, and found a disparity of nearly 40 fold (Theodore, Chang, Runyan, Hunter, Shrikant, & Agans, 2005).

Academically speaking, childhood maltreatment is frequently referred to as trauma, or contributing to one's traumatic stress. It is important to note the sheer breadth in meaning of the term, trauma. It can be applied to describe an environmental situation or an experience one encounters or in which one participates. Trauma can apply to one's response to a stimulus as well. To confuse the issue even more, as a colloquialism, one may highlight an ill turn of events as "being traumatic" like missing the bus, however, the term trauma, as it is used clinically is not to be confused with a small hardship.

Merriam-Webster's Collegiate Dictionary (Mish, 1999) defines trauma as, "…a disordered psychic or behavioral state resulting from mental or emotional stress or physical injury (p. 1257)." Conceptually speaking, however, trauma can be somewhat difficult to envision. Allen (2001) describes it as resting at the end of a continuum where trauma is best understood as, "*extreme* stress…with no bright line demarcating trauma from non-traumatic stress." (p. 5). In everyday language it is easy to blend the notion of traumatic events and traumatic responses, but, distinguishing them based on subjectivity yields a clarifying way to understand how humans experience trauma (Allen, 2001). For instance, in our society, most would agree perceptually that a parent sexually abusing

their child is traumatic. In this case, the event—incest or sexual abuse—and the child's potential response could be deemed traumatic. Yet, even though many in our society would characterize the event as traumatic in nature, there is a subjective quality to how a human being would respond to this traumatic event (Allen, 2001). Depending on individual differences, exposure to possible traumatic events may or may not lead to trauma symptomatology or Post Traumatic Stress Disorder (PTSD) (Allen, 2001). The nature of one's response to a traumatic event depends on the idiosyncrasies of that individual (Allen, 2001).

The DSM-IV-TR's (APA, 2000) criteria for PTSD indicate that for an individual to receive this diagnosis both: exposure to a traumatic event (objective) and a qualified subjective response to that event occurred. As Figley (1994) describes, "…this newly defined disorder was characterized by the development of characteristic symptoms following a traumatic event (p. 4)." As defined by the DSM-IV-TR (2000), a person must meet both criteria:

> (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or other [and]
>
> (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior (p. 467).

However, there has been some criticism of the DSM-IV's current PTSD diagnosis on the grounds that it does not take into account children or adolescents who have not been exposed to the DSM-IV-TR's criteria of a traumatic event, but, have been exposed to "adverse conditions" and consequently exhibit symptoms of PTSD (DeAngelis, 2007).

Regarding this issue, Boston University Medical Center psychiatrist, Bessel van der Kolk, is quoted as saying:

> While PTSD is a good definition for acute trauma in adults, it doesn't apply well to children, who are often traumatized in the context of relationships. Because children's brains are still developing, trauma has a much more pervasive and long range influence on their self-concept, on their sense of the world and on their ability to regulate themselves. (DeAngelis, 2007, pp. 32-33).

Developmental and Attachment Trauma

In order to understand the effect trauma can have on human development it is necessary to first underscore a basic conceptualization of development. Human beings have an inherent leaning to proceed through development by moving from a relatively less differentiated state to a more integrated, mature form (Werner & Kaplan, 1963). What this means is that as human beings make developmental progress, their inner world or in other terms, their world of object representations acquires greater structure and content. Thus as development proceeds, their ability to symbolically represent the world increases (Triana, 1985). Triana writes:

> The study of the representational world in both developmental psychology and psychoanalytic theory is the study of the development of "cognitive schemata" that give organization and direction to manifest behavior and that are expressed in all forms of behavior, including interpersonal relationships, perceptual and cognitive functions, and conceptions of oneself and others (1985, p. 35)..

The term trauma can be used to refer to a wide range of phenomena. When trauma occurs in the childhood attachment relationship one has with a caregiver, this phenomenon is referred to as attachment trauma (Allen, 2001). Attachment trauma can come in many forms and can vary in duration and frequency. Trauma can be considered child abuse or neglect, and these can be considered physical, sexual, and / or emotional

abuse (Allen, 2001). Experiences of abuse fall anywhere between an isolated event, drawn-out exposure, or a series of incidents (Putnam, 2006). However, even though the specifics—time, duration, type of abuse or neglect—may vary between individuals' traumatic experiences, trauma tends to negatively affect one's biological and psychosocial development (Allen, 2001).

Other theorists such as Bowlby, Ainsworth, Gergely, Fonagy, Target, Jurist, and Allen to name a few conceptualize development from the perspective of attachment relationships. Many in psychoanalytic study have long held the belief that one's first relationship with a caregiver is important in that it affects the newborn's personality (Bowlby, 1969). While so many shared this belief, at the time there was little concordance in how that relationship developed or from where it originated (Bowlby, 1969). Bowlby (1982) approached the question of development from the perspective that over evolutionary time, forming attachment relationships with caregivers was an instinctual adaptation for survival. Similar to other mammalian species, human newborns are dependent on caretakers for their survival (Bjorklund & Pellegrini, 2002).

Bowlby's (1969) original theory of attachment accounted for his observations that newborns and parents alike form reciprocal attachment relationships. The logic behind reciprocity in the caregiver-infant dyad is that caregiving evolved out of a newborn's need for attachment. So when a caretaker sufficiently fulfills the needs of its genetic offspring, i.e. provides an environment conducive to survival which later leads to reproduction, the caretaker's reproductive fitness increases (Belsky, 1999). Essentially, when one fosters the creation of an environment which is conducive to one's genetically related offspring's ability to reproduce, then one's own genetic material stands a greater

chance of proliferation. Bowlby's ideas for the evolution of the attachment relationship stem from Darwin's theory of evolution set forth in his paramount text, *On the Origin of Species by Means of Natural Selection* (1872). From the onset of life, the newborn relies heavily on its primary caretaker to provide a safe and secure environment (Bowlby, 1958). The notion of reliance, i.e. necessity, one has for one's caretaker early in human life is imperative to grasping the scope to which experienced-trauma can affect infants, children, and adolescents during their psychosocial and biological development.

From an attachment perspective, interaction with one's caregiver affects several developmental processes that are germane to understanding the degree to which trauma has influence on an individual. One such process, the concept of affect regulation is described by Thompson (1994, pp. 27-28) as, "[consisting] of the extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals." A more concrete description can be found in the following which speaks to the "aim" of affect regulation:

> (a) neurophysiological processes underlying emotional arousal and its management, (b) attention processes, (c) informational processes—such as the reinterpretation of events (which is linked to defense mechanisms), (d) encoding of internal cues, such as of the internal indicators of emotional arousal, (e) enhancing access to coping mechanisms, (f) helping to predict and control commonly encountered settings, and (g) expressing emotions in a satisfactory way—that is, concordant with one's personal goals for the situation (Fonagy, Gergely, Jurist, & Target, 2002, p. 94).

Another conceived process, mentalization, which begins development through the infant-primary caregiver relationship, provides one with the ability to empathize with others' emotional responses (Fonagy, et al., 2002). In turn, the ability to mentalize others'

emotional responses gives one context for their own psychosocial environment, which supports the ability for self-regulation (Fonagy, et al., 2002).

As long as the developmental process unfolds without significant interruptions, the expectation as outlined above is that an individual will develop into a more differentiated self. However, complications to this process arise when certain detrimental events or series of events occur in an individual's development. "Attachment trauma is especially detrimental because it undermines the primary function of attachment, which is to provide protection." (Allen, 2001, p. 20). This refers to the "dual liability" of trauma (Allen, 2001). No matter when trauma occurs it affects developmental pathways, but, it is especially damaging when attachment trauma occurs in childhood or adolescence because it produces dual problems: it creates heightened stress and it decreases one's capacities to self-regulate stress (Allen, 2001, p. 10; Fonagy, 1999, as cited in Allen, 2001; Fonagy & Target, 1997, as cited in Allen, 2001). Moreover, "The child is deprived of the resilience provided by the capacity to understand a traumatic interpersonal situation" (Fonagy et al. 1994; as cited in Fonagy et al. 2002, p. 64).

Thus the notion of dual liability is inherently important to the study of trauma because it not only points to the psychopathology of trauma, but, to the treatment of trauma in that it highlights the decreased resilience to regulate traumatic stress in trauma survivors (Allen, 2001).

It should be stated that although trauma can occur in attachment relationship such as between caregiver and child, attachment trauma is not exclusive in this regard. What this means is that trauma can exist and occur in many other relationships, including peer,

extended family, strangers, and others. Trauma can even occur when good parenting is present if it is based on external or outside situations or experiences.

Adolescence and Resiliency

"*Resilience*...[is]…successful adaptation despite adversity…" (Allen, 2001, p. 10). However, beyond identifying this relatively simple construct of resilience, it is difficult to determine which and what human characteristics successfully predict resilience, therefore making treatment and intervention a challenge (Fonagy, Steele, Steele, Higgitt, & Target, 1994). In a review of literature, Fonagy et al. (1994) outlined several characteristics that resilient children share. The authors noted that attributes such as socio-economic status, gender, biological aspects, temperament, age when trauma occurs, and history of separation and loss have all been observed as predicting children's relative resilience to traumatic responses (Block, Block & Gjerde, 1986; Werner, 1989; Werner & Smith, 1982; Gleser, Green & Winder, 1981; Garmezy & Rutter, 1985). Additionally, there are many other variables that can affect resilience in children as well. Fonagy et al. (1994) point to several larger categories like psychological functioning and environmental components which contain a multitude of sub-categories like IQ and problem-solving capabilities (Kandel, Mednick, Kirkegaard-Sorensen, Hutchings, Knop, Rosendberg, & Schulsinger, 1988; Cowen, Wyman, Work, & Parker, 1990) or availability of primary caregivers (Werner & Smith, 1982) to mention a few.

In terms of one's physical, cognitive and socioaffective being, Dumont and Provost (1999) describe adolescence as being a time of monumental change. Even though all adolescents experience this phenomenon of change to varying degrees, individuals with trauma histories or attachment issues are at greater risk for

psychopathology (Allen, 2001). Dumont and Provost (1999) conducted a study on resiliency in eighth and eleventh grade adolescents by surveying "depressive symptoms and frequency of daily hassles" (p. 343). Based on a comparison of students' scores, the authors created three groups of students: "well adjusted, resilient, and vulnerable." (p. 343). They determined that self-esteem, ability to problem-solve difficult situations, and involvement in social activities were characteristics more often shared by well adjusted students and resilient students than more at-risk students.

According to Yule (2001), children and adolescents exposed to traumatic experiences can have, "…intrusive thoughts…repetitive thoughts…dissociative flashbacks…sleep disturbances…nightmares…difficulties in concentration…memory problems…a sense of foreshortened future...fears associated with specific aspects of their experiences…survivor guilt…depression…[and] panic attacks (p. 195)."

