

EMOTIONAL REGULATION AND TREATMENT PROGRESS OF MALE CHILD AND
ADOLESCENT THERAPEUTIC CAMPERS

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Liberty University

August, 2020

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© August 2020

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ABSTRACT

For the past 75, years Therapeutic Camping (ThC) has been utilized as a therapeutic modality, although it has been largely unknown or unrecognized by the traditional treatment community. ThC bears similarities to wilderness therapy and was initially developed for children and youth suffering from behavioral and emotional problems. Mental and behavioral health issues are frequent in youth which can cause personal, familial, social, and economic problems. Another core underlying issues emotion dysregulation, which involves the inability to regulate emotion across multiple domains. Mental health providers have recognized the need to reduce the effects associated with emotion dysregulation and limited treatment resources for youth, ThC was proposed as being a therapeutic approach potentially improving emotion regulation scores. This study proposes observing and measuring male ThC participants from Fair Play Wilderness School for a 12-week period for emotion regulation, program progress, and if age and time in the program was a covariate. The study which is the subject of this dissertation proposed pre- and post-test measuring of participants producing readiness to change, emotion functioning, and program progress scores. These results suggested improvement in emotion function scores and program progress scores during the 12-week period observed. Age of campers was not found to be a covariable in emotion function or program progress scores. The study did produce correlational results, although it did not identify causation.

Keywords: therapeutic camping, wilderness therapy, emotion regulation, emotion functioning

EMOTIONAL REGULATION AND TREATMENT PROGRESS OF MALE CHILD AND
ADOLESCENT THERAPEUTIC CAMPERS

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Dedication

This dissertation is dedicated to my mother Louella Talley O'Donald who was my biggest fan and encourager. My mom was always supportive in my educational pursuit, largely due to her limited ability to complete her formal education. She always encouraged me to "complete my schooling" due to her lack of opportunity, family obligation and economic status. My mother died two-years ago during my PhD journey and informed me just prior to her death that she could not wait to go to Liberty University and watch me graduate. She always encouraged me by saying "you can do this; you will be a doctor soon". This dissertation is dedicated to my sweet mother whom I believe has watched over me since her home going to be with the Lord. Thank you for your love and encouragement during this project and my entire life.

Acknowledgment

The PhD degree has been the adventure of a lifetime. This adventure has been fulfilling and grueling throughout the ascent, as all meaningful adventures are. The doctoral work and the dissertation would not have been possible without a great support network. So many people have supported me throughout this journey. I first want to thank My Lord for his grace and mercy not only through this adventure but also my entire life.

My wife Emma has been there for me throughout the journey. She has been supportive and believed in me when I did not believe I could finish the climb. The weeks when she was alone when I was away in Lynchburg taking PhD intensives or consulting/teaching for 505 and 667 intensives was not easy for her. Thank you for the love, support, encouragement, and prodding allowing me to complete this task during the storms of life that has occurred during this journey. You were there to help with my mom allowing me to focus on my research during her final days. You were consistently supportive as you have been for the past 40-years as my loving wife.

I would like to also thank my children and grandson for their encouragement. Ethan, thanks for working with me compiling numbers and stats and “talking shop”. Sid, your encouragement along with Cooper’s question of “what is Pop’s doing up there” has pushed me along. Meredith and Kelli thank you for your encouragement. Wendell, “my brother from another mother”, thank you for the calls and texts encouraging me along the way.

I would also like to thank my dissertation committee for their guidance and accommodations assisting me in the completion of this journey. I would like to thank my dissertation chair Dr. David Jenkins for his guidance and encouragement. He has been supportive and honest, helping me to overcome and navigate academic, professional, and

personal challenges. Dr. Sandy Newes has been instrumental in keeping me on task and research focused. Dr. Newes has supported me academically and professionally, encouraging me to engage my knowledge and skill in the area of Adventure Therapy. Dr. Newes has been responsible for keeping my ideas and research on the correct path throughout this Journey. Also, I would like to thank Dr. Fred Volk for his knowledge and guidance through my least skilled areas of research design and statistical analysis. Your confidence has encouraged me to push through the adventure. Thank you all for your prayers, support, and encouragement.

I would also like to thank Greg Jeffers who was willing to tutor me through statistical concepts. I appreciate Greg's willingness to not only check my results but also challenge me to learn more about statistics. I would also like to express my appreciation to Fair Play Wilderness Camp School for their willingness to welcome me and their excitement in the conducting of and the results of the research. My prayer is that Fair Play Wilderness will continue to make a difference in young men. I want to thank everyone at Upstate Carolina Counseling Associates for their encouragement and support during this adventure. Your support has allowed me to complete this task while we continued growing as successful mental health providers. So many people have given me support in so many ways.

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List of Abbreviations

ACA – American Counseling Association
AEE – Association of Experiential Education
AIC – Activity level/Impulse Control
ANCOVA – Analysis of Covariance
APA – American Psychological Association
AT – Adventure Therapy
AWM – Attention/Working Memory
BF – Behavioral Functioning
CAM – Compliance/Anger Management
CYC – Child and Youth Care
D-REF – Delis Rating of Executive Functioning
DV – Dependent Variable
EMF – Emotional Functioning
ES – Effect Size
EXF – Executive Functioning
GAO – General Accounting Office
IV – Independent Variable
MNS – Mirror Neuron System
OBH – Outdoor Behavioral Health
OBHC – Outdoor Behavioral Health Council
RCT – Randomized Controlled Trial
SAMHSA – Substance Abuse and Mental Health Administration
TAPG – Therapeutic Adventure Practicing Group
TC – Total Composite
ThC – Therapeutic Camping
URICA – University of Rhode Island Change Assessment Scale
WRTCA – Wilderness Road Therapeutic Camping Association
WT – Wilderness Therapy
Y-OQ – Youth Outcome Questionnaire

CHAPTER ONE: THE PROBLEM

Background to the Problem

This study has identified issues and problems affecting children and youth in society today. These issues involve mental health problems that children and youth struggle with along with the lack of services available to address their problems. The problem of emotional development and dysregulation was also presented as an issue. This section observes the use of nature as an adjunct to the treatment youth need to potentially reduce the mental health and behavioral issues this population struggles with.

Mental Health Issues with Children and Youth

There is still a need to help young people find their potential and help them reduce the issues that lead to mental health and behavioral concerns in this population (Children's Defense Fund, 2014; Tucker, Javorski, Tracy, & Beale, 2012; Tucker, Widmer, Faddis, Randolph, & Gass, 2016). The continuous mental health issues affecting children and adolescents is an increasing problem. In the past 10 years, close to \$500 million annually has been spent to provide community mental health treatment for children and adolescents (Tucker, Javorski, Tracy, & Beale, 2012). The Children's Defense Fund (2014) reports that incidents of child abuse and neglect occur every 47 seconds with most being incidents of neglect. Approximately 40% of the child victims of abuse and neglect never receive any services post-investigation (Children's Defense Fund, 2014). The Children's Defense Fund (2014) also reported 4,028 children were arrested every day. Chapman (2014) reports that in 2012 the Children's Defense Fund reported 186 children were arrested for violent crimes and 368 were arrested for drugs each day in the US. Over 100,000 children in foster care need adoption and many "age out" of service before being

returned home or placed for adoption (Children's Defense Fund, 2014). The increasingly large number of youth with developmental, behavioral, and social issues reveals a need for psychological and mental health treatment and intervention (Tucker et al., 2016). There is overwhelming evidence indicating that children and adolescents have physical and emotional needs that are not being met in the US (Chapman, 2014).

Developmental and environmental issues also affect children's psychological and social components (Adler-Tapia, 2012). Not only do child and adolescent psychological issues cause problems immediately, but these also have lasting and often sequential effects into adulthood and may become multi-generational, producing social impact (Tucker, Norton, DeMille, & Hobson, 2016). These effects not only produce psychological problems but may also produce physical and somatic issues as well (Tucker, et al., 2016). Many of the children and adolescents treated by medical and mental health providers report social issues like (a) lack of adequate nutrition, (b) sub-standard housing, (c) limited social support, (d) physical abuse, (e) emotional abuse, and (f) sexual abuse and/or neglect (Adler-Tapia, 2012; Tucker, et al., 2016).

The child and adolescent population are affected by problems and needs that stem from interpersonal, familial, cultural, social, and educational problems. These needs may begin during early developmental periods of a child's life. Early problematic attachment needs have been found to affect how children learn to trust, cope, problem solve, and respond and react to stressful situations, trauma, and life events (Chapman, 2014; Schore, 2012; Schore, 2003a; 2003b). Although the psychological and social problems of youth can be more easily observed, the emotional needs of youth are also problematic. The ability to properly identify, utilize, and regulate emotion can be problematic with youth (Adler-Tapia, 2012; Gross 2014; Kring & Sloan, 2014; Schore, 2012, 2003a, 2003b; Zimmer-Gembeck et al., 2014).

Many of the presenting problems children and youth historically have dealt with have been addressed and treated by numerous institutions and professionals using varying techniques (Gass et al., 2012; Loughmiller, 1965, 1979; White, 2015). Loughmiller (1979) describes the need he saw in the youth being serviced using a Therapeutic Camping program at Dallas Salesman Club:

We believe that every boy sent to us has enough resources to assume responsibility for himself and lead a satisfactory life, and we fully expect him to do it. One of our main responsibilities is to provide the opportunity, the environment, where his strengths can be discovered, and his abilities can find expression. The boys we get have not had this opportunity. They come to camp from age eight to sixteen because they have been unable to function quietly at school, at home, or in the community. They are moderately to severely disturbed. All of them are failures in school, many are in conflict with the law, and others have given up and have withdrawn from active participation in anything. All kind of boys come – aggressive, delinquent, neurotic, schizophrenic; with brain damage, asthma, epilepsy, dyslexia, and so on; but as we see it, they are not sick and we are not therapists. (p. 21-22)

There continues to be a need to address the problems youth experience. Many of the traditional services for youth are overwhelmed, or adult therapy techniques are utilized instead of empirically accepted therapies for children and youth, specifically.

Issues with Emotion Development and Regulation

Emotion regulation has been found to be problematic in this population (Adler-Tapia, 2012; Schore, 2003a; 2003b). Humans are emotional and relational beings, so being able to regulate emotions is needed to relate to others appropriately (Adler-Tapia, 2012; Schore, 2003a;

2003b; Siegel, 2012). Humans possess emotion as a result of developmental and learned behaviors (Adler-Tapia, 2012; Gross, 2014; Siegel, 2012). The development of a person's attachment system shapes emotion. Emotion is also shaped through regulation as an individual may be rewarded, punished, or modeled for behaviors or emotional responses (Adler-Tapia, 2012; Bowlby, 2007; Siegel, 2012). If a person does not master emotion regulation or if a stimulus overwhelms the person's ability to cope, emotion dysregulation can occur (Gross, 2014; Schore, 2003a, 2003b). Emotion dysregulation leads to behaviors that are not personally, environmentally, or socially appropriate (Schore, 2003a, 2003b).

The study of emotion and emotion regulation has increased greatly in the past 20 years (Gross, 2014). Gross reports that the psychology literature in 1990 contained very few citations with the word "emotion", but in 2012, there were over 8000 citations with the word "emotion" in 2012. Schore (2003a) called the 1990's the "decade of the brain" because of the focus on neurology and advancements in neuroscience. Although emotion has recently been studied more from a neurological perspective, emotion research has been foundationally attributed to the work of psychoanalytical, developmental, and attachment researchers and theorists (Bowlby, 2007; Gross, 2014; Siegel, 2012; Schore, 2003a, 2003b). Various theories and therapies have focused on emotion development and regulation (Adler-Tapia, 2012; Bowlby, 2007; Gabbard, 2009; Gross, 2014; Siegel, 2012; Schore, 2003a, 2003b), but in this study, the effect of ThC on emotion regulation will be the focus. The therapeutic consideration, ThC is designed to be utilized in nature or in a wilderness setting (Gass et al., 2012; Loughmiller, 1979; White, 2015). Nature, historically, has helped many as a coping mechanism (Gass et al., 2012; Korngold, 2008; Louv, 2008).

Nature as an Adjunct to Therapy

Wilderness has long been a place where humankind has ventured to escape, explore, heal, and find meaning, and for others, it has been a place of suffering (Denton, 2001; Easley, Passineau, & Driver, 1990; Exodus 3:1, NASB; Gass, et al., 2012; Korngold, 2008; Louv, 2008; Mark 1:12-13). Although wilderness is often seen as a place in the deep woods, jungle, or desert, wilderness can occur in a city park or the backyard in a suburban neighborhood. The person who experiences wilderness defines what wilderness is (Gass et al., 2012; Korngold, 2008; Louv, 2008).

Whether the wilderness experience is metaphorical or actual, wilderness is a place where exploration occurs. It must be acknowledged, however, that transitioning to the wilderness may be stressful, thus affecting those who experience wilderness. Even though the transition may be difficult, exploration often leads to discoveries that results in interpersonal experiences or to discovery of new or different places and coping skills (Gass et al., 2012). Discovery leads to change effecting the biological, psychological, social, and spiritual components of a person (Korngold, 2008; Schore, 2003a, 2003b; Siegel, 2012). Wilderness is a place where change can and does occur (Gass et al., 2012).

Loughmiller (1965) emphasized the wilderness as a more effective (more impactful) catalyst for change than mental health professionals (White, 2015). Several wilderness and adventure programs that are currently operating can trace their foundational concepts to programs like ThC (Gass et al., 2012; White, 2015). ThC has been used for many years. It requires the camper to immerse himself into the wilderness, learning to depend on his personal skills, fellow camper's intervention, and direction from the group leader (Gass et al., 2012; Loughmiller, 1979; White, 2015).

Purpose of the Study

This study suggests that emotion regulation problems youth experience may have attachment and stress correlations related to family and environment that could begin early in a child's life (Saarni, 1999; Schore, 2012; Schore, 2003a; 2003b; Southam-Gerow, 2013). With the many apparent needs and problems of youth, this study proposes ThC to be a method that positively influences the problems of youth and measures emotional functioning to determine the effectiveness of ThC on emotion dysregulation. ThC has been presented a potential method to increase emotion regulation and decrease emotion dysregulation in child and adolescent populations (Gross, 2014; Loughmiller, 1972; Loughmiller, 1965; Schore, 2012; Schore, 2003a; 2003b).

In their study, Tucker et al. (2012) report the efficacy of treatments being used for youth need to be determined; Tucker also suggests that some treatment methods may not be appropriate for the youth population receiving treatment. The authors suggest that due to the great need for child and adolescent behavioral health services, youth are often be placed with the most convenient provider, regardless of the appropriateness of the treatment, including the use of adult treatment not designed for children and adolescents (Carr, 2009; Tucker et al., 2012). There is a general need for increased availability and efficacy of mental health services for children and adolescents (Carr, 2009; Tucker, Smith, & Gass, 2014). This study proposes ThC as an additional adjunct for youth dealing with emotion regulation problems, which will be fully discussed in Chapter Two.

The data presented above suggests that effective mental health services are not always available for children and youth (Children's Defense Fund, 2014; Tucker, Javorski, Tracy, & Beale, 2012; Tucker, Widmer, Faddis, Randolph, & Gass, 2016). Anecdotal and marketing

information at Fair Play suggests that their program has served male children and youth with favorable results. Loughmiller (1972; 1965) who developed the initial ThC program also suggests ThC has produced effective change in young male participants. Although the effectiveness has been stated by Fair Play and Loughmiller, little empirical data has been found to reinforce their reports.

Fair Play provides services to a maximum of 40 campers while utilizing ThC as its foundational change process. Because ThC lacks empirical data, this study has begun to answer questions concerning the efficacy of ThC. With the findings presented here, additional questions and research could stimulate, change, or improve current uses of ThC. Emotion regulation is presented as a measure in this study. There has been no data found so far that would indicate any previous types of empirical research has been performed to measure campers' progress during ThC or if ThC affects emotion regulation.

The preliminary search for answers concerning mental health needs for children and youth remains problematic. Several facilities offer ThC as a treatment modality to help youth with problems; however it has never been empirically shown as effective. Although emotion regulation research and data has become more robust, further research is needed. Fair Play offers a research site where data produces answers to research questions presented in this dissertation

Research Questions

The purpose of this study is to evaluate a specific type of wilderness programming, called ThC and explore its effect on emotion regulation, the effect of a camper's age on the results, and its effect on treatment progress. The researcher has evaluated self-reports and camp staff

observations, as needed, to analyze the amount of emotional regulation improvement. The research questions presented are as follows:

- 1) Does ThC improve emotion regulation in male youth?
- 2) Does age of camper and time in the program affect the emotion regulation and program progress scores in male youth while participating in a ThC program?
- 3) Does program progress scores improve while male youth participate in ThC program?

The specific design, measures, statistical parameters, and operational definitions will be presented in Chapter Three.

Limitations and Delimitations

ThC staff and former campers assume that ThC has been an effective intervention for the past 50 years (Loughmiller, 1965). However, there has been little research evaluating the programming and effects of ThC. No known research occurred at Fair Play Camp. ThC has attempted to remain consistent to its theoretical foundations by not using input from contemporary research, mental health professionals or psychological theory (Loughmiller, 1965; White, 2015). The initial ThC program in Dallas TX, as well as Fair Play, was designed for male campers, suggesting this research is limited to male populations only.

The black box effect, which will be discussed in detail in Chapter Two, has been problematic in therapeutic programming and also in ThC. Participants are believed to benefit due to participating or completing a therapeutic program of change (Gass et al., 2012). Gillis et al. (2012) state that, overall, AT/WT programs have struggled to generalize the research performed due the uniqueness of AT/WT programs. ThC has a similar uniqueness but has no current research to compare. Another limitation of outdoor programming is the concept of viewing AT/WT and ThC as a comprehensive or total treatment and neglecting to view smaller treatment

and program components (Bandoroff, & Newes, 2004). This would include individual therapy, group therapy, and increased social skills, to name a few (Gass et al., 2012). Loughmiller (1965) would argue ThC intervention is made up of several individual components, including group and education, but ThC is often seen as one large, inclusive program.

Another limitation identified is accessing measures of emotion regulation. Attempts by this researcher to correspond with developers of emotion regulation instruments have been disappointing. Specific emotion regulation instrument developers did not respond to requests, which required the researcher to utilize subscales of a larger instrument to measure emotion regulation as measured by emotional functioning (Delis, 2012; Gross, 2014; Southam-Gerow, 2013). The measures chosen for the study are accepted in the fields of child and adolescent treatment, AT/WT and have previously been validated and normed (Delis, 2012; Dunn, et al., 2005; Gillis et al., 2016; Wells et al., 1996).

This study does not offer randomization, so a pre/quasi experimental research design method was used (Black, 1999; Kazdin, 2003). Concerns about internal and external validity issues have been identified and explored in detail below. There were concerns about covariables such as age due to the groups being age specific and if longer program admission times might affect campers at Fair Play. To address this potential threat, analysis of covariance (ANCOVA) and Regression was performed to account for the variable of age (Black, 1999; Kazdin, 2003).

The delimitations in this research have been considered by the researcher. Being biased about the effectiveness of outdoor and adventure programming, specifically ThC, is a consideration due to the researcher already having a pre-conceived idea that this treatment is potentially effective, so being focused on the data was essential. All researchers bring core

beliefs or bias into the experiment (Creswell, 2007; Kazdin, 2003). Monitoring my bias and communicating with experienced researchers helped reduce experimenter bias.

Time management was a problem that needed to be monitored, considering the author's position as a full-time private practice therapist and PhD candidate. This issue with time management was reduced through scheduling and planning. The author has also designed the research data gathering to be performed by camp staff, so on-site presence was not required during observation and evaluation.

Limitations and delimitations were considered in the planning, although there were additional complications that occurred during the research project. Complications included (a) being fully employed as a mental health therapist, (b) the traveling distance of 80 miles to and from the research site, (c) and doing research at a facility where research has never been performed. Being mindful, flexible, and maintaining the boundaries established by the design helped reduce potential problems.

Operational Definitions

To assist the reader of this study in the comprehension of the research questions and the purpose of the research, operational definitions are presented in this section. The terms to be defined include adventure therapy, emotion dysregulation, emotion regulation, home environment, ThC, and wilderness therapy. These terms will only be defined here but will be fully discussed in Chapter Two and Chapter Three.

Adventure Therapy

Adventure therapy has been defined and is accepted as, "the prospective use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on cognitive, affective, and behavioral levels" (Gass et al., 2012, p.1).

Emotion Dysregulation

Emotion dysregulation in this study is defined as the inability to use developmental and learned conscious or unconscious self-soothing abilities, when real or perceived stress is sensed (Gross, 2014; Schore, 2003). The inability to regulate emotion can lead to the inappropriate up-regulation or down-regulation of emotion. (Gross, 2014).

Emotion Regulation

Emotion regulation is defined in this study as the process of shaping the emotions a person has, when to utilize an emotion, and how people experience and expresses these emotions (Gross, 2014). Emotion regulation has activation and regulatory components that utilize several neurological systems in the brain (Kring & Sloan, 2010).

Home Environment/Homesday

The home environment in the study is the place or location the camper resided prior to admission at Fair Play Camp School. This may also be the location where the camper spends his time during holiday breaks and “homesday” from Fair Play Camp School. During homesday the campers are allowed to return to their home environments every six weeks for a five-day period beginning Friday and ending Tuesday. If the camper is from an institutional placement, his home environment would be the institution.

Therapeutic Camping

ThC is a form of wilderness therapy that is part of the overall adventure therapy design, with all of this being under the overarching field of experiential education (Gass, et al., 2012). ThC in this study utilizes the program at Fair Play Camp School in the Southern Appalachian Mountains of Oconee County, S.C. The existing program is heavily based on the program

design originated by Campbell Loughmiller in 1946 by the Dallas Salesmanship Club for problematic boys (Gass et al., 2012; Loughmiller, 1965, White, 2015).

Wilderness Therapy

Wilderness Therapy is often used interchangeably with the term adventure therapy (Gass, et, al, 2012). Adventure therapy may be facilitated in areas that are not a wilderness-type setting, such as an urban park, or a challenge course at an inpatient mental health facility. Adventure, therapy, by definition, requires mental health professionals to facilitate the program (Gass et al., 2012). The term Wilderness Therapy, being more general, has been misidentified as “boot camp” type programs and other programs occurring in outdoor settings (Russell, 2001). Russell (2001) reports that elements of wilderness therapy are often generalized, such as calling an experience on a ropes course, “wilderness therapy”. Group activity that occurs outside is not always therapeutic.

To better define the term wilderness therapy, Russell (2001) began to emphasize criteria that ensured key ideas, including theoretical basis, having process or practice, and expected outcomes (Gass, et al., 2012). ThC only meets two of Russell’s (2001) criteria because it is based on a theoretical concept and is a structured 18 to 24-month process. The use of outcome measures in this research was not used due to the short period of time the program was evaluated and the potential of extraneous variables. However, ThC does not meet the definition of AT and has been identified by Bandoroff and Newes (2004) as a third type of therapeutic adventure programming called “long-term therapeutic camping” (p. 12).

The operational definitions presented above identify and define the foundational concepts of this study. Other terms will be defined as needed throughout the dissertation, specifically in Chapter Two and Chapter Three, to inform the reader of unclear terminology. Hopefully, this

information helps prepare the reader to conceptualize the study and better understand the findings. An important question the researcher has asked is, “so what”? What will the findings of this research contribute to ThC, emotion regulation, and problems affecting youth?

Significance of the Study

The significance of this study is to add findings to the minimal study previously conducted with ThC. The study also sought to use collected data to produce indications of improved emotion functioning. ThC has been an ongoing form of therapeutic wilderness programming for more than 50 years, and findings have been largely anecdotal. This study has added empirical data, increasing awareness to this form of wilderness programming. This study has examined measures of emotional functioning, progress, and age to determine if influenced by ThC.

As presented above, there is evidence indicating that youth experience physical, psychological, and social problems (Chapman, 2014; Tucker, Javorski, Tracy, & Beale, 2012). Data indicating effective treatment results would be beneficial to a population in need of effective treatment methods since there is clearly a need for treatment that is developed for and focused on the specific needs of youth. (Tucker, et al., 2016).

This study has measured the age covariate at the ThC facility to help determine if the length of participation and wide age ranges of campers affects therapeutic programming (Kazdin 2003). This 12-week study of ThC indicated improved emotion functioning scores, and increased program process scores. Time in the ThC program and age of the participant was controlled as a covariate., The study produced further research interests and needs for the child and adolescent population in a wilderness environment (Gass et al., 2012). Additionally, current

data from the Fair Play ThC population produced limited findings that could not support or contradict past and current ThC theories and concepts (Cone & Foster, 2006; Gass et al., 2012).

Gass et al. (2012) have described the confusion related to research and evaluation in the AT/WT profession. One might suspect that ThC shares the same research needs as AT/WT. These problems include lack of empirical research and the need to focus on specific program elements rather than considering the general effectiveness of AT/WT type programs. Clinical and empirical research within AT/WT has a short history compared to other fields in behavioral health (Gass et al., 2012). The AT/WT community has acknowledged this problem and is working diligently to address it (Gass et al., 2012; Gillis et al., 2016; Tucker, et al., 2014). Russell (2002) produced longitudinal studies with findings that have been beneficial to the Outdoor Behavioral Health (OBH) field. In other recent developments, Gillis et al. (2016) have utilized meta-analysis to explore research instruments used in AT/WT and OBH. Although this is a start, the amount of empirical research has greatly improved and increased over the past decade with AT/WT (Gass, et al., 2012; Gillis et al., 2016; Russell, Gillis, & Lewis, 2008; Tucker, et al., 2014). This study is the beginning of filling in the gaps in the lack of research in ThC programming, hopefully encouraging additional research.

Although Fair Play Wilderness School and Camp has been providing services for four decades, empirical research has not been done to evaluate any of the processes or outcomes. The camp staff has hypothesized that a camper is different at the end of his ThC process and has made positive changes by appearance of compliant behavior only. There is the perception that any camper who does not improve therapeutically would have been discharged from the program through staff evaluation or expulsion. In other anecdotal reports from former campers, the

program reported to have been effective because campers have a productive and successful life after their experience at Fair Play (P. Crain, personal communication, July 24, 2016).

In summary, this study has produced findings indicating emotion functioning and program progress scores improved over the 12-week period observed. Age of campers was found to be a covariable, although age did not influence the groups as indicated by regression data. Time in the program did not produce statistical significance with emotion function scores or program progress scores. The researcher also hopes his findings will instill interest in further research in the ThC community, outdoor programming, and AT/WT/OBH profession.

Theoretical/Conceptual Framework

The Fair Play facility was not conducive to Randomized Control Trials (RCT) due to a small population of campers, limitations in evaluation opportunities, preexistent group structure, and randomization design requirements (Kazdin, 2003). The population is rarely in a position where conventional self-evaluation tools can be implemented and removing an individual member from his group would potentially affect internal validity (Kazdin, 2003; Martin & Brigmon, 2012).

There has been robust and empirical research performed outside of common RCT standards, or “the golden standard,” and there are methods reducing potential validity issues (Kazdin, 2003; Martin & Bridgmon, 2012). The pre-experimental and quasi-experimental methods have historically been used when control groups could not be used or were limited and may suggest influence (Criswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012). Several suggestions by Martin and Bridgmon (2012) report improving the quasi-experimental design by adding comparisons, utilizing pretest and posttest, and producing replication. The pre-experimental and quasi-experimental with pretest/posttest design proposed in this study accounts

for the above listed concerns reducing validity threats (Kazdin, 2003; Martin & Bridgmon, 2012). The researcher not only considered the experimental design of the study, but also considered the theoretical concepts of the treatment in place at Fair Play.

Since the early 1980s, the facility at Fair Play has traditionally used the philosophy of the wilderness camping program founded by the Dallas Salesman Club and Campbell Loughmiller (1965). Loughmiller (1965) states:

We see our job at camp as one of helping these boys correct the distortions in their point of view by providing them with corrective experiences tailored to individual capacity, and to assist them in the development of more appropriate patterns of behavior, growing out of a different set of values. (p. 5)

Loughmiller's philosophy of change suggests that experiential activities produce desirable patterns of behavior, or a process of change (Loughmiller, 1965).

The definition of AT by Gass et al., (2012) states AT is "... provided by mental health professionals...". (p. 1). Considering this, ThC does not fit this definition of AT. ThC does appear to meet Russell's (2001) description of WT by including theoretical basis, process, and expected outcomes (Gass et al., 2012). The WT criteria was discussed previously in Operational Definitions which includes (a) theoretical basis, (b) process or practice, and (c) expected outcomes (Russell, 2001). Russell and Gillis (2017) discuss definitions of AT and attempts to develop models of AT but most importantly the lack of methods to measure the process of AT (Newes & Bandoroff, 2004; Russell & Farnum, 2004). In Russell and Farnum's (2004) discussion on wilderness experience, three elements were listed as criteria for an AT experience including (a) wilderness or nature, (b) physical self, and (c) social self. It would appear ThC at Fair Play is inclusive of these criteria.

The intent of this research is not an attempt to present ThC as a model of AT, although it could possibly be presented as a model similar to WT (Bandoroff & Newes, 2004; Russell, 2001; Russell & Farnum, 2004; White, 2015). The primary intent of this study is to evaluate ThC and its effect on emotion regulation, age and time in the program as a covariant, and treatment progress during a random 12-week period. The theoretical and conceptual framework presented in this section addresses limitations in traditional research methods and ThC programing and development philosophies. Next, the organization of the remaining material of the dissertation is presented to assist the reader with clarity and expectation.

Organization of Remaining Chapters

The introduction of this study, an overview of the theory and research pertaining to emotion regulation and ThC, has been presented in Chapter One. The remainder of the dissertation provides foundational and collaborative information, along with actual research data attempting to answer the research questions.

Chapter Two provides support for the conceptual framework and reviews the literature connected with theoretical concepts and actual data. In Chapter Two, the literature pertaining to AT/WT, ThC, emotion regulation, and how this may benefit youth is presented in a general to specific format by providing supportive literary findings and discussion providing support for the research and findings.

Chapter Three presents the methods connected with the research and details the quantitative, pre-experiential research design that was used in the study. Also, in Chapter Three, the operational description and procedures of the research is explained. The instrumentation used to obtain the data is explored, along with validity and reliability information of the

instruments. Along with the restatement of the research questions, the null hypothesis has been restated. The processing and analysis of the data will also be discussed.

Chapter Four provides the analysis and discussion of the data. This section presents and discusses the results and provides statistical findings to accept or reject the null hypothesis.

Chapter Five presents the summary, conclusions, and recommendations determined by the study. The researcher has discussed the results as it applies to current and future situations. Implications of the finding are also discussed in this chapter by researcher.

Summary

There are children and adolescents who need behavioral health therapy and services. As the need for these services increase, the therapeutic services delivered must be effective to meet the need (Tucker et al., 2013). ThC is presented as a treatment that may meet the emotion regulation needs of children and adolescents. Research methods were available to measure score changes during a 12-weeks period of ThC, and the resulting data and results is presented in this study. This research and the results have produced data that will display findings that ThC provided at Fair Play Wilderness Camp improved emotion regulation scores and program progress scores over the 12-week period observed. The researcher also processed data evaluating age of camper and time in the program determining age of camper proved a covariant while time in the program did not. In this chapter, the research questions were presented, and operational terms were defined. Research should be based on and supported by theory when possible, should be well explained, well deducted, and utilizing accepted methods to support empirical findings (Black, 1999; Kazdin, 2003). Moving to Chapter Two, the literature review will build theoretical and conceptual foundations and present supportive information pertaining to this study (Pan, 2008).

CHAPTER TWO: REVIEW OF THE LITERATURE

This chapter will review in detail the literature associated with Adventure Therapy, Wilderness Therapy, Therapeutic Camping (AT/WT, ThC) and emotion regulation. Each subject area and topic is presented from a general to specific format. The literature pertaining to AT/WT, and emotion regulation was more abundant than literature associated with ThC specifically (Gass, et al., 2012; Loughmiller, 1965; Loughmiller; 1972; McNeil, 1957; White, 2015).

Although the ThC literature is limited, the practice of ThC continues throughout the world and has been historically foundational in the development of some current AT/WT programs (White, 2015). The historical literature focusing on ThC, remains theoretically and operationally consistent with current ThC operation and procedures (Gass, et al., 2012; Loughmiller, 1972; Loughmiller; 1965; White, 2015). ThC has been reported anecdotally as efficient, (Loughmiller, 1965; Loughmiller; 1972; McNeil, 1957) although there is limited empirical data available to support this claim. ThC is the treatment method to be utilized in this study, and the methods and procedures will be thoroughly presented below in Chapter Three. Along with ThC, emotion regulation will be the variable measured in this study. Emotion regulation and associated studies have been expanding recently, producing robust studies and results (Gross, 2014; Fernandez, Jazaieri, & Gross, 2016; Kring & Sloan; Saarni, 2009; Schore, 2012; 2003a; 2003b).