Moreover, based on a review of current literature, Putnam (2003) suggested that many individuals who have been exposed to maltreatment as children, such as physical and sexual abuse, will experience considerable difficulties in their physical, social and emotional development. Additionally, Putnam (2006) posits that these individuals will suffer increased tendencies toward substance abuse and psychological disorders in comparison to non-abused individuals. In the situation of childhood and adolescent trauma, Fonagy et al. (2002) purport that the resulting reduction in resilience can negatively affect one's mentalizing capacities to the extent that interpersonal relations suffer and can lead to severe personality disorders. In considering the magnificent impact trauma can have on an individual, there is justification to ask the question: what treatments are available for individuals with histories of trauma?

Trauma Treatment

"For a traumatized person, the journey towards a vital, spontaneous life means more than alleviating symptoms—it means transformation…This is a profound metamorphosis—a change that affects the most basic levels of our beings." (Levine, 1997, pp. 193-194). Regarding treatment, Allen writes (2001) "In my view, the real work is in helping the client develop the capacities for close relationships, self-regulation, and self-care that will enhance adaptation and quality of life." (p. 294). With that being said, a multitude of modalities exist to treat traumatized individuals.

Techniques with a sound base of evidence supporting their efficacy are: prolonged exposure, cognitive restructuring, and Eye Movement Desensitization and Reprocessing (EMDR) (Allen, 2001). Through synthesizing recent literature, Allen (2001) found that all three of these techniques share various features. They all have components of cognitive therapy, exposure, psychoeducation, self-regulation techniques, anxiety management (e.g. relaxation techniques), and supportive therapy. With the extent to which these techniques share therapeutic components with one another, it has been difficult to determine which approach is more effective than the other (Allen, 2001).

Treatment models that are not evidenced based exist as well. Many of these models rely heavily on building a foundation of a strong therapeutic alliance. In her book, *Trauma and Recovery* (1992), Judith Herman expounded on one of her basic beliefs in trauma treatment. She wrote:

> Though the single most common therapeutic error is avoidance of the traumatic material, probably the second most common error is premature or precipitate engagement in exploratory work, without sufficient attention to the tasks of establishing safety and securing a therapeutic alliance (p. 172).

Herman is speaking here to both common occurrences: the patient's desire to unload often painful memories of traumatic experiences and the therapists desire to delve into later phases of treatment too quickly. The method proposed here is not something accomplished quickly, but over a year or multi-year period of time. Herman's proposed model for treatment contains three stages: foundation of safety, remembrance and mourning, and reconnection with ordinary life. Allen shares a similar view to Herman and his model for the treatment of trauma contains some of the same principle components.

Allen (2001) presents a model for treating trauma with three phases: (1) containing trauma—holding boundaries, setting a therapeutic frame, creating a sense of safety, object survival techniques like withstanding a client's attempts to push away, establishing a supportive relationship, establishing / maintaining a support network, self-regulation, reflective function, mindfulness, mentalization, coping strategies, and self-care— (2) narrating trauma—the creation of a coherent narrative that removes blame and includes why the trauma happened— and (3) consolidation of new perspectives and behaviors—transitioning from treatment to life.

However, many of the treatment approaches for children and adolescents are adapted from approaches for adults (Yule, 2001). For example, a structured crisis intervention technique was adapted and applied to the treatment of many children survivors following a major cruise ship sinking (Yule & Udwin, 1991). The American Academy of Child and Adolescent Psychiatry (1998) has created parameters for assessing and treating PTSD in children and adolescents. According to their studies, they advocate the use of several interventions: psychoeducation, individual therapy of the cognitive-

behavioral variety, family therapy, group therapy, and psychopharmacology. While in name, the interventions listed above appear similar to those of adult treatment approaches, Cook, Blaustein, Spinazzola, & van der Kolk (2003) outline four goals for the specific treatment of children and adolescents with histories of trauma:

> (1) *safety* in one's environment, including home, school, and community,
>
> (2) *skills development* in emotion regulation and interpersonal functioning,
>
> (3) *meaning-making* about past traumatic events they have experienced so that youth can consider more positive, adaptive views about themselves in the present, and experience hope about their future, and
>
> (4) *enhancing resiliency and integration into social network* (p. 23).

Therapeutic groups have been shown to be beneficial as well (Cook et al., 2003), but, depending on the traumatic event and the individual response to the event, so too, should the treatment response depend (Najjar, Weler, Wesbrot, & Weller, 2008; Yule, 2001; Yule & Williams, 1990). Generally, "…the aims of such therapeutic groups will be to share experiences and feelings, to boost children's sense of mastery and control, and to share ways of solving common problems." (Yule, 2001, p. 196). Although, unless therapeutic preparation is made, the application of therapeutic groups does not mean that group work is necessarily the modality for children to express their feelings, as the expression of feelings could reignite traumatic stress (Pynoos & Nadar, 1993).

In the frame of conducting group therapy as a treatment approach for traumatized children and adolescents, Cook et al. (2003) advocate a focus on physical development. They point to their observation that, "Children who are traumatized or neglected often exhibit inhibited play or the inability to play while others may reenact their experiences." (p. 26). Consequently, play and other physical interactions are necessary for a child or

adolescent to successfully heal the wounds of trauma (James, 1994). Cook et al. (2003) contend that physical mastery of one's body can be accessed through group therapy which can incorporate, "Activities such as yoga, music, movement, sports (in school/program settings), and drama." (p. 26). What these activities set out to accomplish is to engage children and adolescents in new behaviors aimed at altering their physiological responses to threatening stimuli (Cook et al., 2003). An added benefit is that by simply engaging in such programs, children and adolescents interact / socialize with others thus attenuating social-based anxieties.

In sum, there are a vast number of factors that affect one's response to trauma, affect one's ability to recover from trauma, and affect how various treatment approaches can respond to trauma. As exemplified in their treatment approach outlined at the beginning of this chapter, the wilderness therapy model encapsulates many of the basic tenets of trauma treatment: establishment of safety and support, development of communication skills, i.e. putting words to emotions, which can be viewed as self-regulatory capacities, practiced communal living, i.e. social interaction, and physical activities like those outlined by Cook et al. (2003). Therefore, exploring the transformative effects of wilderness therapy on adolescents with trauma histories will provide additional and relevant information to the current understanding of treating trauma in adolescents.

Wilderness Therapy and Trauma

As a treatment modality, wilderness therapy has been used to help a range of populations dealing with a wide scope of issues (Clark et al., 2004). Although a search of literature databases, using the key words, wilderness therapy, adolescents, and trauma

produced no results, combining wilderness therapy with rape, PTSD, war veterans and abuse produced several. Encountered studies range from military veterans with PTSD (Hyer, Boyd, Scurfield, Smith, & Bluke, 1996), to physical and sexual abuse survivors (Ross, 2003; Webb, 1993; Kessell, 1994), to adjudicated adolescents (Bacon & Kimball, 1989; Newes, 2001), and to struggling families (Banderoff & Scherer, 1994). However, literature regarding the effectiveness of wilderness therapy unveils a need for more evidence-based studies (Gillis & Gass, 2004; Newes, 2001; Ragsdale, Cox, Finn, & Eisler, 1996; Ross, 2003). Newes' (2001) paper examining some of the existing literature in adventure therapy highlights the anecdotal nature of the studies' results that show improvement in diverse populations. Comprehensively, there exists a vast deficit in scientific studies and empirical data to suggest improvement as a result of attending these programs (Newes, 2001).

In an unpublished masters thesis, Ganopol (2008) recently conducted a study in cooperation with an Oregon-based wilderness therapy program that serves the needs of adolescent at-risk youth, Catherine Freer Wilderness Therapy Programs. His study observed that over half— 66 % —of the clients attending this particular wilderness therapy program identified as having histories of trauma. It must be noted, however, that the study's sample size only consisted of 32 individuals from a single, three-week section of the company's program so 21 of the 32 students reported histories of trauma. In regards to the size of the study's sample, Ganapol's (2008) data lack sufficient statistical power to authoritatively speak to the number of adolescents entering wilderness therapy programs with trauma histories and consequently the transformative effects of wilderness therapy. Although the strength of his study is somewhat limited given his sample size,

the aforementioned literature search illustrated there is little or no other data to inform this area of research.

Conclusion

Given the scarcity of empirical findings, it is possible to extrapolate that Ganapol's (2008) observations regarding percentage of students attending wilderness therapy with histories of trauma speak for general trends in the wilderness therapy industry. However, the vast number of students who attend these programs, and the significant effects trauma can have on adolescents, a more robust study examining wilderness therapy programs as a transformative experience for adolescents with trauma histories is highly needed. Thusly, in considering the size of Ganapol's sample, prudence calls for a follow-up study that incorporates a larger number of participants.

CHAPTER III

METHODOLOGY

The focus of this quantitative, quasi-experimental, pre-post research project is to examine the experience of adolescents with trauma histories who participate in a 21-day wilderness therapy treatment. This study seeks to further address the research questions posed in a study conducted by Ganapol (2008) which lacked sufficient numbers of data sets to adequately provide statistical analyses for examination. The current study followed Ganapol's methodology exactly, including the same study site. This study is designed to explore the following three questions: 1) Can a wilderness therapy program provide a transformative experience for adolescents with trauma histories? 2) Are there significant differences in the experience between adolescents who report trauma histories and adolescents who do not? 3) Are there demographical trends between the two groups of individuals?

Ganapol (2008) defined transformative experience as a reduction in trauma symptomatology, an increase in psychological resilience, and an increase in psychosocial and occupational functioning. This is measured by the Global Assessment of Functioning Scale (GAF) (DSM IV-TR, 2000).

The null hypotheses in this study are:

1. Adolescents who report histories of trauma will not have a transformative experience after attending a wilderness therapy program.

2. There will be no difference in the transformative experience from attending a wilderness therapy program between adolescents who report histories of trauma and those who do not.
3. There will be no demographical differences between groups of adolescents who report histories of trauma and adolescents who do not.

In order to explore the questions and (dis)prove the null hypotheses, this study relied on data collected from adolescents participating in a 21-day wilderness therapy program in Oregon. Adolescents' data were divided into two groups—one group of individuals that reported histories of trauma and one group that did not report histories of trauma.

Data Collection

Measures

In accordance with Ganapol's (2008) research design, this study followed those methodologies exactly. The wilderness therapy program is the independent variable and the three measures: the trauma symptomatology scale, the resiliency scale, and the GAF are the dependent variables. In order to observe the presence or absence of a transformative experience, this study prescribed to a pre-post research design. This means that participants were administered measures during their initial stage of treatment and during their termination stage of treatment. The three forms of assessment were used to establish baseline levels in order to have comparisons to scores from post-treatment scales.

Participants received the first series of questionnaires on their sixth day in the program. According to Ganapol (2008), clinicians from the study site anecdotally observed that adolescents often displayed defensive behaviors for their first few days in

treatment which would have presumably ill-affected the validity of their responses to testing. In order to adjust for this, study protocols are such that baseline measures were administered six days after entering into wilderness therapy. Because of the pre-post nature of the study design, and because the study site incorporates a 21-day treatment plan, post- measures were administered to participants on their 6th and final day in the program.