The ability to regulate emotion, problem solve, set goals, and develop relationships is essential for biological, psychological, social, and spiritual development (Zeman, Cassano, Perry-Parish, Stegall, 2004; Wieder & Greenspan, 2003; Greenspan, 1997). Child and

adolescent psychopathology (McLaughlin, Hatzenbuehler, Mennin, Nolen-Hoeksema, 2011), dysfunctional family units, and highly-populated foster care systems are believed to be the result of problems associated with biological, psychological, social, and spiritual developmental areas (Zeman et al., 2004). There are more than 500 treatment methods used to reduce child and adolescent mental health issues (Carr, 2009; Hoag, Massey, & Roberts, 2014). Even with copious therapies available, there continues to be a need for additional therapeutic services specifically for adolescent and child populations. (Children's Defense Fund, 2014; Hoag et al., 2014; Russell & Gillis, 2017; Tucker et al., 2012).

Often, disorders diagnosed in adult populations are used to diagnose children's problems in an attempt to label unwanted behavior or produce needed change (Southam-Gerow, 2013). This practice of inappropriate diagnosis does not always serve the child/adolescent population well. Although children and adults share many of the same labeled disorders, the developmental stage environment, and coping skills are variables that contribute to how these disorders present and the type of treatment required (Adler-Tapia, 2012; Bettmann et al., 2011; Bowlby, 1982; Carr, 2009; McLaughlin, 2011; Saarni, 2009). Childhood and adolescent anxiety and depression, along with cognitive, and neurological disorders may mimic other symptoms like somatic, behavioral, or emotional issues (Carr, 2009; Saarni, 2009; Southam-Gerow & Kendall, 2000). When children and youth are misdiagnosed with disorders, they sometimes end up misplaced in treatment facilities (Carr, 2009; Saarni, 2009). In a personal interview with the Director at Fair Play (2015), the director acknowledged that campers have been admitted at Fair Play after treatment in other facilities was reported ineffective. Fair Play staff (2015) report these campers are referred from state agencies and individuals seeking therapeutic help for the child. In

comparison to other therapeutic facilities, the placement sources are typical for youth receiving ThC, but along with the presenting problems and diagnosis according to Fair Play staff (2015).

In a reciprocal problem for treatment staff, children and adolescents may utilize inappropriate emotion as the result of their disorders, and inappropriate emotion may produce the disorders (Adler-Tapia, 2012; Davis-Berman & Berman, 2008; Southam-Gerow & Kendall, 2000). The lack of emotional competency may prevent a person from functioning in an emotionally appropriate manner (Saarni, 2009; Southam-Gerow, 2013). Because emotion regulation is a problem for some youth, these youth need a program that has been shown to be effective in reducing emotion dysregulation (Gross, 2014; Fernandez, Jazaieri, & Gross, 2016; Kring & Sloan; Saarni, 2009; Schore, 2012; 2003a; 2003b).

In summary, review of the literature will explore and evaluate the foundations of ThC, other outdoor/wilderness theories and concepts and emotion regulation studies and concepts. This review begins with discussion focused on ThC and concludes with the review of emotion regulation literature.

Experiential Education

Background of the Philosophy of Experiential Education.

To explore ThC, (Gass, et al., 2012; Loughmiller, 1972; Loughmiller; 1965; White, 2015) a person needs to begin with an understanding of the general philosophy of experiential education (Denton, 2011; Gass, et al., 2012; Priest & Gass, 2005; Russell & Gillis, 2017; White, 2015). Experiential education or learning is a philosophy that utilizes many methods of relaying information and experience to students with direct and purposeful interaction to “increase knowledge, develop skill, clarify values, and develop people's capacity to contribute to their communities” (<http://www.aee.org/what-is-ee>, para. 2). Priest and Gass (2005) present

experiential learning theories as “holistic, incorporating cognition and behavior with conscious perceptions and reflections on experience” (p. 15). From a Christian perspective, Denton states, “Experiential learning aims to achieve transformational outcomes that make a long-term difference in one’s life” (2011, p. 24 - 25). Experiential education is the larger framework of Adventure therapy, Wilderness therapy, and ThC. Experiential education can be used in a traditional classroom, on a school field trip, on a ropes or challenge course, and in an urban or wilderness therapeutic program (Gass, 2003; Gass et al., 2012; Priest & Gass, 2005).

Although experiential education may be a contemporary method as a specific model, experiential education concepts are found in historical writings dating back thousands of years (Denton, 2011; Gass et al., 2012; Korngold, 2008, Priest & Gass, 2005; White, 2015). Hebrew writings provide several narratives of instruction and change that occurred in a wilderness or outdoor setting (Denton, 2011; Korngold, 2008; White, 2015). Denton (2011) describes how the ministry of Christ was primarily achieved experientially, where He “facilitated and debriefed” followers in an outdoor setting, which was reported to be instrumental in changing people’s thoughts, beliefs and behaviors (p. 24).

The idea of experiential learning and the benefits of therapy done in an outdoor setting are reported to have begun in the late 1800’s (Gass et al., 2012; Mc Neil, 1957; Neill, 2003; Priest & Gass, 2005). Summer camping for youth was initially developed with the therapeutic purpose of teaching youth to be active through physical fitness and to develop a healthy lifestyle through personal hygiene (McNeil, 1957). As problems with youth became more psychologically and behaviorally focused, earlier outdoor programs soon gave way to more focused therapeutic facilities requiring residential care (White, 2015). Camps soon took a more

recreational focus, and in-patient residential facilities focused on mental health (Gass et al., 2012).

Organized camping has historically been found to focus on personal improvement and education through challenging activities and structure with group focus (Gass et al., 2012; McNeil, 1957; Neill, 2003; Priest & Gass, 2005, White, 2015). Early campers were typically male from wealthy families who wanted to discourage inactivity in these male youth (Gass et al., 2012; McNeil, 1957; White, 2015). Historical accounts of organized camping appear as early as 1861 and indicate that the purpose of organized ThC was to improve the physical and mental health of campers and prevent behaviors that were seen to be unproductive for the individual, family unit, and society (McNeil, 1957).

Nature, the out-of-doors, and wilderness, all synonyms are often seen as places of change (Bandoroff & Newes, 2004; Bowen & Neill, 2013; Davis-Berman & Berman, 2008; Gass, 2003; Gass et al., 2012; Korngold, 2008; Loughmiller, 1965, 1979; Louv, 2008; Priest & Gass, 2005). The use of nature as refuge, restoration, and recovery has been promoted by those who relish time there or provide services there (Denton, 2011; Gass et al., 2012; Korngold, 2008; Louv, 2008, 2011; Muir, 1901; Russell & Farnum, 2004; White 2015). John Muir, (1901) the founder of the Sierra Club and the environmentalist instrumental in the establishment of several National Parks states:

“The tendency nowadays to wander in wilderness is a delight to see. Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life”. (p. 1)

Muir went on to advocate the construction of parks and protection of nature, realizing the correlation of wilderness, nature, and health (Louv, 2011). Positive changes have been reported in individuals and groups as they experience challenges in an unfamiliar environment, such as wilderness (Bandoroff & Newes, 2004; Davis-Berman & Berman, 2008; Korngold, 2008; Louv, 2008; McNeil, 1957). A facilitator who provides safe challenges consistent with AT/WT programming, a learning environment, and group process which occur in nature is reported to create positive change in those who participate in therapeutic adventure and wilderness (Gass et al., 2012; Hoag et al., 2014; Loughmiller, 1965; Priest, & Gass, 2005).

With the nature/health correlation realized, summer camps and programs steadily increased (Gass et al., 2012; White, 2015). Experiential education's ideas of wilderness and mental health therapy developed into a progression of specific therapeutic adventure and wilderness interests. Excellent overviews of this progression can be found in AT/WT literature (e.g. Bandoroff & Newes, 2004; Gass et al., 2012; White, 2015). The progression and increased interest in experiential education and mental health therapy developed into Outdoor Behavioral Health Council (OBH) and a specific division of AEE.

Experiential Education as Therapeutic.

TAPG

A division of AEE that focuses on adventure therapy is the Therapeutic Adventure Practicing Group (TAPG). This group seeks to improve adventure therapy and therapeutic adventure activities through AEE conferences and pre-conference activities. The TAPG section seeks to improve therapeutic adventure through a Best Practices Manual (<http://www.aee.org/tapg-best-practices>). The TAPG also encourages and supports international adventure therapy activities and training in order to integrate therapeutic adventure techniques

and data on a global level (Norton, Carpenter, & Prior, 2015). Many of the leadership of TAPG are actively involved as therapists and researchers in the areas of therapeutic adventure and wilderness (Gass et al., 2012; Norton et al., 2014; Russell & Gass, 2008; 2010).

OBH

The AEE and TAPG leadership was instrumental in the development of the Outdoor Behavioral Healthcare Council (OBHC) in 1996 (<https://obhcouncil.com/about/>). Outdoor behavioral healthcare (OBH) has become a term synonymous with accreditation, improvements, and increased research in AT/WT programming. This has been in response to an earlier lack of research, risk management issues and complaints of abuse and neglect in AT/WT programs (Javorski, & Gass, 2013; Kutz & O'Connell, 2007; Russell, Gillis, & Lewis, 2008; White, 2015). By design, therapeutic adventure and wilderness along with ThC involves increased risks compared to more traditional therapies (Gass et al., 2012; Javorski, & Gass, 2013, Priest, & Gass, 2005). There have been questions about and scrutiny of staff qualifications and competencies (Gass et al., 2012, Norton et al., 2014), abuse and death during treatment (Kutz & O'Connell, 2007; Russell et al., 2008), and environmental risk (Priest & Gass, 2005). Javorski and Gass (2013) report two factors naturally causing AT/WT to be potentially more at risk: (a) the typical at-risk child and adolescent population; and (b) the location at which treatment occurs. The scrutiny has been taken well by the AT/WT profession, and in recent years positive changes have occurred (Javorski, & Gass, 2013; Norton et al., 2012). Gillis et al. (2008) reported in a five-year study that many OBH facilities had achieved state licensing and/or accreditation, increasing the credibility of AT/WT programming.

With the risk potential assumed in AT/WT programs, the data indicates the actual risk is lower than expected (Gillis et al., 2008; Gass et al., 2012; Leemon, 2008). In 15 to 19-year-old

adolescents, WT programs were found to be safer than backpacking, and 138 times safer than high school football games (Gass et al., 2012; Leemon, 2008). Even so, the risk potential has been reduced with additional research and data benefitting AT/WT programming with the empirical outcomes to indicate the actual risk involved (Gass et al., 2012). In 2007 AT/WT risk management came into question requiring a response from OBH professionals (Kutz & O'Connell, 2007; White, 2015).

After a General Accounting Office (GAO) investigation (Kutz & O'Connell, 2007), there were many concerns about the effectiveness and risks involved in AT/WT, along with residential adolescent therapeutic programs (White, 2015). According to the GAO there were 10 deaths that occurred in adolescent residential treatment programs between 1990 and 2007 (Kutz & O'Connell, 2007; White, 2015). Due to allegations presented in the investigation by the GAO, governmental restrictions, and regulations were recommended, although many programs had already become licensed and/or regulated by the state in which they operated (Russell et al., 2008). In the study Russell et al. (2008) found more than half of the 65 surveyed were accredited by national organizations (White, 2015). The outcome of the problems found by the GAO and researchers working in AT/WT programs resulted in the establishment of protocols with multimodal treatment models, utilization of independently licensed therapists, and use of evidenced based therapies (Gass et al., 2012; Russell et al., 2008; White, 2015).

More recently, some AT/WT programs have agreed to voluntary accreditation reviews by OBHC in a joint venture with AEE (<https://obhcouncil.com/accreditation>; White, 2015). This has begun to set standards for consumers of therapeutic outdoor programs. As of December 2017, there were 15 programs accredited by OBHC (<https://obhcouncil.com/accreditation>). This is a major step in assuring outdoor treatment facilities are providing therapeutic adventure and

wilderness programs that meet appropriate programming, ethical standards and approved risk management (<https://obhcouncil.com/accreditation>). The AEE, TAPG, OBHC, and others have worked together integrating therapy and increasing accreditation in order to improve and facilitate therapeutic excellence. A focused review will now be explored concerning AT/WT specifically.

Therapeutic Adventure and Wilderness

Adventure and wilderness therapy programs historically have been loosely defined with several definitions and concepts being used to describe therapeutic adventure and wilderness (Gass et al., 2012; Davis-Berman & Berman, 2004; 2008; Loughmiller, 1965; Russell, 2001; White, 2015). Gass et al. (2012) defines AT as “the prescriptive use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on cognitive, affective, and behavioral levels” (p.1). Other definitions of therapeutic wilderness have evolved in others’ work (Russell, 2001; “AEE, TAPG-Best-Practices”, 2017). Gass et al. (2012) along with Russell (2001) report Davis-Berman and Berman (1994) earlier work integrated Loughmiller’s (1965) concepts of ThC into their working definition of WT stating, “the use of traditional therapy techniques, especially for group therapy, in outdoor setting, utilizing adventure pursuits and other activities to enhance growth” (Davis-Berman & Berman, 1994, p. 13).

The terms wilderness therapy, adventure therapy, therapeutic wilderness, and therapeutic adventure have been used interchangeably in previous writings (Bandoroff & Newes, 2004; Gass et al, 2012; White, 2015) and will also be used interchangeably in this research. Although, closely connected and sometimes a matter of semantics, therapeutic wilderness is a form of therapeutic adventure. Lung, Stauffer, and Alvarez (2008), state therapeutic adventure can occur

with individuals, families, and groups in a variety of settings including therapy office, playground, ropes course, or a wilderness setting. Others have argued that there are differences in AT and WT, as presented in operational definitions in Chapter One (Bandoroff & Newes, 2004; Russell, 2001; Gass et al., 2012).

Accreditation, risk management, and research issues have improved greatly as AT/WT becomes a more utilized therapy. Colleges and universities now offer specific degree programs with specialization in AT/WT (Gass et al., 2012). Although there have been positive improvements, there continues to be barriers in the AT/WT profession.

One barrier is the out-of-pocket cost for residential therapy because it is too expensive for most individuals and families. A study by Tucker et al. (2013) reports that since 2005, the Substance Abuse and Mental Health Services Administration (SAMHSA) has spent \$400,000,000.00 in support for community-based treatment support (Tucker et al., 2013). Russell, Gillis, and Lewis (2008) reported that the average daily cost of AT/WT programs is \$278. The cost of ThC compared to other residential therapy programs shows ThC may be less costly than more traditional AT/WT residential programs (Fair Play Program Manual, 2015; Tucker et al., 2013). With changes and cuts in government support for therapy programs, Fair Play Wilderness Camp School has maintained a consistent camper population at the camp through donations and creative financing like thrift stores, providing financial assistance for campers (Personal interview with Jud Schrock, Fair Play Wilderness Director, August 2015). Facilities that use therapeutic adventure and wilderness have previously not been reimbursed by third-party payment, like private insurance. In 2017, a CPT code, which is required to charge and collect from third party insurance companies, was established (TAPG Best Practices Conference, June 2017). This presents an opportunity for consumers of AT/WT programs to be

covered by third party payers, thus increasing access to additional specialized treatment options (AEE International Conference, 2016).

Clearly, AT/WT has developed and continues to progress through research, professional development, and associations providing organization and collaboration of likeminded AT/WT providers (Gass et al, 2012). While AT/WT has been progressive, ThC has remained traditional and static, reporting it is an effective method to provide change in children and youth in a wilderness setting (Loughmiller, 1979, 1965). This review will now look at ThC in detail.

Therapeutic Camping

Origins and Development.

ThC is a variation of wilderness therapy although it does not meet the criteria or definition of AT (Bandoroff & Newes, 2004; Gass, 2003; Gass, et al., 2012, White, 2015). Gass (1993) and White (2015) state that ThC can be considered “long-term residential camping” (Gass, 1993, p. 9-10). Bandoroff and Newes (2004) consider long-term residential camping to have the flavor of therapeutic boarding schools, although the setting in nature and individual sufficiency differentiates the two. Bandoroff and Newes (2004) t also contend “this overlap of programming blurs the distinction between treatment models and makes research comparing these modalities challenging” (p. 12).

ThC has been identified as a historical factor in the evolution of OBH (Russell & Hendee, 2000). Historically, the originators and practitioners of ThC did not intend the intervention to be used as psychological therapy, or needing therapeutic professionals to facilitate it, ThC is reported to have changed thousands of campers who have completed a ThC program (Loughmiller, 1965). As mentioned previously, research involving ThC is limited (Davis-Berman & Berman, 1994), although the concepts it uses can be identified in several modern

aspects of AT/WT and experiential education (Gass et al., 2012; Loughmiller, 1965; Norton et al., 2014). ThC integrates adventure experiences, learning, and therapy into a residential camping format that occurs in nature (Bandoroff & Newes, 2004; Gass, 1993; Priest & Gass, 2005; White, 2015). Some who practice AT/WT believe nature is the most important factor in AT/WT treatment (Davis-Berman & Berman, 2008; Gass et al., 2012). Loughmiller (1965) saw the importance of nature and designed his ThC program to incorporate nature as instrumental to the program. ThC programs typically utilize large tracts of land to operate their programs thus assuring that the experience occurs in a natural setting (Bandoroff & Newes, 2004).