The self-reporting series of testing included the Child PTSD Symptom Scale (CPSS) and the Resiliency Scale (RS). The CPSS was created by Foa, Johnson, Feeny, & Treadwell (2001) and modified for use with adolescents in Ganapol's study (2008). The RS was originally developed by Wagnild & Young (1993) and later modified by Neill & Dias (2001) which effectively shortened the length of the original scale from 25 questions to 15. Additional data was collected on participants using information from students' intake and discharge summaries. In respect to this study, this information was logged on a demographic and clinical information checklist (DCIC). Ganapol developed the DCIC to inventory participants' information at intake as well as discharge regarding: diagnoses, GAF, report or denial of trauma history and type of trauma experienced, presence of treatment history, and demographics—age, gender, and race.

Sample

The inclusion criteria for participation in this sample consisted of having been enrolled in Catherine Freer Wilderness Therapy Programs from April, 2008 through March, 2009. Participants were between the ages of 13 and 17, male and female, and literate in English. In order to comprehend the CPSS and the RS, participant literacy was

required. Exclusion criteria for this study was if the participant and / or their parent / guardian refused consent for participation.

Based on Ganapol's (2008) reported difficulties in accumulating a sufficient number of data sets, this study collected data over a longer period of time – April, 2008 through March, 2009. The desired sample size was a minimum of 50 participants. A total of 57 data sets (N=57) were collected for this study.

Of the participants, 37 identified as male, 20 as female, and zero as transgender. The majority of participants identified as White representing 89.5% (51) of the sample, 5.3% (3) as Biracial, 3.5% (2) as Native American, and 1.8% (1) as other. Participants who reported histories of trauma comprised 54.4% (31) of the sample and 45.6% (26) did not report histories of trauma. Participants had a range of treatment histories and carried a wide variety of clinical diagnoses.

Study Site

In an effort to follow the study protocols from Ganapol (2008), the study site remained the same for this project. Catherine Freer Wilderness Therapy Programs, is a 21-day wilderness therapy program based in Albany, Oregon. It is accredited by the Joint Commision on Accreditation of Healthcare Organizations, licensed as a Youth Center for Intensive Residential Treatment by the Oregon Office of Alcohol and Drug Abuse Programs, licensed as a Non-Inpatient Provider by the Oregon Office of Mental Health Services, and licensed as an Outdoor Youth Treatment Program by the State of Oregon. Catherine Freer utilizes a 21-day adventure trek in western Oregon. Each trek is accompanied by a master's level therapist as well as other staff members. Individual and

group therapy focuses on the students' presenting problems, e.g. conflict resolution, affect regulation, and self-awareness.

Recruitment Process and Informed Consent

Enrolled students in the Catherine Freer Wilderness Therapy Programs were recruited as potential participants in this study. Students' parents / guardians were approached and informed about the study details prior to approaching the students. This process occurred during students' initial intake at Catherine Freer Wilderness Therapy Programs. The day before the Program's 21-day trek began, parents / guardians, other family members, and program students met at Catherine Freer Wilderness Therapy Program's main office in Albany, Oregon. Introductions to the program, therapists, staff members, and other facets of the program occurred at this time as well.

The coordinating therapist whose role it is to oversee therapists in the field and also initially meet with students' families provided parents / guardians with detailed information regarding this study. Their son or daughter's participation in the study was explained as completely voluntary and their decision of whether or not to participate would in no way affect their experience at Catherine Freer Wilderness Therapy Programs. If the parents / guardians agreed with the study protocols, the coordinating therapist provided them with informed consent forms to sign. Students whose parents / guardians signed informed consent forms authorizing their student's involvement were then provided with detailed information about the study, and an informed consent form, as well. There were two informed consent forms for this study. The one provided to students was written in age appropriate language and likewise in respect to the parents / guardians. The coordinating therapist explained that their participation in the study was

completely voluntary and their decision of whether or not to participate would in no way affect their experience in the program. They were also informed that they were free to withdraw from the study at any time prior to handing in their surveys at the end of their treatment.

Participation in the Study

A list of consenting participants was compiled by Ms. Tricia MacInnes, the Freer Research Coordinator (FRC). This list was provided to the field therapists who administered the CPSS and the RS to students on their sixth day, and again on their final day of their 21-day wilderness therapy trek.

Students participating in the study were allowed 15 minutes to complete the CPSS and RS. The nature of the CPSS and RS required that participants disclose non-identifying personal information on Likert-type scales. The scales asked participants questions relating to current and past events in their lives as well as questions relating to their current psychological functioning and psychological resilience.

To ensure confidentiality for the participants, each was assigned a participant number (PN). PN's acted as a way to differentiate between data sets while alleviating the need to use names. Surveys were distributed to students in envelopes with their PN's on them. After participants completed their surveys, pre- and post-, their CPSS and RS data were placed in non-identifying, sealed envelopes with their PN's on them. Those envelopes remained sealed until the FRC opened them and entered the data into Microsoft Excel spreadsheets. Data rendered from the clinician-reported DCIC was also entered into Excel spreadsheets by the FRC.

Spreadsheets were sent to this study's author without any identifying information except for PN's. The FRC also sent the original surveys to this author without any identifying information. The FRC signed a data entry confidentiality agreement.

Potential Risks to Participation

Because this study involves interviewing individuals under the age of eighteen, parental and student permission was required for participation. Participants were informed that they did not have to answer any questions they felt uncomfortable answering.

In responding to questions regarding past experiences, which for some participants were traumatic experiences, overwhelming emotions could have surfaced as participants recalled memories. In light of considering this possibility, staff clinicians were available to provide participants with support. While Catherine Freer Wilderness Therapy Programs' staff had knowledge of the study occurring, the staff were bound by ethical guidelines meant to ensure the confidentiality of participants' identities. Additionally, many students in the wilderness therapy program were participating in the research so while personal information remained confidential, it was likely that students were aware that others were potential participants in the study.

Potential Benefits

Participants may have benefited from completing the CPSS and RS surveys because they require personal reflection on past and current experiences. Reflecting in this way may have led to increased psychological insight and eventually contributed to better overall self-awareness. Additionally, participants could have benefited from

knowing that their contributions to this study increased the knowledge available to wilderness therapy and therefore other adolescents could gain from a more enlightened program design. There was no financial or material benefit to participating in this research. Additionally, this study can assist Catherine Freer Wilderness Therapy Programs as well as other treatment programs in thinking about a variety of aspects affecting who they serve, program effectiveness, and hopefully encourage further evaluation of their ongoing work.

Data Analyses

One type of inferential statistics, parameter estimating, was used to draw conclusions about the general population of clients of wilderness therapy programs in suggesting that adolescents enrolled in these programs possess similar characteristics as other adolescents enrolled in similar wilderness therapy programs. However, there is a certain margin of error in extrapolating data in this way (Anastas, 1999, p. 467).

Descriptive statistics were used to illustrate trends in demographic, diagnostic, past treatment history, and presence / absence of trauma history.

To compare scores from the psychometrics, pre-treatment and post-treatment, statistical difference was measured using paired-samples t-tests. Paired-samples t-tests measure the statistical difference between means of two related groups (Anastas, 1999). These tests were used to determine statistical differences in CPSS, RS, and GAF between pre-treatment and post-treatment scores.

CHAPTER IV

FINDINGS

The purpose of this study was to increase the understanding of the effects of attending a 21-day wilderness therapy program on adolescents who report histories of trauma. In this specific area of research, available literature is scarce, so the importance of this study lies in the opportunity to increase our knowledge regarding wilderness therapy and the effect it has clients with backgrounds of trauma. Thusly this study addresses several questions: (1) Can a wilderness therapy program provide a transformative experience for adolescents with trauma histories? 2) Are there significant differences in the experience between adolescents who report trauma histories and adolescents who do not? 3) Are there demographical trends between the two groups of individuals?

The following three sections of this chapter will present the findings of these measures including: demographics and descriptive data, pre-treatment and post-treatment CPSS, RS, and GAF score analyses and psychometric reliability, and inferential findings in regards to the hypotheses in this study. Descriptive data will encompass the number of individual participants in the study, demographics such as age, gender, and race, trauma history, type of trauma, examples of reported traumatic events, prior treatment history, and participant diagnostic data. The section on inferential findings will be comprised of incorporating descriptive data with the statistical analyses from the pre-treatment and

post-treatment psychometric scores in order to contextually synthesize the finding with the hypotheses of this study.

Descriptive Data

Data Collection

Data collected for this study came from Catherine Freer Wilderness Therapy Programs located in Albany, Oregon. Data was collected from April, 2008 through March, 2009. A total of 57 (N = 57) data sets were included in this study. Initially, the study planned to have more than 60 data sets, however, there was one incomplete data set and three participants who where scheduled to take part in the study, but due to complications were not able to participate in the study.

Demographics

All participants were between the ages of 13 and 18 (Mean = 15.58, SD = 1.21). Sixty-five percent identified as male, 35% identified as female. Eighty-nine and one-half percent identified as White, 5.3% identified as Biracial, 3.5% identified as Native American, and 1.8% identified as Other. These findings represent similar demographics to a previous case study conducted at Catherine Freer Wilderness Therapy Programs which found a mean age of 15.5, 62% males, 92% White, and "8% Native American, Hispanic, African-American and others." (Harper et al., 2007, pp. 118-119).

Trauma History

Of the 57 participants, 31 (54%) reported histories of trauma and 26 (46%) denied histories of trauma. Eight of the 31 (26%) who reported histories of trauma did not report upon intake to Catherine Freer, however, did so either while attending the program or at the end of their program. Because the observed increase (26%) in reported histories of

trauma is not based on new trauma experienced while attending Catherine Freer, these data indicate a phenomenological occurrence whereby participants either uncovered histories of trauma or felt more comfortable disclosing trauma during their attendance in the program.

Types of trauma in the DCIC measure included; physical abuse, emotional abuse, sexual abuse, neglect, violent attack, violent sexual attack, witness to domestic violence, witness to community violence, and trauma not otherwise specified. Table 1 illustrates the collected data from participants who reported histories of trauma.

Table 1. Types of Trauma

Types of Trauma	Frequency	% of Total Sample (N=57)	% of the Trauma Subgroup (N=31)
Physical Abuse	**13**	**23**	**42**
Emotional Abuse	**15**	**26**	**48**
Sexual Abuse	**7**	**12**	**23**
Neglect	**6**	**11**	**19**
Violent Attack	**2**	**4**	**6**
Violent Sexual Attack	**3**	**5**	**10**
Witness Domestic Violence	**2**	**4**	**6**
Witness Community Violence	**3**	**5**	**10**
Trauma Not Otherwise Specified	**9**	**16**	**29**
Totals	**60***	**106***	**193***

Note: Some participants reported multiple types of trauma

In respect to gender and trauma history subgroups, female membership in the trauma group was 2.3x that of membership in the non-trauma group, as illustrated in Table 2. Of additional note, females reported greater frequency of sexual abuse (6:1) and violent sexual attack (2:1) types of trauma than male participants, as illustrated in Table 3.