ThC programs occur in a natural environment, usually in a secluded, wooded area. Two adult leaders facilitate each group of ten campers. A supervisor is available 24 hours per day to assist the leaders, if needed. The campers are given experiential and project-based learning opportunities daily. ThC by design and operation would meet the above stated criteria to facilitate change (Gass et al., 2012; Hoag et al., 2014; Loughmiller, 1965; Priest, & Gass, 2005).

In the 1940s, the Dallas Salesman Club in Dallas, TX began summer camping activities that soon expanded into a year-round program for boys with individual, family, and social problems (Bandoroff & Newes, 2004; Gass et al., 2012; Loughmiller, 1965, 1979; White, 2015). Campbell Loughmiller who had studied social work and education but never saw himself as a therapist developed the program in Dallas (Gass et al., 2012; Loughmiller, 1965; 1979). Although Loughmiller did not see himself as a therapist, it is arguable that his background in social work and education led to a vision to help boys in problematic situations and ultimately aided in developing a program design (Loughmiller, 1979; 1965). Over the past 75 years several ThC programs and associations have been developed from Loughmiller's original ThC program design (Gass et al., 2012; White, 2015).

Nine male and female facilities that closely adhere to the original philosophy and design of the original Dallas program and Loughmiller's philosophy comprise the Wilderness Road ThC Association (WRTCA) (Gass et al., 2012; Loughmiller, 1965; 1979). These nine facilities are in the United States, Canada, and Ireland (Fair Play Operations Manual, 2015; Fair Play Website, 2017; Ohio Boys Camp, Website, 2016). The WRTCA continues to promote Loughmiller's philosophy by publishing his literature and providing an annual conference (Loughmiller, 1979, 1965). . There are three important components in Loughmiller's ThC model: program, education, and group (Loughmiller, 1965).

Components of Therapeutic Camping

Loughmiller's component of program. Loughmiller's ThC concept, like other outdoor therapeutic models use programming to organize, maintain program consistency, and manage risk (Gass et al., 2012; Priest & Gass, 2005). According to Priest and Gass, adventure programming can be categorized in four areas that include (a) recreation, (b) education, (c) development, and (d) therapy. Programming is a component Loughmiller (1965) used to develop the foundational, operational, and follow-up of campers in the ThC model. The program design presented by Loughmiller (1965) also considers (a) the location of the camp, (b) organization of the program, (c) intake and assignment of the camper (d) the individual camper's readiness for camp, (e) integration of the camper with the camp counselor, (f) integration of the camper with other campers, (g) parent or guardian involvement, (h) camper's progress evaluation, (i) discharge and after camp follow-up, and (j) after camp evaluation.

At Fair Play, program principles consist of (a) wilderness setting, (b) basic motivation, (c) on the spot problem solving, (d) relevant education, (e) camper contribution, (f) continuous staffing, (g) staff and youth teamwork, (h) camping as a fun activity, and (i) cost effectiveness

(Fair Play Operations Manual, 2015). When principles of current outdoor therapeutic programs (Priest & Gass, 2005), are compared with Loughmiller's (1965) original concepts, and Fair Play's current ThC program, (Fair Play Operations Manual, 2015) all share similar foundational programming principles.

The three models of AT programming presented above appear comprehensive and comparable, reinforcing Loughmiller's concept of program in his therapeutic model. Fair Play derives its program directly from Loughmiller's model, but does the Fair Play program model meet the camper's needs and deliver treatment?

Gass et al. (2012) evaluated several AT programs using The Kellogg Foundation Logic Model (2004) to determine need and outcome. The Logic Model by the Kellogg Foundation (2004) is defined as:

A systematic and visual way to present and share your understanding of the relationships among the resources you have to operate your program, the activities you plan, and the changes or results you hope to achieve (p. 1).

The Logic Model (2004) has five basic components: (a) resources/inputs, (b) activities, (c) outputs, (d) outcomes, and (e) impact. Gass et al. (2012) have modified the components slightly to focus on AT/WT clients' needs and outcomes. The modifications that Gass et al. (2012) present are (a) needs/input/resources, (b) strategies/activities, (c) immediate outcomes, (d) intermediate outcomes, and (e) final outcomes. Programming is essential to any AT/WT program to design, operate, and evaluate the effectiveness and goals of their therapy program. Loughmiller's (1965) initial concept of program has been discussed and reviewed in this section, now Loughmiller's second concept, education will be presented.

Loughmiller's concept of education. Education is a situational and experiential opportunity as presented in Loughmiller's model (1965). Priest and Gass (2005) appear to categorize education as more experiential and learning adventure skills rather than an academic one. Loughmiller (1965), as well as the program at Fair Play, integrates academic studies with experiential learning. Required academic education has been delivered by various methods in outdoor therapeutic programs, which includes contracted educational agencies, equivalency credits, ("Anasazi, 2014-Academic-Packet.pdf", March 26, 2017), and programs that are nationally accredited to issue high school and college credits through their program (outbacktreatment.com/academics/, March 26, 2017). These programs have classroom facilities where state law requires students to be present in an actual classroom and may mandate "seat time" requirements. In South Carolina, where the Fair Play program is located, state law allows local school boards to determine how the required 120-hours of annual seat time is to be allocated per S.C. Reg. § 43-274 (S.C. Education Oversight Committee, 2012). Fair Play Wilderness Camp School has been designated a school in the Oconee County School District which allows the county school board to regulate educational policy and allows the camp to be overseen by a certified teacher who is responsible for curriculum, evaluation and testing. (Fair Play Website, 2017).

The education at Fair Play is experiential and project-focused, which requires the camp counselor to facilitate the learning because of the large amount of time he spends with the campers. Campers document their trip planning which is then checked for spelling and grammar. Campers then complete food plan, supply lists, and budgets for their offsite trips and develop equipment inventory and orders where the camper's math skills are reviewed and critical thinking skills utilized (Fair Play Operations Manual, 2015; Loughmiller, 1965).

At camp, campers are given a weekly financial stipend that is put in an individual account; this stipend is typically spent on crafts, toiletries, and special clothing (Fair Play Operations Manual, 2015). Through this process, campers must write a check from their individual camp financial account, where the math is reviewed and life skills like budgeting are reinforced. The camper maintains a journal while he is a resident at the camp. This journaling process reinforces education and the group concept of Loughmiller's (1965) model. As the journals are evaluated for spelling and grammar, the campers are often given the opportunity to read their journaled experiences to other campers during their group sharing time. The camper may choose to journal about and research many things; a camper may write about an animal he has seen near camp, local Native American history after finding an arrowhead, or research destinations for an upcoming camp trip (Loughmiller, 1965).

Loughmiller's component of group. The last component Loughmiller (1965) expounds on is the group. ThC along with other outdoor therapeutic programs have been primarily conducted in groups, which allows participants to utilize group dynamics as a therapeutic tool (Gass et al., 2012; Momentous institute, 2015; Russell, 2001; Tucker, 2009; Yalom, 2005). Tucker (2009) suggests that group interventions promote interpersonal relationships important to adolescent populations while promoting peer influence and social skills (Russell & Gillis, 2017). Tucker (2009) states, "for this reason, many social work interventions rely on the power of the group format to promote social skills in youth" (p. 319).

Loughmiller (1965; 1979) did not consider ThC staff to be therapists but did realize the importance of group process. Loughmiller saw the group process being foundational to ThC, thus being therapeutic by nature (Gass et al., 2012; Leichenring & Leibing, 2003; Tucker, 2009; Yalom, 2005). Yalom (2005) suggest that clients working as a group develop and build many

skills, strengthening not only interpersonal skills but also intra-personal skills. The group or “camp” at Fair Play consists of up to eight campers who function and develop as a cohesive group (Yalom, 2005). Two counselors who consistently shape and encourage group involvement facilitate the group of campers who develop and discuss daily plans (Loughmiller, 1965). The group of campers develop and discuss daily plans that are decided by the group prior to engaging in tasks. The group interaction encourages critical thinking and accountability (Fair Play Operation Manual, 2015; Tucker, 2009).

ThC as proposed by Loughmiller (1965) includes operating with a program, providing camper education, both experiential and formal, while encouraging change through the group process (Loughmiller, 1979). Loughmiller has proposed a working model or theory for ThC to be further discussed below.

Proficiencies and needs of Therapeutic Camping

Research Related to Therapeutic Camping

Currently, ThC lacks empirical research and categorical data (Bowen & Neill, 2013; Gass et al., 2012). In OBH facilities, research is being reported and articles are being produced in various professional journals including AEE, American Psychological Association (APA), social work, and counseling journals. The APA’s *Monitor on Psychology* (September 2013) featured a cover story about outdoor therapy being used increasingly as a therapeutic tool in psychological services. The increase in peer reviewed articles written pertaining to current research indicates a desire for quality data to be shared (Bandoroff, & Newes, 2004; Gass, Gillis, & Russell, 2012). When comparing ThC to other adventure and outdoor therapies, there is an obvious void of data and peer review (Davis-Berman & Berman, 1994). Although there have been recent improvements in research and data collection in AT/WT programs, still more data and research

is needed in AT/WT and especially with regard to ThC (Gass et al., 2012; Norton et al., 2014; Tucker, Zelov, & Young, 2011).

Several factors appear to facilitate the lack of research in ThC programs. First, some of these ThC programs are based solely on Loughmiller's philosophy, ThC traditions, and the original undocumented research of the original program that began in Texas (Davis-Berman & Berman, 1994; Gass, Gillis, & Russell, 2012; White, 2015). Since ThC leaders not traditionally therapists (Loughmiller, 1979; White, 2015), there appears to have been limited contact with therapeutic staff such as psychologists, counselors, and social workers to monitor therapeutic process and improvement. Because facilities like Fair Play accepts referrals and placements from state agencies such as juvenile justice (DJJ), family court, and social services (DSS), there has been an increase in collaboration with mental health professionals (Fair Play Operation Manual, 2015).

Second is the "black box effect" mentioned by Gass et al. (2012, p. 288) and Mainieri and Anderson (2015). The black box effect occurs when a client begins an outdoor program or therapeutic process. After a prescribed time is spent in the therapeutic program, the person emerges changed by the process that occurred in the program or "black box" (Gass et al., 2012; Mainieri & Anderson, 2015). Therapist or camp staff may state they are not sure how or why the program works, but it does. The black box effect is caused by little or no quantitative measures being obtained, the process methods are not analyzed, data is not statistically challenged, and programs report only favorable data. Gass et al. (2012) report this has been an issue specifically in AT/WT research and journal articles. Loughmiller (1965; 1972) and those interviewed at the Fair Play program, appear to adhere to the black box effect by not seeing a need empirically

evaluating the program. The use of anecdotal reports of effectiveness and recidivism as a desired outcome indicator have been common.

Other potential problems associated with the black box effect include defining exactly which variables exist in AT/WT (Gass et al., 2012). Therapeutic wilderness is different from other types of inpatient treatment facilities where the physical environment and variables are typically stable and predictable. In outdoor therapeutic programs, the physical environment is consistently changing due to seasons, weather, and terrain (Gass et al., 2012; Loughmiller 1965; Priest & Gass, 2005). Gass et al. (2012) also describe how attempting to determine cause and effect in a program may cause the focus of the program to change in order to align with the perceived cause. This black box effect appears to be common in both ThC and AT/WT programming (Gass et al., 2012). The more one dissects or explores how adventure therapy, wilderness therapy, or ThC works, the less effective it seems (Gass et al., 2012). Those in the therapeutic adventure and wilderness professions have heard other AT/WT practitioners state “I don’t really care how AT works; I know it does, and we should just leave it at that” (Gass et al., 2012, p. 288).

Although this concept of the black box may be acceptable for some program staff of AT/WT and ThC, it is not beneficial or preferred by researchers and program directors. Gass et al. (2012) suggest researchers have found two issues when reporting their results and findings of AT/WT programs. First, as explained above, there is a lack of data due to data being perceived as unnecessary because of the black box effect. Second, when researchers report complexities, components, variables, and outcomes particular to an AT/WT program, journal editors conclude the data and descriptions of processes are too lengthy and must be more succinct, often

eliminating important methods, discussion, and explanation of data prior to publishing (Gass et al., 2012).

The administrative and programing staff in outdoor therapeutic programs depend on data and research for recruitment, grants, justification, and adherence to empirical models (Gass et al., 2012). Reduction of funding has been reported in residential treatment for youth, such as AT/WT programs, (Davis-Berman & Berman, 2008). Empirically based treatments are becoming the protocol for third-party reimbursement, suggesting needed reduction of the black box effect in AT/WT, including long-term residential camping (Gass et al., 2012; Mainieri & Anderson, 2015; Russell, 2001; Tucker et al., 2013; White, 2015).

ThC has historically been utilized to treat youth with problems (Davis-Berman & Berman, 2008; Gass et al., 2012; Loughmiller, 1965, 1979; White, 2015). The ability to distinguish a treatment method as effective depends on quantifiable measures to indicate the treatment is doing what it is designed to do (Gass et al., 2012; Gillis et al., 2016; Norton et al., 2014). Research allows a quantifiable means to make these types of assertions. ThC has not shifted towards empirical research like AT/WT programs have. A shift towards increased research indicating empirical results could enable ThC to compete for additional funding and grants. Until ThC makes this shift, it will continue to be a program or treatment method holding on to tradition and the past. This research study along with other research exploring the empirical data produced in ThC could suggest ThC as a program to serve the need of children's and youth's mental/behavioral health needs.

This section has presented a need for increased research in ThC programs. With this need established, the next section will explore the limitations associated with ThC.

Limitations in Therapeutic Camping

Therapeutic but not Therapy.

There has been discussion about where ThC fits into the current AT/WT/OBH progression or even if it should be considered with other therapeutic adventure program at all (Bandoroff & Newes, 2004; Gass, 1993; White, 2015). To reiterate, AT is defined as “the prospective use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on cognitive, affective, and behavioral levels” (Gass et al., 2012, p. 1). ThC meets partial criteria of the Gass et al. (2012) definition of adventure therapy although ThC is typically not provided by mental health professionals (Loughmiller, 2017; 1979; 1965; White, 2015), although it does provide “functional client change” (Gass, 1993, p. 10). Early writings (Loughmiller, 1965) describe ThC as being delivered without the use of specialist; “no psychologist, no psychiatrist...”. (p. 25) Loughmiller (1979) reports his view changed originally believing there was a need for specialists like mental health professionals, to only needing well trained ThC counselors who can lead the groups of boys (Loughmiller, 2017; 1979).

Gass (1993) places ThC as one of three methods used in adventure therapy, also included Wilderness Therapy and Adventure-Based Therapy. Gass (1993) describes WT and AT as therapeutic experiences but states ThC is “outdoor programing...that produces functional client change” (p. 10). Gass continues by stating ThC produces a “positive peer culture, confronting problems encountered with day-to-day living, and dealing with existing natural consequences” (p. 10). Gass concludes that many AT programs in North America experience these three outcomes, but he also argues there are many differences within the programs.

Bandoroff and Newes (2004) call ThC “long-term residential camping” (p. 12) and align ThC more closely with therapeutic boarding schools than more intensive wilderness therapy programs. Bandoroff and Newes (2004) further suggest that what sets ThC apart from boarding schools and other residential programs is the use of wilderness. Bandoroff and Newes (2004) also suggest that there may be similarities in some parts of ThC and wilderness therapy programs, but this only “blurs the distinctions between treatment models and makes research comparing the modalities challenging” (p. 12). A distinction is needed in design and research.

Population Served

The primary population served with AT/WT is children and adolescents (Davis-Berman & Berman, 2008; Norton et al., 2012). This is also the population served with ThC (Fair Play Operations Manual, 2015). With this population comes a wide range of developmental levels and milestones (Adler-Tapia, 2012; Davis-Berman & Berman, 2008; Greenspan, 1997). Along with these developmental issues comes a non-exhaustive list of variables of behavioral issues, family dysfunction, abuse, trauma, and abandonment (Adler-Tapia, 2012; Children’s Defense Fund, 2014; Davis-Berman & Berman, 2008; Loughmiller, 1965; Norton et al., 2014; Tucker et al., 2013).

The youth served in AT/WT/ThC come from a diverse group. The children served at AT/WT/ThC facilities are placed by parents/guardians, adjudicated by the juvenile justice system, placed by child protective services (CPS), or the foster care system (Bandoroff & Newes, 2004; Gass, 2003; Gass et al., 2012; Loughmiller, 1965; Norton et al., 2014; Tucker et al., 2013). Children and adolescents admitted for treatment in OBH, AT/WT, and ThC facilities have often exhausted traditional therapy methods and placement options (Davis-Berman & Berman, 2008; Gass et al., 2013; Norton et al., 2014). Many of the problems presented by youth

populations in treatment suggest emotion regulation deficits (Davis-Berman & Berman, 2008; Gass, 2003; Saarni, 2009).

Description of Fair Play Specific Population and Needs.

This is also the population served by ThC at Fair Play (Fair Play Operations Manual, 2015). A typical treatment period at Fair Play can last 18 to 24-months with the mean being 18-months. During this treatment period, campers could experience developmental milestones (Davis-Berman & Berman, 2008; Greenspan, 1997; Loughmiller, 1965). The population of the ThC program at Fair Play ranges from 8 years old to 17 years old. With this wide diversity of developmental stages, a younger group could solve problems by a totally different process than an older group. Emotion could then be expressed differently because of multiple variables like gender, culture, developmental level, cognitive processes, emotional understanding, family modeling, and attachment style (Bettman, Olson-Morrison, & Jasperson, 2011; Davis-Berman & Berman, 2008; McLaughlin, et al., 2011; Southam-Gerow, 2013).

Emotion Regulation

Emotion allows humans to modify and modulate their environment (Gross, 2014; Fernandez, Jazaieri, & Gross, 2016; Kring & Sloan; Saarni, 2009; Schore, 2012; 2003a; 2003b). Emotion can be classified as positive, negative, or subjective, and can have physiological associations, which makes defining emotion difficult (Fernandez et al., 2016; Kring & Sloan, 2010). Saarni (2009) has suggested emotion competence is as much a developmental process as biological or physiological development. The use of emotion can be rewarding or problematic, occurring in family, social, and group settings and can feature a goal, strategy, and an outcome. (Gross, 2014; Kring & Sloan, 2010; Loughmiller, 1965; Saarni, 2009; Schore, 2012; 2003a; 2003b).

Through the progression of psychological theory and treatment concepts of psychological disorders, the study of emotion awareness, and emotion regulation has increased over the past two decades (Gross, 2014; Kring & Sloan, 2010; Southam-Gerow, 2013). Southam-Gerow (2013) reports that the early works of Darwin and James identify and align with emotion theory. These early researchers who studied animal and human learning understood the importance of emotion in humans. Early historical writings such as the Bible include numerous references to emotion awareness and emotion regulation (e.g. Ecclesiastes 3:4; Proverbs 15:18; Philippians 4:6-7; James 1:20). Further research by Southam-Gerow (2013) and other experts in the field of emotion regulation and competence report a progressive move toward the inclusion of emotion in current treatment methods (Gross, 2014; Kring & Sloan, 2010; Saarni, 1999).

Emotion is a dynamic system with a multitude of components (Kring & Sloan, 2010; Saarni, 2009). As alluded to above, emotion involves multiple physiological, neurological, spiritual and social components (Dalai Lama, 2010; Erickson, 1998; Gross, 2014; Fernandez, et al., 2016; Kring & Sloan; Saarni, 2009; Schore, 2012; 2003a; 2003b). This complexity has led to disagreement and debate concerning aspects of research and development involving emotion theory (Kring & Sloan, 2010). According to Kring and Sloan (2010) understanding these differences can best be explained by the approach the researcher has formed about emotion from his or her own understanding. Even with the knowledge that emotion exists an exact and simple explanation of emotion remains elusive. With concepts of emotion and emotional development remaining somewhat elusive, what do researchers know?

Emotion Development Described

The formation of emotion is a biological, psychological, and social developmental process that involves multiple areas of the brain (Gross, 2014; Saarni, 1999; Schore, 2012;

2003a; 2003b; Schwartz & Begley, 2003). Brain development is a complex process that begins soon after conception and requires critical periods and factors to co-exist, which allows the brain to develop in an optimal manner (Psalm 139:14; Schore, 2012; 2003a; 2003b; Schwartz & Begley, 2003). At birth, the infant brain has approximately 100,000,000,000 cells, although prior to birth another 100,000,000,000 nerve cells have already eliminated through a process called pruning (Schwartz & Begley, 2003). At birth, the infant brain is biologically equipped to be shaped by social and environmental stimulus (Gross, 2014; Kring, & Sloan, 2010; Schore, 2012; 2003a; 2003b; Schwartz & Begley, 2003).

The limbic area of the brain is where humans process emotion and perform emotion regulation (Gross, 2014; Kring, & Sloan, 2010). Schore (2012; 2003a; 2003b) has suggested that in the infant, much of the affect and emotion development occurs in the right cortex area. Schore (2003a, 2003b) also concludes the right hemisphere is the dominant area of the brain for the infant until approximately age three. Shore (2003a, 2003b) has further suggested that the right brain is the unconscious mind.

Neuroscience has evolved since the middle to late 20th century (Shore, 2003a, 2003b). Shore (2003a, 2003b) has argued that changes in the focus of studies in neuroscience research could be shared in other areas of psycho-neurobiology that include (a) right brain development; (b) research in emotion; and (c) models of self-regulation. In Shore's (2012) research, he concluded the attachment system is essential for the development of emotion (Bowlby, 1986; Shore, 2003a; 2003b). Implicit and explicit cues given by the attachment figure are reciprocated by the infant, promoting emotion development and regulation (Shore, 2003a; 2003b).

The Mirror Neuron System (MNS) is a group of neurons located in the frontal and parietal areas of the brain that fire or activate when a person observes or performs tasks or

activities (Gabbard, 2009; Iacoboni & Dapretto, 2006). Gabbard (2009) points out the MNS is how the human brain attributes meaning in other's actions, both operationally and subjectively. Research supports findings indicating that meaning and understanding of behavioral indications, as well as emotional experiences, occur in the MNS (Carr, Iacoboni, Dubeau, Mazziotta, & Lenzi, 2003; Gabbard, 2009; Iacoboni & Dapretto, 2006). The MNS allows emotion recognition and emotion regulation to attribute meaning in operational and subjective means. In the research done by Carr et al., (2003) the insula is believed to be a relay between the MNS and the limbic circuitry that includes the amygdala (Gabbard, 2009). Researchers also contend that the subjective emotional meaning developed by a person may imprint circuits for emotion competence and regulation (Gabbard, 2009). Saarni (1999) suggests subjective awareness rules and emotional expressive behavior is strongly connected with emotional dissemblance such as cultural and personal display rules. It would be assumed that the meaning attributed to cultural and personal feedback, both subjective and operational, would be the result of MNS.

The MNS has been shown to be foundational in empathy (Carr et al., 2003; Gabbard, 2009; Iacoboni & Dapretto, 2006). Empathy is the ability to recognize emotion in others, with the knowledge of self equals emotion (Gabbard, 2009). Empathy can also make a comparison and attribute meaning to another's subjective and objective emotional display (Carr et al., 2003; Saarni, 1999). The MNS involvement with empathy was once thought to be a cause in Autism Spectrum Disorder (ASD) because of the decrease in empathy displayed by some with ASD (Gabbard; 2009; Iacoboni & Dapretto, 2006). Gabbard (2009) suggests that the MNS is also instrumental in psychotherapy because of the therapeutic alignment which occurs between the therapist and the patient (Adler-Tapia, 2012; Bandoroff & Newes, 2004; Gass et al., 2012).

The MNS and attachment system have been shown instrumental in the development of the juvenile brain and the ability to develop emotion and levels of security (Bowlby, 1986; Carr et al., 2003; Gabbard, 2009; Iacoboni & Dapretto, 2006; Schore, 2012; 2003a; 2003b; Siegel, 2012). It could be argued that the attachment system and the MNS respond to accurate and inaccurate meaning by relying on mirroring and cues given by others. This results in emotion regulation, dysregulation, and also results in appropriate and inappropriate emotion imprinting (Schore, 2012; 2003a; 2003b). The use of appropriate emotional meaning leads to the development of emotional competence (Saarni, 1999).

Saarni (1999) and Southam-Gerow (2013) have identified constructs in the development of emotional competence. Variables such as the person's history of learning emotions, societal expectations, and sense of morality affect this emotional competence (Southam-Gerow, 2013). Emotional competence is required to enhance many outcomes that are needed including "mental/behavioral health, academic success, and social adaptation" (Southam-Gerow, 2013, p. 12). It appears Saarni (1999), Shore (2012, 2003a, 2003b), and Southam-Gerow (2013) present a case that emotion development is the result of a multi-system biopsychosocial evolution. Southam-Gerow (2013) reports formation of emotion has moral implications. Morality being subjective is based on spiritual, societal or legal mores, producing both positive and negative outcomes. Religions such as Buddhism, Judaism, and Christianity suggest emotional development and competence is the result of spiritual growth (Dalai Lama, 2010; Erickson, 1998; Korngold, 2008). Given this, an argument can be made that emotion development is a bio-psycho-social-spiritual evolution (Saarni, 1999, Shore, 2012, 2003a. 2003b; Southam-Gerow, 2013).

Saarni (1999) has identified eight emotional competency skills summarized here to include (a) awareness of personal emotional state, (b) ability to discern others emotions, (c) use of vocabulary and expression terms of emotion, (d) empathy and sympathetic involvement of others emotional experience, (e) realizing a difference in the intrinsic and extrinsic expression of emotion, (f) self-regulatory strategies for coping with various emotional states, (g) awareness of correlation between relationship and emotion, and (h) “capacity for emotional self-efficacy...” (p. 5).

Southam-Gerow (2013) suggests five “component constructs related to emotional competence” (p. 12). Southam-Gerow (2013) constructs include (a) emotion awareness of self and others, (b) emotion understanding, (c) empathy/sympathy, (d) emotion regulation; and (e) emotion socialization. There appear to be similarities in the findings of Southam-Gerow (2013) and Saarni’s (1999) constructs of emotional competence that have been presented above.

Researchers suggest the ability to be aware of not only self, but also to be aware of emotional self-awareness is needed (Saarni, 1999; Southam-Gerow, 2003). A person realizes the self when he or she has knowledge they are an individual among others, or as Saarni (1999) contends the subjective self or “the existence of ‘I’” (p. 29). Saarni also presents the concept of self where the person has knowledge of “existence of ‘me’ or the objective self” (p. 30). The objective self is the emotional self, where humans experiencing emotions realize the emotion belongs to them.

Along with the knowledge of the emotional self, Saarni (1999) suggests the term meta-emotion, or “emotion about emotion” (p. 68) is necessary for emotional competence (Gottman, Katz, & Hoovan, 1997). Not only is knowledge of “the self” required, but the development of emotional competence requires others, such as attachment figures, family, and social modeling to

include feedback (Saarni, 1999; Southam-Gerow, 2003). Saarni (1999) suggests that children who develop in situations where they feel lonely struggle with emotional competence and may develop socialization issues. Agreement between Saarni (1999) and Southam-Gerow (2003) continues with empathy and sympathy, which has to do with recognition and the ability to subjectively be aware and feel the emotion of others. Agreement is also noted as both researchers contend the ability to regulate, modulate, and control emotion is required for emotional competence (Saarni, 1999; Southam-Gerow, 2003).

Emotion awareness is complex because of the physiological, psychological, and contextual content associated with them (Southam-Gerow, 2013). The awareness of self is required to enhance and develop emotional awareness. Emotion understanding has to do with knowledge of emotion processes and knowing if the person is regulating emotion (Saarni, 1999). Empathy is “feeling with another, such that one can respond effectively to offer assistance or support” (Southam-Gerow, 2013, p. 19). Emotion regulation is the ability to respond and modify emotional reaction while working toward one’s goal (Southam-Gerow, 2013).

Emotion Regulation Development

Emotion regulation is identified as the ability to increase or decrease emotion when an individual decides to engage in a situation (Gross, 2014; Werner & Gross, 2010). A person needs a goal to activate emotion regulation (Gross, 2014). The ability to self-regulate or apply intrinsic emotion regulation is a desirable technique where extrinsic emotion regulation occurs as others cue or activate intrinsic regulation (Gross, 2014). Loughmiller (1965) describes how the group process of campers addresses emotionally charged problems and the leader facilitates the process, utilizing both intrinsic and extrinsic emotion regulation. The leader can model

regulation skills such as “up-regulation”, “down-regulation”, and “co-regulation” of emotions in emotionally charged situations (Gross, 2014).

Gross and Thompson (2007) have introduced a process model of emotion regulation that includes (a) situation selection, (b) situation modification, (c) attention deployment, (d) cognitive changes or appraisals, and (e) response modulation. In this model, a person modifies, changes, and chooses situations and responses that increase positive emotion and decrease negative emotion, a process that is modulated by emotional competence (Gross, 2014; Saarni, 1999; Southam-Gerow, 2013).

Davis-Berman and Berman (2008) have discussed the high percentages of mood and anxiety disorders along with the large number of children and adolescents who receive therapy and medication. Kring and Sloan (2014) report that more than 75% of the psychopathology in the DSM-IV Youth Edition are related to emotion regulation issues, and more recently, Zimmer-Gembeck et al., (2017) report “...most, if not all, forms of psychopathology involve reduced emotional competence, difficulties with regulation of some emotions, and challenges dealing with stress” (p. 74).

Emotion considerations in AT/WT and ThC.

In the early writings on ThC, McNeill, (1957) focused on the behavioristic concepts of ThC, reporting that ThC had always focused on therapy appearing to delve into interests concerning emotion and suggested further study concerning emotion. Loughmiller, (1965) saw the importance of emotion in his writings of ThC, stating, “education of the emotions as well as the intellect – two parts of the same process” (p. 40). The study and use of emotion appear to be relevant in the effectiveness and use of ThC (Loughmiller, 1965; McNeill, 1957). Limited research involving ThC requires a review of more current research, especially in areas of

emotion, emotion regulation, emotion dysregulation, and emotional competence. This research will be reviewed in the next section (Gross, 2014; Gross &Thompson, 2007; Kring & Sloan, 2010; Saarni, 1999; Schore, 2012; 2003a; 2003b; Southam-Gerow, 2013).

The population attending AT/WT residential programs, primarily youth, are at higher risk for emotion dysregulation due to variables of gender, culture differences and dysfunctional family dynamics (Davis-Berman & Berman, 2998; Gass et al., 2012; Norton et al., 2014; Southam-Gerow, 2013). Programs instilling emotion regulation processes, problem solving and improving frustration tolerance can effectively support and expect improvements in child and adolescent mental health (Gross, 2014; Gross &Thompson, 2007; Kring & Sloan, 2010; Norton et al., 2014; Saarni, 1999; Schore, 2012, 2003a, 2003b; Southam-Gerow, 2013).

Therapeutic camping along with AT/WT facilitate and model emotion socialization as the camp staff educate campers about knowledge of emotions and model emotional regulation (Gass, et al., 2012; Southam-Gerow, 2013; Straub, 2015). “Emotional knowledge” occurs as the leader asks the camper to explain an appropriate response when someone speaks disrespectfully to another camper. The leader could then ask the group of campers to evaluate a camper’s response. In this scenario, the leader and group educate the individual and together they can evaluate the group’s response (Gass, et al., 2012; Gross, 2014; Gross &Thompson, 2007; Kring & Sloan, 2010; Loughmiller, 1965; Saarni, 1999; Schore, 2012, 2003a, 2003b; Southam-Gerow, 2013).

As presented above, emotion regulation pertains to the ability to self-regulate in given circumstances and environments (Gross, 2014; Gross &Thompson, 2007; Kring & Sloan, 2010; Saarni, 1999; Schore, 2012, 2003a, 2003b; Southam-Gerow, 2013). Delis (2012) reports social functioning is interrelated to emotion regulation and is important for a person’s psychosocial

situation or to achieve personal goals. The decreased ability to regulate emotion, poor impulse control, and social perception abilities are related to executive functioning issues (Delis, 2012). Delis argues that the inability to appropriately perceive social cues such as recognition of emotion expression, theory of mind, the ability to understand and exercise explicit and implicit social rules affects emotion regulation. This argument supports Saarni (1999) and Southam-Gerow's (2013) constructs related to emotional competence.

Delis (2012) has explored emotion regulation in the development of his instrument, which measures emotional functioning (EMF), behavioral functioning (BF), and executive functioning (EXF) to establish a Total Composite Score (TC) used in the Delis Rating of Executive Functioning© (D-REF). The D-Ref can be utilized by self, parents, and teachers and should indicate improvements in emotional competence which includes emotion regulation as indicated by a decrease in the EMF score. This measure is discussed in more detail in Chapter Three.