Table 2. Trauma and Gender

	Trauma Group		Non-Trauma Group	
	Frequency	**% of the Total Sample (N=57)**	**Frequency**	**% of the Total Sample (N=57)**
Male	**17**	**30**	**20**	**35**
Female	**14**	**25**	**6**	**11**

Table 3. Type of Trauma and Gender Disbursement

	Male		Female	
	Frequency	**% of those Reporting this Type of Trauma**	**Frequency**	**% of those Reporting this Type of Trauma**
Physical Abuse	**10**	**77**	**3**	**23**
Emotional Abuse	**9**	**60**	**6**	**40**
Sexual Abuse	**1**	**14**	**6**	**86**
Neglect	**2**	**33**	**4**	**67**
Violent Attack	**1**	**50**	**1**	**50**
Violent Sexual Attack	**1**	**33**	**2**	**67**
Witness Domestic Violence	**2**	**100**	**0**	**0**
Witness Community Violence	**3**	**100**	**0**	**0**
Trauma Not Otherwise Specified	**4**	**44**	**5**	**56**
Totals	**33***	**401***	**27***	**393***

Note: Some participants reportedly had a history of multiple types of trauma

In the CPSS measure, participants had the opportunity to report additional "distressing events," which because these data were kept confidential, Catherine Freer staff did not have the opportunity to observe them. Example distressing events that participants reported were: running away from home, molestation, gun violence, abandonment, rape, adoption, deaths of family members and friends, and many others.

Prior Treatment History

Of the 57 participants, 48 reported engaging in treatment prior to attending Catherine Freer Wilderness Therapy Programs, and nine reported not having engaged. Only two (6%, N=31) of the participants in the trauma group reported not having engaged in treatment prior to attending Catherine Freer whereas seven (27%, N=26) participants in the non-trauma group had not engaged in prior treatment. The disparity between those having engaged in prior treatment may indicate a relationship between prior treatment and reporting histories of trauma.

Diagnosis

On the DCIC, participants were given DSM IV-TR (2000) primary and secondary diagnoses on intake and discharge from Catherine Freer. In order to organize these data, diagnoses were grouped into five major diagnostic categories: Type 1) Substance Use Disorders which include diagnoses such as Cannabis, Opoid, Alcohol Dependence and others; Type 2) Mood Disorders which include diagnoses such as Depressive Disorder NOS, Major Depressive Disorder Single Episode, and others; Type 3) Impulse Control and Behavioral Disorders which include diagnoses such as Oppositional Defiant Disorder, Attention-Deficit/Hyperactivity Disorder NOS, and others; Type 4) Anxiety and Stress-related Disorders which include Generalized Anxiety Disorder, Anxiety Disorder NOS, Posttraumatic Stress Disorder (PTSD), and others; and Type 5) Relational Disorders which include Reactive Attachment Disorder of Infancy or Early Childhood, and Parent-child Relational Problem. These data are presented below in Table 4.

As seen in Table 4., substance use disorders comprised the largest number of diagnoses given while mood disorders, and impulse control and behavioral disorders follow respectively.

When substance use disorders were examined in the context of reported trauma history, 21 (68% of the trauma group, N=31) participants in the trauma group were given substance use diagnoses, while 22 (85% of the non-trauma group, N=26) participants in the non-trauma group were given substance use diagnoses. Many studies have shown that substance use disorders are some of the highest comorbid disorders with PTSD diagnoses (Keane & Wolfe, 1990; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

Table 4. Diagnoses and Disbursement

	Intake		Discharge	
Diagnosis Type	**Primary and Secondary Dx on (N=114*)**	**% of N**	**Primary and Secondary Dx on (N=114*)**	**% of N**
Substance Use	**42**	**37**	**44**	**39**
Mood Disorders	**32**	**28**	**33**	**29**
Impulse Control and Behavioral Disorders	**24**	**21**	**24**	**21**
Anxiety and Stress Disorders	**4**	**4**	**8**	**7**
Reactive Attachment and Relational Disorders	**2**	**2**	**2**	**2**
No Dx	**10**	**8**	**3**	**3**

Note: N=114 based on each participant receiving two diagnoses—primary and a secondary.

Examining Pre-treatment and Post-treatment Scores

Internal Reliability of Measures

In order to examine the internal reliability and consistency of the measures used in this study, Cronbach's Alpha (Cronbach, 1951) or coefficient alpha was applied to the

study measures. This is a statistical test designed to quantify how reliably a psychometric measures a single construct—in this study, psychological resilience measured by the RS, and trauma symptomatology measured by the CPSS are the single constructs.

RS pre-treatment and post-treatment scores were found to demonstrate high internal reliability according to Cronbach's Alpha (RS Pre-treatment, Alpha= .943, N=57, number of items= 15; and RS Post-treatment, Alpha= .914, N=57, number of items= 15). These numbers compare similarly to those reported by Wagnild and Young (1993) who cited five other studies using their original 25 question Resilience Scale, and found Cronbach's Alphas between .76 to .90. This study applied Neill and Dias's (2001) modified Resilience Scale, which they found to have an Alpha of .91.

The CPSS measure was found to have high internal reliability, also. Pre-treatment (alpha= .878, N= 57, number of items= 24) and Post-treatment (alpha= .914, N= 57, number of items= 24) alphas compared similarly to .89, found by Foa et al. (2001).

Deriving Meaning from the Measures

Of the 31 participants who reported histories of trauma, 23 of them (74%) reported their histories of trauma during the pre-treatment phase of testing. The remaining eight participants did not report histories of trauma until later in their time during wilderness therapy. Twenty-six participants did not report histories of trauma. In following with the purposes of this study, i.e. statistically analyzing the results of this study so that hypotheses could be tested, all participants who reported histories of trauma—whether during the pre-treatment phase or later—were included in the "trauma

group." Thusly this study generated a dichotomy of participants—those who reported histories of trauma and those who did not.

In order to examine the measure-generated scores in light of the study's hypotheses, paired-samples t-tests were conducted on CPSS, RS, and GAF outcomes. This was done to determine whether there was a statistically significant difference between pre-treatment and post-treatment scores. More specifically, it was logically determined, given the design of this study, that these results would indicate wilderness therapy's effectiveness at providing adolescents with histories of trauma with transformative experiences, i.e. a decrease in trauma symptomatology (as measured by the CPSS), an increase in psychological resilience (as measured by the RS), and an increase in psychosocial functioning (as measured by the GAF).

Trauma Group

In examining the group of participants who reported histories of trauma, each measure—CPSS, RS, and GAF—yielded differing results. A paired-samples t-test was conducted to compare trauma symptomatology, measured by the CPSS, pre-treatment and post-treatment. There was not a significant difference in the CPSS scores for participants with reported histories of trauma engaging in wilderness therapy pre-treatment (M= 22.90, SD= 12.960) and post-treatment (M= 24.52, SD= 12.585); t(30)= -.671, p= .508. This result indicated that in regards to trauma symptomatology, exposure to wilderness therapy did not act as a transformative experience for those participants with reported histories of trauma.

A paired-samples t-test was conducted to compare psychological resilience, measured by the RS, pre-treatment and post-treatment. There was not a significant

difference in the RS scores for participants with reported histories of trauma engaging in wilderness therapy pre-treatment (M= 65.48, SD= 23.115) and post-treatment (M=72.55, SD= 17.785); t(30)= -1.643, p= .111. This result indicated that in regards to psychological resilience, exposure to wilderness therapy did not act as a transformative experience for those participants with reported histories of trauma. Although the result did not demonstrate a significant difference between pre-treatment and post-treatment, the p-value, however, almost showed indicated significance.

As was the case for the other two measures, a paired-samples t-test was conducted to compare psychosocial functioning, measured by the GAF, pre-treatment and post-treatment. There was a significant difference in GAF scores for participants with reported histories of trauma engaging in wilderness therapy pre-treatment (M= 51.13, SD= 7.478) and post-treatment (M=54.42, SD= 7.894); t(30)= -3.276, p= .003. This result indicated that in regards to psychosocial functioning, exposure to wilderness therapy acted as a transformative experience for those participants with reported histories of trauma.

Non-trauma Group

In examining the group of participants without reported histories of trauma, each measure—CPSS, RS, and GAF—yielded similar results. A paired-samples t-test was conducted to compare trauma symptomatology, measured by the CPSS, pre-treatment and post-treatment. There was a significant difference in the CPSS scores for participants without reported histories of trauma engaging in wilderness therapy pre-treatment (M= 20.69, SD= 10.236) and post-treatment (M= 13.92, SD= 8.931); t(25)= 3.659, p= .001. This result indicated that in regards to trauma symptomatology, exposure to wilderness

therapy acted as a transformative experience for those participants without reported histories of trauma.

A paired-samples t-test was conducted to compare psychological resilience, measured by the RS, pre-treatment and post-treatment. There was a significant difference in the RS scores for participants without reported histories of trauma engaging in wilderness therapy pre-treatment (M= 68.50, SD= 15.953) and post-treatment (M=76.38, SD= 10.640); t(25)= -2.756, p= .011. This result indicated that in regards to psychological resilience, exposure to wilderness therapy acted as a transformative experience for those participants without reported histories of trauma.

Similar to the other two measures, a paired-samples t-test was conducted to compare psychosocial functioning, measured by the GAF, pre-treatment and post-treatment. There was a significant difference in GAF scores for participants without reported histories of trauma engaging in wilderness therapy pre-treatment (M= 56.15, SD= 8.573) and post-treatment (M=58.96, SD= 7.130); t(25)= -3.359, p= .003. This result indicated that in regards to psychosocial functioning, exposure to wilderness therapy acted as a transformative experience for those participants without reported histories of trauma.

Inferential Statistics

This section will examine data collected from this study as they pertain to hypotheses formulated for this research. This study was designed to test three hypotheses. In examining the first hypothesis—wilderness therapy programs would provide transformative experiences for adolescents with trauma histories—CPSS, RS, and GAF scores for individuals with reported histories of trauma were analyzed using paired-

samples t-tests. This was done in order to demonstrate whether statistically significantly differences existed between pre-treatment and post-treatment scores. As set forth in the experimental design of this study, for a transformative experience to have taken place, three things would have had to occur in the pre-treatment and post-treatment testing—one, a decrease in trauma symptomatology measured by the CPSS, two, an increase in psychological resilience, measured by the RS, and three, an increase in psychosocial functioning as measured by the GAF. As noted in the previous section, "*Examining Pre-treatment and Post-treatment Scores,"* GAF scores were the only measure of the three which was demonstrated to have a significant difference, pre-post. In other words, while the products of these tests yielded varying results, the outcomes from paired-samples t-tests did not lend sufficient evidence to reject the null hypothesis that: adolescents who report histories of trauma will not have a transformative experience after attending a wilderness therapy program.

In examining the second hypothesis—there would be significant differences in the transformative experiences between adolescents with trauma histories and adolescents without after attending a wilderness therapy program—CPSS, RS, and GAF scores for all study participants were analyzed using paired-samples t-tests. This was done in order to ascertain whether statistically significantly differences existed between pre-treatment and post-treatment scores so that sub-groups, *trauma and non-trauma*, could be compared to one another. As noted in the previous section, "*Examining Pre-treatment and Post-treatment Scores,"* GAF was the only measure of the three for which the *trauma* sub-group was demonstrated to have a significant difference, pre-post. Conversely, for the *non-trauma* sub-group, all measures—CPSS, RS, and GAF—were demonstrated to have

significant differences. The outcomes from paired-samples t-tests provided sufficient evidence to reject the null hypothesis that: there would be no difference in the transformative experience between adolescents who report histories of trauma and those who do not after attending a wilderness therapy program. In other words, according to data provided by this study, adolescents who do not report histories of trauma are more likely to have transformative experiences after attending a wilderness therapy program than those who do report histories of trauma.

In examining the third hypothesis—there would be demographical trends between groups of individuals who reported histories of trauma and those who did not report histories of trauma—descriptive data collected from the demographic and clinical information checklist (DCIC) were aggregated. This was done in order to provide information as to whether differences existed between the descriptive data from the sub-groups, *trauma and non-trauma*. As noted in the previous section, "*Descriptive Data,"* several demographical differences existed between the sub-groups. Three areas of observed difference were: gender proportioning, frequency of those engaged in prior treatment, and percentages of individuals with substance abuse diagnoses. In regards to gender, female participants comprised 45% (14, N=31) of the *trauma* sub-group membership, whereas they only comprised 23% (6, N=26) of the *non-trauma* sub-group. When looking at prior treatment history, only 6% (2, N=31) of the *trauma* sub-group denied prior treatment, whereas 27% (7, N=7) denied having a prior treatment history in the *non-trauma* sub-group. In respect to diagnostic distribution, members of the *non-trauma* sub-group had a higher percentage (85%, N=26) of substance abuse diagnoses than members of the *trauma* sub-group (68%, N=31). The outcomes from these

comparisons provided sufficient evidence to reject the null hypothesis that: there would be no demographical differences between groups of adolescents who reported histories of trauma and adolescents who did not report histories of trauma.

CHAPTER V

DISCUSSION

This chapter seeks to elaborate on the implications of this study's findings. This is done in order to view this study in a larger context, i.e. in the context of how the core issues under investigation relate to the broader field of mental health. By way of accomplishing this goal, the findings of this study will encounter relief in relevant references from other research and literature.

There are four sections in this chapter. The first section will focus on providing information as how the findings of this study relate to the hypotheses, and in turn, to the findings of other studies. The second section will address the strengths and limitations of the study. The third section will highlight various directions for future research. In the fourth section, a summary will provide a consolidating overview of this study's findings.

Hypothesis Testing and Implications

After noting the reliability of the measures in this study as accounted for by Cronbach's Alpha, and by submitting the CPSS, RS, and GAF scores to paired-samples t-test analyses, it can be reasonably supposed that the test results accurately show whether participants significantly increased / decreased or remained unchanged, given the psychometric construct in regards to the effects of the independent variable, i.e. participation in wilderness therapy. This statement, which interprets these specific findings of the current study to be an accurate representation of the phenomena observed

by the measures in this study, reflects a conclusion that these findings hold an appropriate level of validity necessary to evaluate the hypotheses of this study.

As noted in the previous chapter, this study's first hypothesis—wilderness therapy programs would provide transformative experiences for adolescents with trauma histories—was not supported by data. However, the second hypothesis—there would be significant differences in the transformative experiences between adolescents with trauma histories and adolescents without after attending a wilderness therapy program—was evidenced by support from the data. Moreover, the third hypothesis—there would be demographical trends between groups of individuals who reported histories of trauma and those who did not report histories of trauma—was supported by evidence from the findings. While these statements speak to the (il)legitimacy of the hypotheses, they do not, however, discern the nature of the findings.

Based on the literature—notably Ganapol's (2008) study, which this research sought to enhance by conducting a follow-up study—this author supposed that wilderness therapy would act as a transformative experience for adolescents who reported having histories of trauma. Ganapol reported findings that observed significant differences in each measure for adolescents who reported histories of trauma, pre-treatment to post-treatment. He also reported other findings inconsistent with those found in the current study. Whereas this study found that participants who did not report histories of trauma had transformative experiences after attending a wilderness therapy program, Ganapol observed the converse. Although the findings of the two studies diverge, one area of overlap exists, and that is the significant difference in GAF scores, pre-treatment to post-treatment, without consideration for trauma history.

In order to begin to generate meaning from this study, it is first necessary to reconcile the contrasting findings from this study with Ganapol's (2008) study. When two studies follow the same methodology and study site, the challenge of making comparisons is self-evident. For instance, Ganapol's demographics represent similarly to the current study. However, one blatant distinction exists between the studies, and that is the sheer number of participants—Ganapol's study included 32 individuals. The current study incorporated nearly twice as many participants as Ganapol's. In this study, sample size was not haphazardly chosen, either. For it was determined by Ganapol that his pool of participants was sufficiently low to deny his data of speaking powerfully, the sample size in this study was chosen at the outset to be larger than Ganapol's by an approximate factor of two. In summary of this point, while Ganapol's findings accurately represent the experiences of 32 individuals attending a wilderness therapy program, his findings fall short of carrying the needed breadth to speak for a generalizable population, i.e students engaged in wilderness therapy, and therefore this distinction likely accounts for the disparity among findings.

In reconsidering the hypotheses of this follow-up study and the hypotheses of its preceding study, which are nearly identical, the current findings seem to meld well with inferences made from available literature on the subject of; trauma, wilderness therapy, and transformative experience. The reason the term, "inference" is used, is because although to date there are no studies, minus Ganapol (2008), which seek to assess the phenomenon encountered in this study, there are literature in these approximate fields.

As extolled in the literature review chapter, wilderness therapy is believed by many to offer therapeutic benefits to its clients. Bandoroff and Newes (2004) encapsulate some of the benefits of wilderness therapy as they write:

> Operating as a small, self-sufficient team in a wilderness environment requires mutual decision making which demands trust, cooperation, effective communication and good problem-solving. The members of the group are dependent upon each other for their success as well as their survival. This promotes empathy, sharing, support, and patience and fosters a strong sense of community (p. 11).

Their words connote a sense of feeling held and cared for while also encountering challenges and successes. In essence, the authors imply that wilderness therapy can offer an experience rich with opportunities to grow. In other words, sentiments such as these provided the basis for formulating the hypotheses in Ganapol's (2008) study and the current study, that wilderness therapy would act as a transformative experience for individuals with histories of trauma.

The findings, however, revealed a slightly more nuanced picture than what the hypotheses could describe. While the findings could not reject the null hypothesis—adolescents who report histories of trauma will not have a transformative experience after attending a wilderness therapy program—they were able to demonstrate that individuals with histories of trauma were in fact affected by engaging in wilderness therapy. Of the three measures, GAF scores showed a significant difference, and RS scores nearly showed a significant difference, pre-treatment to post-treatment. This can be interpreted as a somewhat, semi-transformative experience because approximately half of the measures displayed positive change—a significant increase in psychosocial functioning

as measured by GAF, and a near statistically significant increase in psychological resilience as measured by RS.

In addressing the statistically significant differences in the outcomes between *trauma* and *non-trauma* sub-groups, it is appropriate to acknowledge that the findings—while inconsistent with Ganapol (2008), mesh well with the benefits lauded to wilderness therapy in the previous paragraphs. Whereas Ganapol found no significant difference, examining CPSS and RS scores of participants without reported trauma—the current study did. Based on the literature, it is this author's conviction that the current study's findings more accurately reflect the experiences of individuals attending wilderness therapy who do not report histories of trauma than the previous study. By virtue of the aforementioned benefits of wilderness therapy, no reasonable evidence appears to exist that would discount wilderness therapy's potential for acting as a transformative experience for individuals without reported histories of trauma. In fact, there is reason to believe that wilderness therapy would be more effective at acting as a transformative experience for those without histories of trauma than it would for those with histories trauma. This is the case because developmental and attachment trauma, which is germane to adolescents like this study's sample, can have severe effects on one's ability to: regulate affect like stress which can result from some of the challenges in wilderness therapy; connect with others; and connect with one's self (Allen, 2001).

Other important findings from this study include: the percentage of participants who reported having histories of trauma (54%, N=57), which was near 75% found by Ganapol (2008); the 26% increase in those reporting histories of trauma throughout the duration of the wilderness program (only 23 participants initially reported histories of

trauma), which was near 20% found by Ganapol; and the disproportion of female *trauma* sub-group membership (70%) (proportion not reported by Ganapol). These findings speak to the affirm the third hypothesis of this study—there would be demographical trends between groups of individuals who reported histories of trauma and those who did not report histories of trauma. Of additional note was the finding that a larger percentage of participants without reported trauma histories (85%) had received substance use diagnoses than those in the *trauma* sub-group (68%). While this finding does not directly contradict the observations of other researchers (Keane & Wolfe, 1990; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995), that substance use is often the highest comorbid diagnosis with trauma, it neither speaks to the validity of their observations.

To broadly summarize the points that surfaced in this section, wilderness therapy indeed had a significant effect on both groups of participants in this study. By assessing these effects, this study observed that wilderness therapy was somewhat more effective at producing a transformative experience in those individuals without reported histories of trauma than in those individuals who reported histories of trauma. The disparity present between the outcomes of the two sub-groups has been accounted for by referencing Allen's (2001) observations that trauma can have a detrimental impact on one's ability to regulate affect and connect with other individuals. Thusly those without histories of trauma would likely be more prone to experience a decrease in trauma symptomatology, an increase in psychological resilience, and increase in psychosocial functioning after engaging in a wilderness therapy program. Additional of note in the findings is the prevalence of reported trauma among participants in this study, as well as specifically

among female adolescents who in this study—both categories accounted for more than 50% of the overall attendees.

Strengths and Limitations

This section will discuss potential positives and potential shortcomings in the current study. As seen in the demographics reported in the Findings Chapter of this study, diversity in respect to gender and race was not representative of the domestic United States nor of the globe. Therefore, with the understanding that there are limitations due to sample biases because of who is able to access treatment from private wilderness therapy programs, etc., this study should not be interpreted as representative of all adolescents. However, according to a survey conducted by Russell (2003) of wilderness therapy programs nationwide, the majority of wilderness therapy clients are White so this study is likely racially representative of many private wilderness therapy programs.

Additionally, in regards to a portion of the study's measures that are clinician-reported, it should be understood that program clinicians who administer and report on the various tests may inject some of their own personal biases regarding study participants. In stating this, the reader should be aware that it was necessary for clinicians apply somewhat subjective judgment to their determinations of diagnoses and GAF scores.

As a disclaimer, in discussing the current study's findings and the available literature, there was difficulty in constructing a clear case which would either affirm or disaffirm wilderness therapy's potential to engender a transformative experience in individuals with histories of trauma. This author believes that the reason for this

difficulty lies in the black-and-white nature, per se, of this study design, and how the design of this study does not expressly allow for the distinction between the varying degrees of transformative experience. In a similar vein, this study sought to produce a clear delineation between those with trauma histories and those without, however, how clear was that delineation? For example, as mentioned in the Findings Chapter, participants had the opportunity to confidentially disclose any other traumatic or "distressing events" on their CPSS measures, which may or may not have been disclosed to staff members. In other words, the delineation between those in the *trauma* sub-group and those in the *non-trauma* sub-group relied entirely on participant-reporting, which may or may not have been accurate.