Family Involvement and Emotion Regulation

Since one in every five adolescents in the United States deals with a diagnosable mental health disorder, many settings in which the adolescent functions, including the family unit, are affected (Swartz, 2009; Tucker et al., 2016). Family systems and parental involvement may provide stability or produce chaos for youth (Faddis & Bettmann, 2006; Nichols & Schwartz, 1998). In a study by Tucker et al. (2016), family involvement measures and family research methods were found to be used in many OBH programs. This study found family involvement in approximately 80% of OBH treatment programs and included an average of 27 hours of reported family involvement per child (Tucker et al., 2016). AT/WT family involvement was

found to include psychoeducation with family groups, parent support groups, parenting seminars, and on-line support (Tucker et al., 2016).

Family involvement is a historical and important component used in treatment at Fair Play (Fair Play Website, 2017). The parents, caretakers, and families are provided monthly parenting support groups that are facilitated by the Fair Play Placement Coordinators. At these meetings, family members are encouraged to discuss and explore changes, positive and negative, being made by campers and the campers' families while the camper is away. These group meetings promote emotion regulation through the group process and reinforcement of coping strategy needed for both campers and family members (Adler-Tapia, 2012; Gross, 2014; Saarni, 1999; Schore, 2012; 2003a; 2003b; Yalom, 2005). The family group also allows parents and caretakers to explore issues with other families and discover different parenting techniques used by others. The group facilitates support and often a network that extends beyond the treatment period at Fair Play (Personal interview with a former camper's parent, July 7, 2017; Yalom, 2005).

Attachment theory suggests that an attachment figure, such as a parent, may provide a safe base for a child (Adler-Tapia, 2012; Bowlby, 1982; Schore, 2012; 2003a; 2003b). The security the child gains from his or her family allows exploration of the environment, knowing there is a place of retreat when the child is stressed. The parent teaches the child to eventually self-soothe or down regulate so that the child can problem-solve and so that confidence to explore in the future is reinforced (Adler-Tapia, 2012; Bowlby, 1982; Schore, 2012; 2003a; 2003b; Straub, 2015). During this process of developing an attachment system, children learn emotion regulation. Problems within the family and family environment can affect the child's ability to feel safe and hinder secure attachment (Adler-Tapia, 2012; Bowlby, 1982; Schore, 2012; 2003a;

2003b; Straub, 2015). The structure of the camp replicates a family structure and reinforces attachment and emotion regulation. The camp staff becomes a type of surrogate attachment figure, promoting security, emotion regulation, and problem solving (Bowlby, 1982; Priel & Sharnia, 1995).

As the campers learn to utilize their skills of emotion regulation, the parents become less stressed, which produces an improved home environment and facilitates problem solving and encourages behavior compliance (Greenspan, 1997; Gross, 2014; Schore, 2012; 2003; 2003b). As Bowlby (1982) and Schore (2003a; 2003b) have suggested, the attachment system along with emotion regulation is reciprocal, intrinsic, and extrinsic resulting in potential positive changes within a family unit when individual and family stress is reduced (Bowlby, 1982; Gross, 2014; Schore, 2003a; 2003b).

This section has focused on emotion regulation and the family. Problems experienced by individuals and families can result in emotion dysregulation in the individual, families, and groups. Therapeutic outdoor programs like ThC are believed to instill skills that optimize emotion regulation, thus reducing conflict and dysfunction in the family system (Gass et al., 2012; Loughmiller, 1965).

Summary

This chapter has examined current literature pertaining to experiential education, adventure and wilderness therapy, and emotion regulation. ThC was developed some time ago, with the spirit and principles continuing currently in AT/WT to improve mental and behavioral health in youth. The current literature regarding ThC appears to be anecdotal, and contemporary empirical data is lacking. There continues to be debate about where AT/WT and ThC fit in the

quest to provide child and youth care (Harper, 2017). Both appear therapeutic, but both are not therapy.

This chapter has also demonstrated a need for treatment for troubled youth who struggle with many physical, emotional, social, and family issues that involve emotion regulation and dysregulation problems. The data indicates a lack of appropriate mental health treatment for youth. A case has been presented providing evidence that AT/WT has been an effective vehicle to deliver efficacious treatment to youth. ThC is a treatment foundational in WT historically, although different it is expected to provide findings through empirical data supporting improved emotion regulation during treatment. The need for additional and improved empirical data from research with AT/WT/ThC has been discussed. With ThC, empirical research is needed to establish a baseline of ThC with emotion regulation improvement. The research in this project will begin to establish findings of ThC's effect on emotion regulation improvement. The next chapter will describe the design and method that will be used to produce the data and findings needed to answer the research questions and inference associated with ThC (Kazdin, 2003).

CHAPTER THREE: METHODS

The information presented in Chapters One and Two has demonstrated the need for effective treatment and programming designed specifically for youth to reduce mental health issues. Therapeutic camping (ThC) has been presented as a potential therapeutic program, facilitating emotion regulation improvements. This chapter presents the research design and methods utilized by the researcher to obtain data and infer results. The design and components are explained, as well as problems that occur in research and in this research design specifically. The next section describes operationalizing the research design by presenting participant selection, including inclusion and exclusion criteria. After selection of participants is discussed, the instruments used in gathering and providing data are presented. Other discussion in this section explores the assumptions, processing, and analysis of the data.

Inquiry about cause and change through the study of variance is foundational in research (Black, 1999; Kazdin, 2003; Martin & Bridgmon, 2012). Randomized Controlled Trials (RCT) has been called the golden standard in research methods (Gass et al., 2012; Kazdin, 2011; Kratochwill & Levin, 2010, 2014). This standard set forth in RCT has decreased threats to validity that once reduced the reliability of psychological research (Kazdin, 2003). Randomized samples with large sample sizes produces statistical power and the valid findings needed to produce robust and accurate results (Black, 1999; Kazdin, 2003; Martin & Bridgmon, 2012). Development of improved research and statistical methods with statistical software advances have resulted in valid results produced quickly and accurately through efficient computer programs (Martin & Bridgmon, 2012).

Although randomized research is the golden standard, it remains impractical for all researchers to utilize (Black, 1999; Gass et al., 2012; Kazdin 2003). Several reasons RCT may

not be appropriate for the researcher include (a) limited numbers in the sample; (b) inability to randomly select subjects who enter a research program; (c) subjects who have previously been assigned to a research group; (d) subjects who share a common disorder; and (e) logistical issues in the sample environment (Black, 1999; Gass et al., 2012; Kazdin, 2003).

Gass et al., (2012) report that the reasons data is not being collected by AT/WT therapists include (a) therapist believe data or treatment programs would not meet the rigorous standards of randomization, (b) the results are facility specific and would not be beneficial to other researchers, or (c) researchers would be a distraction for participants in AT/WT programs (Gass et al., 2012).

In their comprehensive study, Norton et al. (2014) presented findings indicating several limitations in AT/WT treatment including needed improvements in research and data collection. This article, in conjunction with the argument made by Gass et al. (2012), maintains a case for increased research in AT/WT. If AT/WT have needs for an increase and improvements in research and these have limitations, then ThC would especially need an increase and improvements due to the lack of empirical research (Loughmiller, 1979; White 2015). Others have argued not only for increased research, but also for needed improvements in current research methods for outdoor programs and therapies (Gass et al., 2012; Norton et al., 2014; Russell & Gillis, 2017). Norton et al. (2014) have called for (a) clarity of AT/WT treatment models, (b) focus on rigorous research, instead of program outcome, (c) longitudinal research and data banks, and (d) improved focus on statistical rather than clinical significance outcomes. ThC, although not identified as AT/WT, should be expected to adhere to the same improvements in research as recommended by Norton et al., (2014).

Anecdotal and traditional beliefs concerning the efficacy of treatment programs have also limited research and data collection (Gass et al., 2012; Kazdin, 2003; Priest & Gass, 2005). If program staff believe their program is effective, empirical evidence may seem unnecessary, as with the black box (Gass et al., 2012; Mainieri & Anderson, 2015). In fact, a retired experienced practitioner of ThC and original staff at Fair Play, informed the researcher that “doing research on ThC was useless, because research can’t measure the true effectiveness” (J. D. Miller, personal communication, Saturday, August 30, 2014). These types of thoughts reflect the resistance to research and traditional beliefs.

As Norton et al. (2014) have suggested, this belief will continue to be a limitation for AT/WT and ThC and “this perspective creates significant challenges” (p 51). These limitations were considered in the design and development of this research. This study is believed to maintain the spirit of the changes and improvements called for by Norton et al. (2014), and Gass et al. (2012), by increasing research and using accepted research designs and methods. The following section will describe the research design of this study.

Research Design

A case has been presented for increased and improved research methods in adventure and wilderness programs (Gass et al., 2012; Norton et al., 2015; Russell & Gillis, 2017). This has also led to findings that encourage the development of additional treatment goals and programs that reduce a shortage in programs addressing mental health for youth. ThC programs exist to meet these needs but operate with only limited research and data. Therefore, the need exists for data that addresses ThC populations specifically.

This study utilized a Pre-Experimental/Quasi-Experimental, One-Group Pretest-Posttest Design, (Black, 1999; Creswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012). Several

methods were considered while designing the study, but with no randomization or experimenter control possible, experimental research methods were ruled out. The researcher was limited to Quasi-experimental or nonexperimental design considerations (Black, 1999; Creswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012; Knight & Tetrault, 2017; Warner, 2008). In the design, a Pre-test, Posttest Nonexperimental Design was chosen and performed at the beginning and end of a random 12-week camp session (Black, 1999; Creswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012). This period of observation included a six-week camp period, a five-day period at home, followed by a six-week camp period. The participants varied in the amount of time they had been in the program at Fair Play. The camp reported the program is 18 to 24-months, with an average stay of 18 months.

The Fair Play population is a convenience sample of non-random boys assigned to four groups at the facility. Fair Play staff assigned the participants to groups generally by age and availability in the group. In this study, participants from Fair Play who met the inclusion criteria were measured for emotional functioning, stage of change, and program progress using the pretest beginning the 12-week observation and repeated at the end of 12-weeks as the post-test (Delis, 2012; Kazdin, 2003). The instruments used are described in detail below. Statistical evaluation used to analyze the data produced by the pre and posttest included hypothesis testing using t-test, ANCOVA, and regression testing (Black, 1999; Kazdin, 2003; Martin & Bridgmon, 2012; Warner, 2008). The variables that were investigated in the ThC program at Fair Play included Independent Variable, Dependent Variable, and Covariables (Black, 1999; Creswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012; Knight & Tetrault, 2017; Warner, 2008).

Independent Variable

The independent variable (IV) is the ThC program at Fair Play and will also be known as the therapeutic program or ThC program. Additional details concerning the therapeutic program are explained below and in Chapter 2. The IV was predicted to influence the dependent variable of emotion function which is also explained in the next section (Black, 1999; Creswell, 2009; Delis, 2012; Kazdin, 2003; Martin & Bridgmon, 2012). The IV was not measured as it was considered consistent during the 12-week camp period utilized by the researcher.

Dependent Variable

The dependent variable (DV), emotion regulation, is the measure of emotion functioning as scored by the Delis Rating of Executive Functions (D-REF) sub-scales “Emotion Functioning” (EMF) and “Total Composite” (TC). The T-score values of these sub-scales were derived from the raw score, producing the dependent variable measures used to calculate the statistical results.

Covariate

The research study design does not afford random selection or random assignment as mentioned previously. Assignment is generally based on the camper’s age at admission. Given this, there is potential for age to be a confounding variable, thus compromising internal validity (Black, 1999; Kazdin, 2003; Warner, 2008). This potential compromise was controlled with the statistical method known as Analysis of Covariance (ANCOVA) and Regression.

Threats to Validity

Validity is not constant in research or society (Black, 1999; Creswell, 2009; Kazdin, 2003). The major categories for research validity have to do with internal validity, external

validity, construct validity, and data-evaluation validity (Kazdin, 2011). Data-evaluation validity was once known as test validity (Kazdin, 2003).

Invalidity (Black, 1999), or threats to validity (Creswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012) are always a consideration during research. The researcher at Fair Play will consider potential threats to validity during the study. Kazdin (2003) describes internal validity as “the extent to which an experiment rules out as explanations those factors that otherwise might account for the results” (p. 53). Potential internal validity threats at Fair Play were considered because campers are typically there for an average of 18-months, and they continue human growth and development while in the program, which presents the potential threat of maturation (Black, 1999; Kazdin, 2003; Martin & Bridgmon, 2012). Another threat to internal validity is the potential variables that are unknown or unaccounted for in the ThC program. These extraneous variables can account for confounding the results. At Fair Play, these extraneous variables could be staff influence, time of year, changes in group makeup, and weather. The camper’s experience at Fair Play, although structured, has several known extraneous variables noted in outdoor programming that include but are not limited to physical environment, social environment, education, and task mastery (Gass et al., 2012; Loughmiller, 1965).

Another potential validity threat to the research at Fair Play is mortality (Kazdin, 2003). As reported previously, campers complete the program on average in 18-months. There have been occasions when campers are removed from the program due to their inability to assimilate in the program, the fact that a more intensified level of care is needed, or simply because of changes in the camper’s custody status occur (J. Schrock, personal interview, 2015).

External validity is described as the extent to which the findings can be generalized to populations, settings, measures, experimenters, and other circumstances than those used in the original investigation” (Kazdin, 2003, p. 53). External validity threats in this study have been reduced by maintaining consistency through the planning and execution stages of the research (Black, 1999). In Black’s (1999) design process, he suggests five considerations in the planning stage of research and two in the execution stage of research to reduce external threats. In the following designated procedure, the threats to external validity have been potentially reduced according to Black (1999). The stages of design suggested by Black (1999) include

1. The research question, the hypothesis must be stated, and the variables must be identified.
2. The design structure or method must then be determined.
3. The population and sample must be identified.
4. The instrument is then chosen, and operational definitions are established.
5. The hypothesis must then be tested statistically. (p. 51)

The execution stage in Black’s (1999) model of the research begins

1. When the plan established previously is carried out allowing data to be collected.
 2. The final process is analyses of the data, drawing conclusions and evaluating the process.
- (p. 51)

The researcher followed Black’s (1999) recommendations along with other design recommendations, (Creswell, 2009; Kazdin, 2003; Knight & Tetrault, 2017; Martin & Bridgmon, 2012; Warner, 2008) designing this study in such a way that would answer the research questions and reduce invalidity. Although this model was followed it does not totally reduce the risk of validity threats. Problems with external threats in this study include only males were observed,

the observation only occurred at one location, and the 12-week period observed was a short period of time compared to the 18-month average stay.

In planning the research method for this study, the researcher considered several models. The situation at Fair Play, including inability to randomly assign groups, the inability to have a control, and the inability to manipulate the IV, resulted in using a pre-experiment model (Creswell, 2009; Kazdin, 2003; Knight & Tetrault, 2017; Martin & Bridgmon, 2012; Warner, 2008). Pre-experimental designs increase the potential for validity issues such as internal validity threats because of no randomization or controls with limited or loss of control with extraneous variables (Martin & Bridgmon, 2012; Warner, 2008). Regarding pre-experimental design threat to external validity, pre- and quasi-experimental designs may generalize well because of the research occurs in actual clinical and field settings (Black, 1999; Kazdin, 2003; Warner, 2008). Although this design may generalize well, it must be remembered that generalization in clinical and field type settings must be generalized to similar settings (Black, 1999). To increase sample size, a Single Group Pretest Posttest Model was chosen. Because the single group has a large variance of age and since age is typically a variable, statistical methods will be used to account for age as a confounding variable (Warner, 2008).

Selection of Participants

The research participants were from a convenience sample already participating in the ThC program at Fair Play. This eliminated the need to recruit participants for the study. According to Kazdin (2003), samples of convenience can be used when participants meet the needs and purpose of the experiment. Kazdin (2003) also suggests the scientist should contemplate the use of samples of convenience. In doing so, Fair Play is the only facility

offering ThC in proximity to the researcher, and the conditions of ThC could not be met through other means.

Participants

The participants were campers from the four individual camps at Fair Play. Inclusion criteria to the research allowed participants who were currently in the Fair Play program and agreed to the research to be utilized. Exclusion from the research included (a) those campers who were admitted or discharged during the 12 week observation period; (b) campers who transitioned to another camping group during the research period; and (c) campers and parents/caretakers who chose not to participate in the research.

Evaluators

Evaluators were camp staff assigned to the four individual camps. Camp staff are known as Chiefs and are with the participants most hours of the day and night. The Chiefs have the task of administering the evaluations and completing the teacher forms for those participants who fell below the instrumentation age cutoff (Delis, 2012).