Lastly, a limitation of this study continues to be the small sample size. The field of trauma and wilderness therapy need to continue to be studied and examined on their effectiveness and impact moving forward.

Contributions

In this author's view, there are many directions for future research in respect to wilderness therapy, trauma, and transformative experience. Experimenting with clinical practice or delivery of care, however, is of most importance. Both Ganapol's (2008) and the current study assert that a large number (over 50%) of wilderness therapy clients have histories of trauma which means that program participants could likely find greater benefit from programs better designed to treat adolescents with histories of trauma. More specifically, 70% of females reported histories of trauma so perhaps designing programs which target the feminine experience of trauma would be beneficial.

To continue building on the wealth of information garnered from Ganapol (2008) and the current study while remaining adhered to experiments aimed at innovative practices, future studies could maintain the current experimental design, which could provide baseline figures for future research.

This study has broad implications for social work practice. With the exception of Ganapol's (2008) study and the current study, there is no literature exploring the effectiveness of wilderness therapy at providing a transformative experience to adolescents with histories of trauma. In addition to garnering information regarding the number of adolescents entering wilderness therapy with histories of trauma, this study examined the nature of the transformative effects of wilderness therapy on adolescents with reported histories of trauma. Moreover, this study has clear implications for informing wilderness therapy programs, which often maintain therapist positions staffed by licensed clinical social workers, as to statistical feedback regarding their potential clientele.

Summary

In accordance with having a discussion on the synthesis of this study's results with available literature, it is helpful to revisit the underlying infrastructure from where this study took shape.

The essence of this study revolves around the desire to assess the efficacy of wilderness therapy at treating adolescents with histories of trauma. In this follow-up study as well as the original study (Ganapol, 2008), it was determined that this assessment would be most efficiently ascertained through pre-treatment and post-treatment measuring of three psychological constructs associated with trauma. This study

found that a 21-day wilderness therapy program was somewhat effective at treating adolescents with histories of trauma—there was a significant increase in psychosocial functioning and a near significant increase in psychological resilience. In other words, while trauma symptomatology was not observed to have decreased, the other two measures showed changes. From this author's perspective, the results of this study reflect a view that wilderness therapy, with its focus on community through group-building, can enhance clients' abilities' to overcome some of the repressing effects that trauma often has on adolescents.

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Appendix A

Agency Approval

October 3, 2008

Smith College
School for Social Work
Lilly Hall
Northampton, MA 02063

To Whom It May Concern:

Catherine Freer Wilderness Therapy Programs agrees to partner with George Herrity in conducting research during the years 2008 and 2009. Catherine Freer Wilderness Therapy Programs gives George Herrity permission to administer his study to clients through our staff members. We grant him permission to focus his research at our wilderness therapy program including access to data collected from a similar study conducted the previous year.

As Catherine Freer Wilderness Therapy Programs are without a human subjects review process, we seek the use of the Smith College School for Social Work Human Subjects Review Committee to execute the necessary evaluation of George Herrity's proposed research. Catherine Freer Wilderness Therapy Programs hereby agrees to follow the guidelines set forth to protect participants in this proposed study as approved by the Smith College School for Social Work Human Subjects Review Committee. Catherine Freer Wilderness Therapy Programs retains all responsibility for participants in this study.

Sincerely,

Paul Smith
Chief Operating Officer

PS/mtm

Appendix B

HSR Approval

December 1, 2008

George Herrity

Dear George,

Your revised materials have been reviewed. Your amended scales arrived today and they are now clear with good instructions and well organized. We are therefore now able to give final approval to your most interesting study.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Good luck with your project.

Sincerely,

Ann Hartman, D.S.W.
Chair, Human Subjects Review Committee

CC: Shella Dennery, Research Advisor

Appendix C

Parent / Guardian Consent Form

Dear Parent or Guardian,

My name is George Herrity and I am currently studying for a Master's Degree in Social Work from the Smith College School for Social Work in Massachusetts. Prior to graduate school I worked for a wilderness therapy company like Catherine Freer and I also worked for a therapeutic boarding school. I am partnering with Catherine Freer Wilderness Therapy Programs in conducting a research study for my thesis. The purpose of this study is to increase our understanding of how Catherine Freer and similar wilderness therapy programs may be better able to help students who have experienced distressing events in their lives. This will be accomplished not only by looking at students who have experienced distressing events, but, also by looking at those who have not. The Smith College School for Social Work has approved this research project. Findings from this study will be used for my thesis, for presentation and possibly for future publication.

I am asking for your permission to allow your child to participate in this study while attending Catherine Freer. If you allow your child to participate, s/he will be asked to complete two surveys within the first week of the trek and then the same two surveys at the end of the trek. Survey questions pertain to behaviors linked to past events and how s/he manages those difficulties. Combined, the surveys will take 15 minutes to complete. In addition to the surveys, trek therapists will complete a checklist when your child is discharged from Catherine Freer. This information will consist of your child's presenting problem, your child's demographic information, whether or not your child has received prior treatment to Catherine Freer, the presence of a distressing event, and a clinical measure, the Global Assessment of Functioning Score. All students at Catherine Freer will be given the opportunity to participate in this study.

The potential risks for your child by participating is that other students and staff members may know they are involved in the study. However, as all students at Catherine Freer are potential participants this risk may not be a problem for your child. Additionally, your child could potentially experience strong and/or uncomfortable emotions while completing parts of the survey that ask to recall past experiences. Freer staff members will be available and offer support as needed.

There are no financial benefits for you or your child by participating in this study, however, you and/or your child may benefit in other ways. Participants may benefit from completing the surveys because they involve reflecting on past and current experiences. Reflection like this may increase your child's insight and contribute to better overall self-awareness. Furthermore, you and your child can know that your participation may have helped future families seeking help from wilderness therapy. The knowledge gained from this research could very well be beneficial to the continuing improvement of wilderness therapy.

Catherine Freer takes the confidentiality of their students very seriously. They do not allow outside independent researchers like me access to confidential information. This means that all identifying information will be removed before I receive data. The Freer Research Coordinator (FRC), Tricia MacInnes has signed a pledge to uphold confidentiality standards and will remove all identifying information before sending me the coded data. My research advisor will also only have access to coded data. If this research were to be published or presented, all information would be prudently disguised. Furthermore, all data collected will be securely protected for a minimum of three years and then destroyed.

Your child's participation in this study is completely voluntary. S/he may refuse to answer any of the survey questions. If you are uncomfortable for any reason giving your consent, this will not affect your child's admission or experience at Catherine Freer in any way. You and/or your child have the right to withdraw from the study at any time prior to handing the material in at the end of the trek. If you or your

child chooses to withdraw, all information will be destroyed. If you decide to withdraw, please contact Tricia MacInnes (FRC) at Freer. If your child wishes to withdraw they can simply write, "withdraw" at the top of a survey. Once the materials have been handed in at the end of the trek, your child's responses will become part of the study. If you or your child has any questions you may speak with the Freer staff, contact the principle researcher, George Herrity, or contact the Chair of the Smith School for Social Work Human Subjects Review by the information listed below.

YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND UNDERSTAND THE ABOVE INFORMATION AND THAT YOU HAVE HAD THE OPPORTUNITY TO ASK QUESTIONS ABOUT THE STUDY, YOUR CHILD'S PARTICIPATION, AND YOUR CHILD'S RIGHTS AND THAT YOU AGREE TO PARTICIPATE AND ALLOW YOUR CHILD TO PARICIPATE IN THE STUDY.

_____ _____

SIGNATURE OF GUARDIAN SIGNATURE OF RESEARCHER

_____ _____

Date Date

If you have any questions or wish to withdraw from the study, please contact:

George Herrity, Principle Researcher
georgeherrity@gmail.com
774.382.1986
Chair of the Smith SSW HSR Committee
413.585.7974

Thank You for Your Participation.
Please keep a copy of this form for your records.

Appendix D

Participant Consent Form

Dear Participant,

My name is George Herrity and I am an outside independent researcher. I am conducting a research study at Catherine Freer. This project is for my thesis at Smith College School for Social Work. I am interested in learning about how programs like Catherine Freer can be useful for teens who have experienced distressing events in their lives. I will be looking at teens who have experienced distressing events as well as those who have not. As a student of Catherine Freer, you have been chosen to take part in this study. The findings from this study will be included in a presentation of my thesis and possibly for future publication, however, your name and any identifying information will never be released. In fact, because Freer does not allow any outside independent researchers access to students' names or information, your confidentiality will be protected in this research.

If you decide to participate, you will be asked to complete two surveys within the first week of the trek and then the same two surveys at the end of the trek. Survey questions pertain to past distressing events and how you manage any behaviors that might come as a result of that event. The surveys take 15 minutes to complete and in addition to the surveys, your trek therapist will complete a checklist about some of the challenges you may have faced before coming to Freer (i.e. distressing events that might be considered outside of normal experience) as well as some of your background information such as age, gender, race. Your name will never be present in the data, only a coded number will be. All data will be securely kept for three years and then the data will be destroyed.

The risks of participating in this study are that other students and staff members may know you are involved so your participation will not be anonymous. However, this may not be a problem for you as all students at Catherine Freer are potential participants in this study. Additionally, while completing parts of the surveys that ask you to recall past experiences, you could potentially experience strong and/or uncomfortable emotions. Freer staff members will be available and can offer support if you need it.

There are no financial benefits for you by participating in this study, however, you may benefit in other ways. You may find that by participating you are potentially helping other teens who might benefit from your experience. You also may find completing the surveys beneficial by increasing insight in past experiences.

Your participation in this study is completely voluntary. If you choose for any reason that you do not want to participate, your decision will not affect your experience at Catherine Freer in any way. Additionally, if you wish to withdraw you may do so at any time before the end of the trek. You can simply write, "withdraw" at the top of a survey if you wish to withdraw. Once the materials have been handed in at the end of the trek, your information will become part of the study.

YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND UNDERSTAND THE ABOVE INFORMATION AND THAT YOU HAVE HAD THE OPPORTUNITY TO ASK QUESTIONS ABOUT THE STUDY, YOUR PARTICIPATION, AND YOUR RIGHTS AND THAT YOU AGREE TO PARTICIPATE IN THE STUDY.

_____ _____

SIGNATURE OF PARTICIPANT SIGNATURE OF RESEARCHER

_____ _____

Date Date

If you have any questions or wish to withdraw from the study you may speak with the Freer staff or after the trek, you may also contact:

George Herrity, Principle Researcher
georgeherrity@gmail.com
774.382.1986
Chair of the Smith SSW HSR Committee
413.585.7974

Thank You for Your Participation.
Please keep a copy of this form for your records.

Appendix E

Data Entry Assurance of Research Confidentiality

STATEMENT OF POLICY:

This thesis project is firmly committed to the principle that research confidentiality must be protected. This principle holds whether or not any specific guarantee of confidentiality was given by respondents at the time of the interview. When guarantees have been given, they may impose additional requirements which are to be adhered to strictly.

PROCEDURES FOR MAINTAINING CONFIDENTIALITY:

- The Catherine Freer Research Coordinator/Data Enter for this project shall sign this assurance of confidentiality.