Instrumentation

Data gathering and research in a wilderness setting can be difficult compared to an inpatient or clinical setting (Gass et al., 2012). The selection of instruments in this research was considered because of the design of the instrument, testing environment, validity and reliability of the instrument, and history of previously being used in the field (Dunn, Burlingame, Walbridge, Smith, & Crum, 2005; Gillis, et al., 2016; H. L. Gillis, AEE workshop presentation October 29, 2016; Tucker, Smith, & Gass, 2013). Three instruments were utilized to gather the data for the research: (a) the Youth Outcome Questionnaire 30.2 (Y-OQ 30.2); (b) the University of Rhode Island Change Assessment Scale (URICA); and (c) the Delis-Rating of Executive

Functioning (D-REF) (Burlingame, Dunn, Hill, Cox, Wells, Lambert, & Brown, 2004; Delis, 2012; Dunn, et al., 2005; Gass et al., 2012; Gillis et al., 2016; McConaughy, DiClemente, Prochaska, & Velicer, 1989; Warnick, Drake, & Vidrine, 2015; Wells, Burlingame, Lambert, Hoag & Hope, 1996).

Youth Outcome Questionnaire (Y-OQ)

The Y-OQ has been an instrument utilized by inpatient, residential, outpatient, and other clinical settings to measure outcome treatment results (Burlingame, et al., 2004; Dunn, et al., 2005, Gillis et al., 2016; Wells et al., 1996). In AT and OBH research, the Y-OQ has been used frequently to measure overall treatment outcomes (Gass et al., 2012; Russell, 2002). Because Fair Play is closely aligned with residential treatment and occurs in a wilderness environment, the Y-OQ was chosen for this research study. Programming effectiveness has become an interest among not only researchers, but also among program directors (Gillis et al., 2016; Wells et al., 1996). Burlingame et al., (2004) suggest the Y-OQ be used for quickly assessing a child's general functioning as compared to a normative sample and the child's progress in treatment. Gary M. Burlingame, Ph.D. developed the Y-OQ which has continued to be developed and improved since it was introduced in 1996 (Burlingame, et al., 2004; Dunn, et al., 2005; Russell, 2002). Burlingame's version was developed to be comparable to the Outcome Questionnaire (OQ) developed by M. G. Wells for adult populations (Wells et al., 1996).

The Y-OQ 30.2 has two versions that include a self-report version (SR) for the child/adolescent age 11 or 12 and above, and an observer reported instrument (PR) for parents, teachers, and caretakers who have past interaction with the child/adolescent (Burlingame et al., 2004). The Y-OQ 30.2 SR and PR instruments were utilized in this research in compliance with the age cutoff. The Y-OQ has been found to be valid and reliable as a psychometric instrument

(Burlingame, et al., 2004; Dunn et al., 2005; Gillis et.al, 2016; Wells et al., 1996). Gillis et al., (2016) report the Y-OQ and Y-OQ-SR total scores range from -16 to 240. A decrease in total score indicates a positive change in reported behaviors. Higher scores represent more extreme problem behavior in the youth. Normative data can vary depending on treatment settings although Gillis's (2016) findings indicate the Y-OQ is reliable in both wilderness and non-wilderness therapy settings. Gillis et al., (2016) also report normative scores for residential settings are higher ($M = 115.4$) than scores for in-patient ($M = 110.4$), outpatient ($M = 68.4$), and community settings ($M = 21.4$). A total score lower than 46 on the Y-OQ is considered within normal scoring limits. Burlingame et al., (2004) stated the cutoff score should be considered ($M=29$) to distinguish ($M < 29$) as the Community Normal Score and ($M > 29$) as Clinical Scores.

Reliability measures for the Y-OQ report high internal consistency ratings of .97 for the Y-OQ (Gillis et al., 2016), .96 for the Y-OQ-SR (Wells et al. 2003) and .92 for the Y-OQ-30 (Gillis et al., 2016). Validity has been produced through use of the Y-OQ with various populations with higher total scores representing more pathologic youth and lower total scores representing less pathologic youth (Gillis et al., 2016). Gillis's article (2016) also reports the Y-OQ correlates well with other instruments that measure behavior.

The Y-OQ will be used to measure and observe the progress of the participants during a 12-week period at Fair Play. The Y-OQ will be given as a pre-and post-test (Black, 1999; Kazdin, 2003). The instrument was also chosen for the short administration time needed for the population and environment. The Y-OQ has moderate effect size ($d = .50$), and a test/re-test coefficient of [.84 total] (Wells et al., 1996). The instrument consists of a Total Score and six subscales: Somatic (S), Social Isolation (SI), Conduct Problems (CP), Aggression (A), Conduct

Problem (CP), Hyperactivity/Distractibility (HD), and Depression/Anxiety (DA) (Cross, 2014; Gillis et al., 2016; Wells et al., 1996).

University of Rhode Island Change Assessment Scale (URICA)

The URICA is a self-report instrument designed to measure readiness of change (Greenstein, Franklin, & McGuffin, 1999; Tucker, Bettmann, Norton, & Comart, 2015). The 32-item assessment uses a five-point Likert scale to measure the stages of Change: Precontemplation, Contemplation, Preparation, Action, and Maintenance (Greenstein et al., 1999; McConnaughy, et al., 1989). The scale ranges from 1 (strong disagreement) to 5 (strong agreement). Psychometric reviews of the URICA include reliability measures of Internal consistency and validity measures of Content, Criterion, and Construct (retrieved from https://pubs.niaaa.nih.gov/publications/AssessingAlcohol/InstrumentPDFs/75_URICA). The URICA has been used in adult and youth addiction treatment and other residential treatment programs for youth to screen and predict readiness for change (Greenstein et al., 1999; Tucker et al., 2015).

The URICA 32-item version was scored using a matrix designed by University of Maryland, Baltimore. The website reports, “The matrix provides a readiness score by calculating the mean for the precontemplation response, contemplation responses, action responses and the struggling to maintain responses. Once means are found for each of the stage subscales, the mean from the precontemplation is subtracted from the summation of the other three stages” (retrieved from <https://habitslab.umbc.edu/urica-readiness-score/>). The researcher produced an Excel spreadsheet matrix to calculate the readiness score data.

Delis-Rating of Executive Functioning (D-REF)

Dean Delis developed the D-REF, and Pearson publishes the D-REF (Delis, 2012; Warnick et al., 2015). This instrument is designed for children between five and 18 and is available in three versions that include a self-report version for adolescents 11 to 18, a parent/caregiver, and a teacher version for children five to 18 (Delis, 2012; Warnick et al., 2015). Delis (2012) reports the instrument “is designed to assess behavioral, emotional, and cognitive symptoms...” (p. 27). The D-REF instrument has four core index scores with T-score ($M = 50$) and ($SD = 10$) (Warnick et al., 2015). There are four core scores, Behavioral Functioning (BF), Emotional Functioning (EMF), Executive Functioning (EXF), and Total Composite (TC). There are also four clinical scores measured by the D-REF that include the Attention/Working Memory score (AWM) score, Activity Level/Impulse Control (AIC) score, Compliance/Anger Management (CAM) score, and Abstract Thinking/Problem Solving (APS) score (Delis, 2012; Warnick et al., 2015).

The EMF, AIC, CAM, and APS scores of the D-REF were evaluated to consider differences of emotion regulation indicators (Delis, 2012; Gross, 2014; Kring, & Sloan, 2010). The EMF and TC score will be used as the measure in this research. In this research, the campers’ improvement in emotion functioning was hypothesized by a decrease in t-score values (Delis, 2012). According to Delis (2012), scores ($T < 55$) are within normal limits (WNL).

Assumptions

The use of the instruments presented above was predicted to produce data showing a decrease in measures of emotion functioning (EMF) and total composite (TC), which indicates change in specific areas of emotion regulation reported with D-REF and program progress as

measured by the Y-OQ 30.2 (Burlingame et al., 2004; Delis, 2012; Dunn, et al., 2005; Gillis et al., 2016; Wells et al., 1996).

The D-REF is reported to measure emotion regulation in both the TC and the EMF scores (Delis, 2012). Delis reports these scores (2012) to “reflect the child/adolescent’s ability to regulate his or her emotion to be appropriate for the specific setting and to meet the developmentally appropriate expectations of different psychosocial environments” (p.91). An increased EMF t-score would indicate potential emotion functioning problems such as poor frustration tolerance, issues regulating anger, labile affect, and problems interacting with others (Delis, 2012; Rueter, 2014).

The TC score considers all the scores including EMF and the comparison of all scores to executive functioning. The t-scores are not to be used as an exact score indicating pathology, but a range based on normal to severely elevated classification (Delis, 2012). By comparing pre-test scores with post-test scores, the mean difference of the EMFt pretest and EMFt posttest will indicate changes in the scores reflecting Emotion Function (EMF) changes. It is assumed the null hypothesis will be rejected thus finding the program at Fair Play improves emotional functioning as indicated by the EMF and TC score of the D-REF, thus indicating potential change in emotion regulation (Delis, 2012).

Program progress, as measured by the Y-OQ 30.2, predicted changes during the 12-week observation period at Fair Play. Y-OQ 30.2 total scores less than the cutoff score of 29 or a 13-point difference in the pretest and posttest scores suggests progress (Burlingame, et al., 2004).

The URICA was administered as pre and posttest to produce the “Readiness Score”. The URICA scores are expected to show improvement in Readiness Score during 12-week period of

monitoring at Fair Play. An increase in the Readiness Score has been associated with improved motivation and stage transition in past studies (McConaughy et al., 1989).

Once the research instruments were considered, the procedure for obtaining the data was conceptualized. Factors such as ethics, test procedures, test security, invalidity, and analysis of the data were also considered. In the next section, the procedures for the research will be presented.

Research Procedures

In this section, the procedures needed to operationalize the research design will be explained and defined. This will assist the reader in understanding this study and the integration of research into an ongoing program.

The Fair Play Director, Daniel Hochstetler agreed to meet with the researcher to establish preliminary agreement for the research. Once the proposed research was agreed upon by the Fair Play Director, the researcher presented his dissertation proposal to the Dissertation Committee. Once the proposal was approved, the formal process began. A formal letter was sent to the Fair Play Director requesting permission to perform the research at Fair Play (see Appendix D). Once formal approval was obtained, ethical guidelines was presented to Liberty University.

Ethical guidelines have been considered and the research followed the ethical standards provided in Section G: Research and Publication in the ACA Code of Ethics (ACA, 2014). The research methods and design review was approved by the Liberty University Institutional Review Board (IRB). The IRB approval obtained was prior to any data being collected or any encounter with participants (www.liberty.edu/academics/graduate/irb, retrieved July 2017). The IRB is tasked with assuring that no harm will come to human subjects in the experiment. Parents and caregivers were required to consent to the research because subjects were under the legal age

(see Appendix B). Participants agreed to the experiment by choice, signing assents with no coercion (see Appendix C). The design of this research did not cause any changes or modification to the ThC program, and results were taken from self-rating forms or staff-observed evaluations.

Once IRB approval was obtained, research evaluation began with the camp. Staff provided participants with instruction, self-report evaluations, and the staff evaluated the participants under 11-yrs of age using the instruments provided at the beginning and end of the 12-week period. The completed instruments were collected at the administration building in a secured collection container then collected by the researcher after all instruments were collected from campers and staff. Because camp staff are required to remain in the field for extended periods of time, computer access and internet are unavailable, so pencil and paper instruments were required. Prior to the administration of any instruments, the camp staff and parent/guardian received information and instruction about the use of the reporting instruments. This training consisted of (a) an overview including the meaning of content, (b) confidentiality issues, (c) test security issues, and (d) data collecting procedures (Delis, 2012; Kazdin 1993). The administration of all research instruments followed the instruments guidelines provided by the instrument publisher (Burlingame, et al., 2004; Delis, 2012; Dunn, et al., 2005).

Inclusion/exclusion criteria determined the number of participants needed for the research. The director was responsible for test security during the pretest and posttest periods. The Chief completed the teacher version of the instrument for campers 11-yrs of age and under who were below the cutoff age.

Data Processing and Analysis

The statement of the problem, purpose of the study, and research questions were presented in Chapter One. The research questions will now be restated to review what is being investigated in this study:

- 1) Do emotion functioning scores improve while male youth participate in ThC program?
- 2) Does age of camper and time in the program affect the emotion regulation and program progress scores in male youth while participating in a ThC program?
- 3) Do program progress scores improve while male youth participate in ThC program?

Several data processing considerations were evaluated in this study to answer the research question and address covariate potential (Black, 1999; Kazdin, 2003; Martin & Bridgmon, 2012; Warner, 2008). The null hypothesis (H_0) or alternative hypothesis (H_A) needed to be determined for statistical significance and can be stated as $H_0: M_1 = M_2$, and the alternative hypothesis may be stated as $H_A: M_1 \neq M_2; M_1 < M_2$ (Black, 1999; Creswell, 2009; Kazdin, 2003; Martin & Bridgmon, 2012). Also, limitations in the design presented a potential issue and included a convenience sample. Although this is a convenience sample and has potential of increasing a Type I error (Kazdin, 2003; Warner, 2008), the campers are assigned to camp groups generally by age.

The Y-OQ and the D-REF were used to indicate changes in emotion function and program progress scores. The D-REF instrument with scores $T > 50$ were considered elevated while Y-OQ total scores > 30 were elevated (Burlingame et al., 2004; Cross, 2014; Delis, 2012; Gillis et al., 2016; Wells et al., 1996). The T-scores of the D-REF was obtained through commercial scoring provided by a license through Q-Global © by Pearson. The Y-OQ 30.2 total

score was hand scored on the questionnaire by design. All results produced by D-REF, Y-OQ, and URICA including subscales were recorded on an Excel spreadsheet.

The URICA was administered to evaluate the camper's readiness for change. Although it does not answer one of the research questions, it provided the researcher with a Readiness Score to evaluate potential measures in stages of change. Suggested "cut-off scores" have been established and are associated to Stages of Change (<https://habitslab.umbc.edu/urica-readiness-score>).

Data was entered and analyzed using IBM SPSS Statistics GradPack 26 © after said data was collected and scored. Once the variables were entered it was possible to evaluate results and perform hypothesis testing needed to answer the research questions (Black, 1999; Creswell, 2009; George & Mallory, 2010; Kazdin, 2003). There were concerns regarding power and effect size because of the smaller sample size (Black, 1999; Kazdin, 2003; Martin & Bridgmon, 2012; Warner, 2009). According to Kazdin (2003), the use of pretest posttest designs potentially increase effect size (ES). Kazdin (2003) states, "as the correlation between the pre and posttest increases, the error term (denominator) is reduced, and hence power of the analysis increases" (p. 447). The ES in all statistics in this study were medium being above 0,25.

The next step utilized the IBM SPSS program 26.0 to complete the statistical analysis and determine if there was statistical significance to answer the research questions (Black, 1999; Martin & Bridgmon, 2012; Warner, 2009). The ANCOVA is the statistical method that utilizes both analysis of variance and regression analysis (Martin & Bridgmon, 2012, p. 300). As mentioned previously, ANCOVA was used to adjust for the covariance of age and time in the program. An ANCOVA was calculated in research question one and three to control these covariates.

The PhD program requires a statistician to review and approve all statistical actions related to the experiment. In this process, the statistician and researcher reviewed the statistical results using the design criteria, but they also analyzed the data using linear and quadratic regression. Regression was used in this research for comparison and explanation (Keith, 2006).

Regression was used because of its ability to be used with categorical and continuous variables, multiple independent variables, and its ability to be used to analysis nonexperimental and experimental research (Keith, 2006). Keith (2006) reports multiple regression typically being preferred to ANOVA in nonexperimental research.

The role of the researcher with regard to contact with the research population in this study was limited. The research design reduced knowledge of who the researcher was to the sample population, further protecting against internal validity issues. The collection of data was achieved by retrieving a data drop container from the camp, without having contact with the campers. The contact with evaluating staff at Fair Play was limited to instruction on testing and research procedures presented above.

Summary

Chapter Three explored the method of research that was used in this study. This study presented findings that indicate children and adolescents have mental and behavioral health issues including emotion regulation. This study proposed that ThC improved emotion regulation and improved program progress scores when age and time in the program are controlled during a 12-week period. The male child and adolescent population at Fair Play in a ThC program (IV) were used to produce the scores. Two (DV) measures, the Y-OQ and D-REF were chosen to measure the score differences of the IV. Once the data was compiled, it was processed by

statistical methods and indicated the statistical significance and results of the research to be presented in Chapter Four.