- The Catherine Freer Research Coordinator/Data Enter should be aware that the identity of participants in research studies is confidential information, as are identifying information about participants and individual responses to questions. Depending on the study, the organizations participating in the study, the geographical location of the study, the method of participant recruitment, the subject matter of the study, and the hypotheses being tested may also be confidential information. Specific research findings and conclusions are also usually confidential until they have been published or presented in public.

It is incumbent the Catherine Freer Research Coordinator/Data Enter treat information from and about research as privileged information, be aware of what is confidential in regard to specific studies on which they work or about which they have knowledge, and preserve the confidentiality of this information. Types of situations where confidentiality can often be compromised include conversations with friends and relatives, conversations with professional colleagues outside the project team, conversations with reporters and the media, and in the use of consultants for computer programs and data analysis.

- Unless specifically instructed otherwise, a volunteer or professional transcriber upon encountering a respondent or information pertaining to a respondent that s/he knows personally, shall not disclose any knowledge of the respondent or any information pertain to the respondent's testimony or his/her participation in this thesis project. In other words, volunteer and professional transcribers should not reveal any information or knowledge about or pertaining to a respondent's participation in the project.

- Data containing personal identifiers shall be kept in a locked container or a locked room when not being used each working day in routine activities. Reasonable caution shall be exercised in limiting access to data to only those persons who are working on this thesis project and who have been instructed in the applicable confidentiality requirements for the project.

- The researcher for this project, *George Herrity* shall be responsible for ensuring that the Catherine Freer Research Coordinator/Data Entry Professional involved in handling data is instructed in these procedures, have signed this pledge, and comply with these procedures throughout the duration of the project. At the end of the project, *George Herrity* shall arrange for proper storage or disposition of data, in accordance with federal guidelines and Human Subjects Review Committee policies at the Smith College School for Social Work.

- *George Herrity* must ensure that procedures are established in this study to inform each respondent of the authority for the study, the purpose and use of the study, the voluntary

nature of the study (where applicable), and the effects on the respondents, if any, of not responding.

PLEDGE

I hereby certify that I have carefully read and will cooperate fully with the above procedures. I will maintain the confidentiality information from all studies with which I have involvement. I will not discuss, disclose, disseminate, or provide access to such information, except directly to the researcher, *George Herrity* for this project. I understand that violation of this pledge is sufficient grounds for disciplinary action, including termination of professional or volunteer services with the project, and may make me subject to criminal or civil penalties. I give my personal pledge that I shall abide by this assurance of confidentiality.

_____Signature

_____Date

_____George Herrity, investigator

_____Date

Appendix F

Child PTSD Symptom Scale-Pre

Remember all information will be kept confidential.

Please think over your life and write down any distressing events in your life that come mind and include the length of time since each event in parentheses Ex: xxxx (2 years):

_____
_____
_____

Below is a list of problems that people sometimes have after experiencing distressing events in their lives.

Read each one carefully and circle the number (0-3) that best describes how often that problem bothered you IN THE 2 WEEKS ***BEFORE*** COMING TO FREER.

0 – Not at all or only at one time
1 – Once a week or less / once in a while
2 – 2 to 4 times a week / half the time
3 – 5 or more times a week / almost always

1. Having upsetting thought or images about distressing events come into your head when you didn't' want them to	0	1	2	3
2. Having bad dreams or nightmares	0	1	2	3
3. Acting or feeling as if the distressing events were happening again (hearing something or seeing a picture about it and feeling as if I am there again)	0	1	2	3
4. Feeling upset when you think about it or hear about the distressing event (for example, feeling scared, angry, sad, guilty, etc)	0	1	2	3
5. Having feelings in your body when you think about or hear about the distressing events (for example, breaking out into a sweat, heart beating fast)	0	1	2	3
6. Trying not to think about, talk about, or have feeling about the distressing events	0	1	2	3
7. Trying to avoid activities, people, or places that remind you of the traumatic events	0	1	2	3
8. Not being able to remember an important part of the upsetting distressing events	0	1	2	3
9. Having much less interest or doing things you used to do	0	1	2	3
10. Not feeling close to people around you	0	1	2	3
11. Not being able to have strong feelings (for example, being	0	1	2	3

unable to cry or unable to feel happy)

12. Feeling as if your future plans or hopes will not come true (for example, you will not have a job or getting married or having kids)	0	1	2	3
13. Having trouble falling or staying asleep	0	1	2	3
14. Feeling irritable or having fits of anger	0	1	2	3
15. Having trouble concentrating (for example, losing track of a	0	1	2	3
story on the television, forgetting what you read, not paying attention in class)	0	1	2	3
16. Being overly careful (for example, checking to see who is around you and what is around you)	0	1	2	3
17. Being jumpy or easily startled (for example, when someone walks up behind you)	0	1	2	3

Indicate below if the problems you rated in Part 1 have gotten in the way with any of the following areas of your life DURING THE PAST 2 WEEKS

Have the problems above gotten in the way of:	Yes	No
18. Personal spiritual time (for example: praying, meditating, etc)	Y	N
19. Chores, duties, and responsibilities	Y	N
20. Relationship with peers	Y	N
21. Enjoyable activities	Y	N
22. Academic work (school work, journaling, etc)	Y	N
23. Relationship s with adults in your life (family, teachers, staff members)	Y	N
24. General happiness with your life	Y	N

Foa et al., (2001). Used by permission

Appendix G

Child PTSD Symptom Scale-Post

Symptom Scale - Post

Remember all information will be kept confidential.

Please think over your life and write down any distressing events in your life that come mind and include the length of time since each event in parentheses Ex: xxxx (2 years):

_____
_____
_____

Below is a list of problems that people sometimes have after experiencing distressing events in their lives.

Read each one carefully and circle the number (0-3) that best describes how often that problem bothered you IN THE 2 WEEKS ***DURING YOUR TIME AT FREER***.

0 – Not at all or only at one time
1 – Once a week or less / once in a while
2 – 2 to 4 times a week / half the time
3 – 5 or more times a week / almost always

1. Having upsetting thought or images about distressing events come into your head when you didn't' want them to	0	1	2	3
2. Having bad dreams or nightmares	0	1	2	3
3. Acting or feeling as if the distressing events were happening again (hearing something or seeing a picture about it and feeling as if I am there again)	0	1	2	3
4. Feeling upset when you think about it or hear about the distressing event (for example, feeling scared, angry, sad, guilty, etc)	0	1	2	3
5. Having feelings in your body when you think about or hear about the distressing events (for example, breaking out into a sweat, heart beating fast)	0	1	2	3
6. Trying not to think about, talk about, or have feeling about the distressing events	0	1	2	3
7. Trying to avoid activities, people, or places that remind you of the traumatic events	0	1	2	3
8. Not being able to remember an important part of the upsetting distressing events	0	1	2	3
9. Having much less interest or doing things you used to do	0	1	2	3

10. Not feeling close to people around you	0	1	2	3
11. Not being able to have strong feelings (for example, being unable to cry or unable to feel happy)	0	1	2	3
12. Feeling as if your future plans or hopes will not come true (for example, you will not have a job or getting married or having kids)	0	1	2	3
13. Having trouble falling or staying asleep	0	1	2	3
14. Feeling irritable or having fits of anger	0	1	2	3
15. Having trouble concentrating (for example, losing track of a	0	1	2	3
story on the television, forgetting what you read, not paying attention in class)	0	1	2	3
16. Being overly careful (for example, checking to see who is around you and what is around you)	0	1	2	3
17. Being jumpy or easily startled (for example, when someone walks up behind you)	0	1	2	3

Indicate below if the problems you rated in Part 1 have gotten in the way with any of the following areas of your life DURING THE PAST 2 WEEKS

Have the problems above gotten in the way of:	Yes	No
18. Personal spiritual time (for example: praying, meditating, etc)	Y	N
19. Chores, duties, and responsibilities	Y	N
20. Relationship with peers	Y	N
21. Enjoyable activities	Y	N
22. Academic work (school work, journaling, etc)	Y	N
23. Relationship s with adults in your life (family, teachers, staff members)	Y	N
24. General happiness with your life	Y	N

Foa et al., (2001). Used by permission

Appendix H / I

Resilience Scale-Pre / -Post

The Resilience Scale™ Pre/Post

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right.

Circle the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, circle "1". If you are neutral, circle "4", and if you strongly agree, circle "7", etc.

	Strongly Disagree						**Strongly Agree**
1. When I make plans I follow through with them.	1	2	3	4	5	6	7
2. I usually manage one way or another.	1	2	3	4	5	6	7
3. I feel proud that I have accomplished things in my life.	1	2	3	4	5	6	7
4. I usually take things in my stride.	1	2	3	4	5	6	7
5. I am friends with myself.	1	2	3	4	5	6	7
6. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
7. I am determined.	1	2	3	4	5	6	7
8. I have self-discipline.	1	2	3	4	5	6	7
9. I keep interested in things	1	2	3	4	5	6	7
10. I can usually find something to laugh about.	1	2	3	4	5	6	7
11. My belief in myself gets me through hard times	1	2	3	4	5	6	7
12. I can usually look at a situation in a number of ways.	1	2	3	4	5	6	7
13. My life has meaning.	1	2	3	4	5	6	7
14. When I am in a difficult situation, I can usually find my way out of it	1	2	3	4	5	6	7
15. I have enough energy to do what I have to do.	1	2	3	4	5	6	7

Adapted by Neil & Dias (2001)

Appendix J

Demographics and Clinical Information Checklist

Demographics and Clinical Information Checklist: Therapist

#	**demographics**		Please √ appropriate box
1	age		13
			14
			15
			16
			17
			18
2	gender		(1) male
			(2) female
			(3) transgender
3	race		(1) African American
			(2) Asian/Pacific Islander
			(3) Bi-Racial
			(4) Latino
			(5) Native American
			(6) White
			(7) Other
	Clinical Information		
4	In Tx prior to Freer		√ for yes
5	Primary Dx (intake)		
6	Secondary Dx (intake)		
7	Primary Dx (discharge)		
8	Secondary Dx (discharge)		
9	Intake GAF		GAF on intake
10	Discharge GAF*		GAF on discharge*
11	Hx of Trauma- intake		√ for yes if trauma Hx reported
12	Hx of Trauma- discharge		√ for yes if trauma Hx reported
	Trauma Reported (in intake or discharge)		√ all that apply
13	physical abuse		
14	emotional abuse		
15	sexual abuse		
16	neglect		
17	victim of violent attack		
18	victim of violent sexual attack		
19	witnessing domestic violence		
20	witnessing community violence		
21	Other_____		A distressing event not otherwise specified

*GAF on discharge- If there was any change in the GAF please add a one line qualifying statement describing the change in functionality.

Appendix K

Study Protocols

Dear Freer Staff,

My name is George Herrity and I am continuing a research study conducted at Catherine Freer last year. This study is for my Masters Thesis at Smith College School for Social Work. As an independent researcher, I am partnering with Freer on this project. It is my hope that this study will add to the knowledge gained from last year's study thereby shedding new light on the effectiveness of wilderness therapy as a transformative experience for clients impacted by trauma.

I have worked as a wilderness therapy instructor in central Oregon and while employed by another company I transported students to Catherine Freer. I believe in Freer's program and the excellent work you do. I am writing to ask your help in facilitating this study. I have first hand experience in how difficult and frustrating it can be to be given additional responsibilities in the field; and I also know how valuable independent research can be to Freer and the field as a whole.

I wish I could fly out and introduce myself to you and discuss the study, but that does not seem like a possibility for me. Based on the foundation David Ganapol, Paul Smith, Tricia MacInnes, and you have built for this study over the past year I believe there is great potential in furthering the research.

I am including with this letter the study protocols David Ganapol and Freer established. My hope is to answer outline the study so you may have an idea about the help I need from you. Current efforts are being made to develop better ways to conduct therapeutic interventions for those affected by trauma. With your help in conducting this study, we hope to gain a stronger grasp on understanding wilderness therapy's role in adolescent trauma work.

I greatly appreciate your help! If you are interested in receiving information regarding theoretical models of trauma I would be more than happy to send information to you. If you have any questions, please do not hesitate to call me.

Sincerely,

George Herrity
Smith School for Social Work
774.382.1986
gherrity@smith.edu

A Follow-up Study Exploring the Transformative Effects of Wilderness Therapy on Adolescents with Histories of Trauma

George Herrity
Smith School for Social Work
All correspondence for this study to:

304 11th St NW, Charlottesville, VA 22903
774.382.1986

OVERVIEW OF STUDY

Research objective:
To examine if wilderness therapy can be a transformative experience for adolescents who have experienced and/or been impacted by trauma compared to those adolescents who have not experienced and/or been impacted by trauma.

Working Definition: Transformative in this study is operationalized as a reduction of trauma symptomatology, an increase in psychological resiliency, and an increase in global functioning.

Major research questions:
1. Is exposure to a three-week adventure therapy program a transformative experience for adolescents who have been impacted by trauma?

2. Are there differences in the transformative experience for adolescents who have been impacted by trauma compared to those who have not been impacted by trauma after exposure to a three-week adventure therapy program?

3. Are there demographical trends between the two groups of individuals?

OVERVIEW OF PROCEDURES

Enclosed documents:
(1) Informed Consent Parent/Guardian
(2) Informed Consent Participant
(3) Pre- Child PTSD Symptom Scale; Post- Child PTSD Symptom Scale
(4) Pre- Resiliency Scale; Post- Resiliency Scale
(5) Demographic and Clinical Information Checklist

Study administration:

1. Trish MacInnes is the Research Coordinator and responsible for implementing the logistics at Freer. Trish will:
   a. direct the preparation of all survey materials,
   b. develop a list for each trek identifying which participants are eligible for the study
   c. be responsible for keeping all completed data and consent forms secured,
   d. enter the data.
2. Each trek will need to identify one individual responsible for the administration of the instruments in the field, and for keeping them sealed and secured until the completed forms can be hand delivered to Trish.

Recruitment and consent forms:

Please read through the informed consent forms. The forms are a basic description of the study and being familiar with this will help make your presentation of the study to the parent/guardian and participants go

more smoothly. .
The more you know and are comfortable with the material, the better the chance we will have to include more clients in the study. These forms are a requirement of my HSR/IRB committee and may be longer than what you are used to from other studies at Freer. Nevertheless, it is critical that the parent/guardian and participant read the entire form, have an opportunity to ask questions at the end, and sign the forms if they wish to participate. Both parent/guardian and client should be told that this is an independent research project being completed with the help of the Freer staff; it is not a requirement for admission to Freer.

Coordinating Therapist
Parent/guardian: A parent/guardian will need to complete a consent form if they choose to participate in the study. According to the ethical standards laid out by my HSR/IRB committee this needs to be done prior to approaching the client about participation in study. The Coordinating Therapist will be responsible for discussing the study with the parent/guardian and presenting the consent form. If the consent forms are signed they need to go to Trish who will keep them secure. Please remember to give out copies of the forms.

Trek Staff
Client: Each client needs to complete the client consent form if they choose to participate in the study. This will be the responsibility of a trek staff to make sure this happens prior to the start of trek.
The client should have the opportunity to go over the entire participant consent form. The client should be told there will be no repercussions if they don't wish to participate. After the client has read the consent and has had an opportunity to ask questions the client may sign the form. All forms need to be returned to Trish and copies made available to the participant.
*As with all studies, it is critical to discuss the benefits of the study as well as the risks with both the parents and the participants in order to give them an opportunity to make an informed choice. Ultimately, regardless of how it is framed, if a parent does not want to participate, they are not included. If a parent gives consent, their child may still refuse.

Quantitative methods and measures:

Measure	When administered	Notes
Child PTSD Symptom Scale (CPSS)	Pre- on day 6 at reration, Post- at discharge	Client self report 25 questions– 5-7 minutes 1 qualitative question about distressing events the participant has experienced 17 questions 4 point Likert scale 8 questions True or False
Resiliency Scale (RS)	Pre- on day 6 at reration, Post- discharge	Client self report 15 questions 3-6 minutes 7 point Likert
Demographic and Clinical Information Checklist (DCIC) GAF-mixed quantitative and qualitative	Intake and at discharge	Trek therapist fills out a checklist using the client intake when writing the discharge summary. GAF: intake score, discharge score, and a *one line* qualifying statement as to reason GAF score changed (either increased or decreased)

Methods:
- Six days into the trek when the group is picking up the re-ration you will receive research packets in individual envelopes for each participant who has both consent forms signed and a list of who is eligible to participate. To ensure the integrity and consistency of the Pre and Post data the participant's first name and last initial and their **participant number (PN)** will be written on the outside of the individual envelopes.
- In each envelope there will be three color-coded documents:
    1. A short one-page instruction set of how to fill out the surveys for the participants.

2. A **pink copy** of the modified **Pre-Child PTSD Symptom Scale (CPSS)** with the PN written on the top.
3. A **yellow copy** of **Pre-Resiliency Scale (RS)** measure also with the PN written on the top.

• The Trek staff then will need to arrange for each participant to have 15 minutes to sit individually and privately to fill out each survey *completely*.
• Once the surveys are completed each participant will seal their survey in the accompanying envelope with their corresponding PN written on the front.
• The Trek staff will then take all of the completed surveys in sealed envelopes and pack them into another sealed and protected package (secure from the clients and waterproofed- ziplock with duct tape, dry bag, etc.)
• At the end of the trek the sealed package with all of the sealed surveys should be given to Trish.
• To administer the surveys on the first and last day of the trek would be a simpler research design. However, the participants' reluctance, defensiveness, and resistance about participating in the program may skew the participants data on the first day. The assumption is by the re-ration those *initial* resistances will be more resolved and the clients will present with more accurate data in the Pre time period measure.
• The Post measure will be given to the participants in the same manner with sealed research packet envelopes when the participants finish their trek on the 21st day.
• The Coordinating Therapist will hand out the second round of research packets when the group is met at Santiam.
1. A short one-page instruction set of how to fill out the surveys
2. A **blue copy of the modified Post- CPSS** with the PN written on the top.
3. A **green copy of Post-RS** with the PN written on the top.

• Please give each participant some private and individual space to fill out the survey for 15 minutes. Remind the participants before they seal the envelope to check and make sure everything is filled out and complete.
• The Coordinating Therapist will then give the Trish the sealed packet of all the sealed Post measures.

Following the trek and while writing discharge summaries-

Trek Therapists

Your help in this step is crucial (thank you!). In order to get a true measure and picture of how the participants have been impacted by trauma it is critical to have data on their trauma history and the other variables that might factor into adventure therapy being a transformative experience.

• To complete the DCIC accurately please take into consideration the intake and any information you might write up in your discharge summary.
• The form includes:
1. demographic data (age, gender, race)
2. prior history of treatment (check mark for yes, leave blank for no)
3. primary diagnoses on intake and discharge (write in code number)
4. GAF score intake and discharge (write in number)
5. reported history of trauma on intake, and then again at discharge (check for yes leave blank for no)
6. types of trauma history reported (check those that apply; and write in any other distressing event not otherwise specified, i.e.: natural disaster, witnessing a death, etc…)

• The last item on the checklist is the one-line qualifying statement to add if there was any change in the GAF score. If there was an increase or decrease in the score simply write a one-line description including the reason for the change in the score.

If you have any questions please do not hesitate to call or email me.

Thank You Again For Your Help.

George Herrity

Ganapol, (2008). Used by permission

Table 1. Types of Trauma.

Table 1. Types of Trauma

Types of Trauma	Frequency	% of Total Sample (N=57)	% of the Trauma Subgroup (N=31)
Physical Abuse	**13**	**23**	**42**
Emotional Abuse	**15**	**26**	**48**
Sexual Abuse	**7**	**12**	**23**
Neglect	**6**	**11**	**19**
Violent Attack	**2**	**4**	**6**
Violent Sexual Attack	**3**	**5**	**10**
Witness Domestic Violence	**2**	**4**	**6**
Witness Community Violence	**3**	**5**	**10**
Trauma Not Otherwise Specified	**9**	**16**	**29**
Totals	**60***	**106***	**193***

Note: Some participants reported multiple types of trauma

Table 2. Trauma and Gender

Table 2. Trauma and Gender				
	Trauma Group		Non-Trauma Group	
	Frequency	% of the Total Sample (N=57)	Frequency	% of the Total Sample (N=57)
Male	17	30	20	35
Female	14	25	6	11

Table 3. Types of Trauma and Gender Disbursement

Table 3. Type of Trauma and Gender Disbursement

	Male		Female	
	Frequency	**% Reporting this Type of Trauma**	**Frequency**	**% Reporting this Type of Trauma**
Physical Abuse	**10**	**77**	**3**	**23**
Emotional Abuse	**9**	**60**	**6**	**40**
Sexual Abuse	**1**	**14**	**6**	**86**
Neglect	**2**	**33**	**4**	**67**
Violent Attack	**1**	**50**	**1**	**50**
Violent Sexual Attack	**1**	**33**	**2**	**67**
Witness Domestic Violence	**2**	**100**	**0**	**0**
Witness Community Violence	**3**	**100**	**0**	**0**
Trauma Not Otherwise Specified	**4**	**44**	**5**	**56**
Totals	**33***	**401***	**27***	**393***

Note: Some participants reportedly had a history of multiple types of trauma

Table 4. Diagnoses and Disbursement

Table 4. Diagnoses and Disbursement

	Intake		Discharge	
Diagnosis Type	**Primary and Secondary Dx on (N=114*)**	**% of N**	**Primary and Secondary Dx on (N=114*)**	**% of N**
Substance Use	**42**	**37**	**44**	**39**
Mood Disorders	**32**	**28**	**33**	**29**
Impulse Control and Behavioral Disorders	**24**	**21**	**24**	**21**
Anxiety and Stress Disorders	**4**	**4**	**8**	**7**
Reactive Attachment and Relational Disorders	**2**	**2**	**2**	**2**
No Dx	**10**	**8**	**3**	**3**

Note: N=114 based on each participant receiving two diagnoses—primary and a secondary.