CHAPTER FOUR: RESULTS

The purpose of this study was to examine emotion regulation and Therapeutic Camping (ThC) along with the covariant of age and time in the program. Several reasons have been presented indicating the need for empirical data relating to ThC including lack of data and research, effectiveness being only reported through anecdotal reports, and a need to identify effective programs to provide reprieve to an overwhelmed mental health system. This research measured indicators of emotional functioning and treatment progress using pre and post-tests at the beginning and end of a 12-week period. The URICA questionnaire was given at the beginning and end of the same 12-week period, to assess the level of change indicated by change score measures. Age of the subjects and time in the program was analyzed using ANCOVA for potential impact on emotion function and treatment progress scores. Finally, the treatment progress, as indicated by the Y-OQ score, was analyzed over the same 12-week period for differences in pre and posttest scores.

In this section the results from obtaining data is presented and discussed. The procedures used to collect and evaluate data also reviewed as well as interpretation of the data collected. The chapter concludes with a summary of analysis and the results.

Data Screening

There were 40 campers available for study at the beginning of the research. Of the 40 campers considered for inclusion, the subjects were identified as coming from four types of family systems with 35% being adopted, 35% from stepfamilies, 15% from biological families, and 15% being raised by kinship caretakers. On February 8, 2019, the researcher was informed by the camp director that signed informed consent forms had been returned, and campers had signed assents. The legal caregivers of eligible campers were provided informed consent and

associated consent forms prior to the research beginning. Of the 40 total campers, 26 met the inclusion criteria presented in Chapter Three. With 26 subjects, 65% of the population of the camp was evaluated during pretest, with two campers dropping out prior to taking post-tests, resulted in 7% attrition rate. Those evaluated were from four camp groups resulting in pretests taken by, Explorers group n = 5, Pioneer group n = 8, Trailblazer group n = 6, and Frontiersmen group n = 7. The two campers not completing the study were from the Pioneer and Frontiersmen group resulting in an attrition of two.

Fair Play accepts males from age eight to 15 with the program lasting up to 24 months. The range of campers age evaluated was 10.0 – 16.43 with a mean age of 13.43 and standard deviation of 1.55. The amount of time in the Fair Play ThC program is a mean of 78 weeks (18 months). The time in program mean of participants was 37.38 weeks with nine weeks minimum and 73 weeks maximum, producing a range of 64 weeks and standard deviation of 17.05.

Participant demographics is provided in Table 4.1 providing a summary of data.

Table 4.1

Participation Demographics

| | N | % |
|---------------------|----|------|
| <u>Participants</u> | | |
| Total | 26 | 100 |
| Attrition | 2 | 7 |
| <u>Gender</u> | | |
| Male | 26 | 100 |
| <u>Age</u> | | |
| 8-10 | 1 | 3.8 |
| 10-12 | 3 | 11.5 |
| 12-14 | 13 | 50.0 |
| 14-16 | 8 | 30.8 |
| 16+ | 1 | 3.8 |
| <u>Group</u> | | |
| Explorers | 5 | 19.2 |
| Pioneers | 8 | 30.8 |

| | | |
|---------------|---|------|
| Trail Blazers | 6 | 23.0 |
| Frontiersmen | 7 | 26.9 |

Research Questions

The first question asks: Do emotion functioning scores improve while male youth participate in ThC program? This question presents the hypothesis: ThC does not improve emotion regulation and decrease emotion dysregulation. The hypothesis would be $H_0: \mu = EMFT_{pre} \geq EMFT_{post}$ and the alternative hypothesis would be $H_a: \mu = EMFT_{pre} \leq EMFT_{post}$. The rejection of the null hypothesis would suggest an increase in emotion regulation as indicated by the Emotion Functioning Score (EMF). As mentioned above, Delis (2012) reports EMF is an indicator of frustration tolerance, mood fluctuation, compliance, and regulating emotions relative to environmental demands.

The second question asks: Does age of camper and time in the program affect the emotion regulation and program progress scores in male youth while participating in a ThC program? This hypothesis is stated as: $H_0: \mu = EMFT \& Y-OQ \text{ score differences/age} \neq EMFT \& Y-OQ \text{ score differences}$. The alternative is: $H_a: \mu = EMFT \& Y-OQ \text{ score differences/age} = EMFT \& Y-OQ \text{ score differences}$. This question presented issues due to statistical and research design. This question needed to be answered in conjunction with questions one and three. ANCOVA was applied to the data from D-REF and Y-OQ 30.2 mean differences. Linear and quadratic regression was performed to assess age as a covariable.

The third question asks: Do program progress scores improve while male youth participate in a ThC program? This question produced mean score differences in Y-OQ resulting in program progress analysis. This question was assessed using the Y-OQ-30.2 measure pre and posttest results. The Y-OQ 30.2 measure is designed to evaluate treatment progress in youth

(Burlington et al., 2004). The Y-OQ-30.2 total score (YOQPre and YOQPost) was used as pre and posttest to measure treatment progress to hypothesize an increased total score indicating dysfunction or reduced progress. The hypothesis for this question is: $H_0: \mu = YOQPre = YOQPost$ with the alternative being: $H_0: \mu = YOQPre \leq YOQPost$.

The data analysis was performed based on the research design. The Paired-Samples t-Test was used to determine the statistical significance of the data. The Paired-Samples t Test was again considered due to all participants receiving the same treatment (IV) and having repeated measures from a pretest and posttest (George & Mallery, 2010; Warner, 2008). Additional analysis was performed using ANCOVA, linear, and quadratic regression. The data has been processed and the results for each question can be discussed including how these instruments were utilized to obtain the data.

Data Analysis

The three instruments used in this study, URICA, D-REF, and Y-OQ-30.2, were discussed in Chapter Three. All the instruments were utilized considering developer's design and operational manuals (Burlingame et al., 2004; Delis, 2012; Greenstein et al., 1999; Wells et al., 1996). The instruments were distributed and administered by the procedures presented in Chapter Three, APPENDIX F and in accordance with procedures approved by IRB (APPENDIX A). Test security was maintained by protocol established in consideration of instrument producers, ethical standards, and IRB approval (ACA, 2014; Burlingame et al., 2004; Delis, 2012; Greenstein et al., 1999; Wells et al., 1996). Once the instruments were collected, they were scored by the manufacturer software or recommended hand scoring method. The D-REF raw data was entered and verified using the Pearson Q-Global© where the results are also securely stored. This program produces the D-REF Core Index and Clinical Index Scores in raw

and T-score results (Delis, 2012). The Y-OQ-30.2 and URICA were hand-scored using Microsoft Excel to record results. Once all variables were recorded in Excel the data was transferred to SPSS for statistical computation.

The instruments were administered to camper's as self-report except for three campers who were under the recommended age for the measures. Where the campers were under the self-report age cut off, the researcher provide designated forms with recommended procedures for the staff to complete, meeting the manufacturing recommended methods (Delis, 2012; Burlingame, 2004). The D-REF utilizes different instruments for self-report, teacher, and parent while the other two instruments utilize the same instrument for self-report and all other observational reporting (Burlingame et al., 2004).

The instruments were given to the Director of the camp along with instructions and training for administering the instruments and test security by the researcher. A collection container was provided for completed testing material to be placed when completed. The secure container was placed in the Director's office that is always occupied or locked. The researcher and Director provided instruction and training for other camp staff who participated in the research. All instruments utilized do not have time cut-offs and were administered in the participant's camp (Burlingame et al., 2004; Delis, 2012; Greenstein et al., 1999; Wells et al., 1996). The pretests were given on March 12-13, 2019, and the posttests were given on June 4-5, 2019. The pretest and posttest were completed by camp group collectively, in the group's camp area. The location was consistent in all testing, with a 12-week period between pretest and posttest. Once completed, the instruments were delivered and placed in the secure container by the director. Once instruments were collected, the container was sealed, then collected by the researcher the following day, and transported to the researcher's office for analysis.

As approved by the IRB, all possible identification factors were removed, converting all participants names to a numeric identification system. The logbook with the name key is secured by HIPAA and IRB approved procedures with the researcher. Each camper is listed in research data by randomly assigned identification number, their associated group number, and age only.

The URICA Readiness Score was compiled by using the University of Maryland, Baltimore County (UMBC) Health and Addictive Behaviors: Investigating Transtheoretical Solutions (HABITS) Lab website (<https://habitslab,umbc.edu/urica-readiness-score/>). The Readiness Score (RS) is the calculated result of individual subscale sums divided by seven to obtain the subscale mean of: Precontemplation (P); Contemplation (C); Action (A); and Maintenance (M). When the means are obtained for each of the stage subscales, the mean from the precontemplation is subtracted from the summation of the other three subscale stages. The equation presented by UMBC HABITS Lab to obtain the URICA score is: $(C+A+M-PC=RS)$. The researcher constructed a matrix in Excel to produce the RS once the camper's URICA raw scores were entered. The following cut-off scores are suggested by UMBC for general population uses but should be considered arbitrary. A score of eight or less represents Precontemplation stage, while eight – 11 would indicate Contemplation stage, and 11 – 14 represents those in Preparation or Action Stage.

The participants completed the URICA 32 Item Questionnaire to indicate the readiness score that has been used to evaluate readiness for change (McConnaughy et al., 1989). A comparison of means was considered due to having repeated measures from a pretest and posttest (George & Mallery, 2010; Warner, 2008). The pretest readiness score (URICA Pre T) was compared to the posttest readiness score (URICA POST T). Results were calculated using SPSS producing the following findings listed in Table 4.2 and explained below.

Table 4.2

Paired Sample t-Test Statistics of URICA Pretest and Posttest

| | | N | M (SD) | SEM | | | | |
|-----------------------------|--------------------|-----------|-------------|-----------|-----------|-----------|----------|----------|
| Pair 1 | URICA PRE T | 24 | 8.70 (1.73) | .35 | | | | |
| | URICA POST T | 24 | 9.56 (1.06) | .21 | | | | |
| | | N | <i>r</i> | <i>p</i> | | | | |
| Pair 1 Samples Correlations | URICA Pre & Post T | 24 | .045 | .834 | | | | |
| | | 95% CI | | | | | | |
| | <i>M</i> | <i>SD</i> | <i>SEM</i> | <i>LL</i> | <i>UL</i> | <i>df</i> | <i>t</i> | <i>p</i> |
| Pair 1 | -859 | 1.99 | .406 | -1.699 | -.0197 | 23 | -2.12 | .045 |

Note. CI = confidence interval

The pretest $N = 26$, $M = 8.74$, and the posttest $N = 24$, $M = 9.56$ with the paired differences resulted in $M = -.8591$. The results of the Paired Sample t -Test produced results indicating statistical significance rejecting the null hypothesis and accepting the alternative or, $t(23) = -2.12$, $p \leq .05$. This suggests that the URICA POST T is significantly higher than URICA PRE T. *Cohen's d* was estimated at -0.586 suggesting a medium ES (Cohen, 1992). Although these data do not apply directly to the research questions, it infers over the 12-week period there was significant differences within the Contemplation Stage. These results show the mean of the Readiness Score higher at posttest than pretest indicating improvement statistically. Although the mean score improved the range of scores remained in the contemplation stage.

The effect of age on Readiness Scores was determined using regression. This resulted in $R = -0.017221233$ and $R^2 = 0.00029657086$ with $SE = 2.0322584$. Table 4.3 displays linear regression results associated with the URICA Readiness Score controlling for age.

Table 4.3

URICA Readiness Score with Age Using Linear Regression

| Parameter | Estimate | Std. Err. | Alternative | DF | T-Stat | P-value |
|-----------|-------------|------------|-------------|----|--------------|---------|
| Intercept | 1.1575262 | 3.7164001 | ≠ 0 | 22 | 0.31146436 | 0.7584 |
| Slope | -0.02239446 | 0.27720471 | ≠ 0 | 22 | -0.080786722 | 0.9363 |

Research Question 1

In the first question, Does ThC improve emotion regulation in male youth? The Paired Sample *t*-Test compared the means of EMFTpre and EMFTpost data of the D-REF. The results indicated $r = .81$ and a $t(23) = 4.08$, $p < .001$ (one-tailed). The results of the Paired Sample *t*-Test produced results indicating statistical significance rejecting the null hypothesis and accepting the alternative or, $t(23) = 3.49$, $p \leq .05$. This suggests that the difference in EMF/T pre and EMF/T post scores is statistically significant (see Table 4.3). *Cohen's d* was estimated at 0.389 suggesting a medium ES (Cohen, 1992). Rejecting the null hypothesis would suggest an increase in emotion regulation as indicated by the mean difference of the Emotion Functioning Score (EMF) during the 12-week period observed.

An ANOVA produced the following results when camp group was compared with EMFT pre and posttest mean differences. There was statistically significant differences between group means as determined by one-way ANOVA ($F(3,20) = 3.723$, $p = .028$). As mentioned above, Delis (2012) reports EMF is an indicator of frustration tolerance, mood fluctuation, compliance, and regulating emotions relative to environmental demands.

The Total Composite Score TC/T is also an indicator of emotion regulation along with behavioral and executive functioning. The TC/T pre and posttest *t*-score means were evaluated with the Paired Sample *t*-Test and produced results indicating statistical significance with $r =$

.71, $t(23) = 3.49$, $p = .001$ (one-tailed). The results of the Paired Sample t -Test produced results indicating statistical significance rejecting the null hypothesis and accepting the alternative or, $t(23) = 3.49$, $p \leq .05$. This suggests that the TC/T pretest score is significantly higher than TC/T posttest scores, indicating improvement. *Cohen's d* was estimated at 0.389 suggesting a medium ES (Cohen, 1992).

Table 4.4

Paired Sample t-Test Statistics of EMF/T pre/post and TC/T pre/post

| | | <i>M</i> | <i>N</i> | <i>SD</i> | <i>SEM</i> |
|--------|------------|----------|----------|-----------|------------|
| Pair 1 | EMF/T pre | 60.83 | 24 | 9.54 | 1.95 |
| | EMF/T post | 55.42 | 24 | 11.1 | 2.27 |
| Pair 2 | TC/T pre | 62.75 | 24 | 8.94 | 1.82 |
| | TC/T post | 57.46 | 24 | 10.28 | 2.10 |

| | <i>N</i> | <i>Correlation</i> | <i>Sig</i> |
|--------|----------|--------------------|------------|
| Pair 1 | 24 | .81 | < .001 |
| Pair 2 | 24 | .71 | < .001 |

EMF/T pre/post (Pair 1) TC/T pre/post (Pair 2)

| | <i>M</i> | <i>SD</i> | <i>SEM</i> | <i>95% CI</i> | | <i>df</i> | <i>t</i> | <i>Sig (2-tailed)</i> |
|--------|----------|-----------|------------|---------------|--------------|-----------|----------|-----------------------|
| | | | | <i>Lower</i> | <i>Upper</i> | | | |
| Pair 1 | 5.42 | 6.50 | 1.33 | 2.67 | 8.16 | 23 | 4.08 | < .001 |
| Pair 2 | 5.29 | 7.44 | 1.52 | 2.15 | 8.43 | 23 | 3.49 | .002 |

The EMF pretest and posttest difference calculations using regression to control for age as a covariable produced a value of $p = .006$ and $R^2 = .38$. The data in the statistical analysis indicates an increase in emotion regulation as indicated by emotional functioning score during the 12-week period measured at Fair Play (see Table 4.5).

Table 4.5

Analysis of variance table for polynomial regression model:

| Source | DF | SS | MS | F-stat | P-value |
|--------|----|-----------|-----------|-----------|---------|
| Model | 2 | 375.33418 | 187.66709 | 6.5848194 | 0.006 |
| Error | 21 | 598.49916 | 28.49996 | | |
| Total | 23 | 973.83333 | | | |

With ThC being the program modality at Fair Play, a decrease in emotion functioning score suggests emotion regulation scores improved during the 12-week period measured. Delis (2012) suggests emotion regulation is interrelated to social functioning, implying increased emotion regulation would also increase social functioning. The practical aspects would suggest campers with higher frustration tolerance, less mood fluctuation, and increased compliance with increased social functioning. This indicates improvement in EMFT scores only and does not suggest causation.

Research Question 2

The second question, does age of camper and time in the program affect the emotion regulation and program progress scores in male youth while participating in a ThC program? An ANCOVA was performed to control for age and time in program with the EMFT data. The results were produced using SPSS software and reported no statistical significance. The null hypothesis was rejected with the results being $f(1) = 3.345$ $p = .083$ when ANCOVA controlled for age with EMFT M difference scores (See table 4.6).

Table 4.6

Tests of Between-Subjects Effects with Dependent Variable: EMFT/T M difference

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|-----------------|-------------------------|----|-------------|-------|------|---------------------|
| Corrected Model | 442.473 ^a | 4 | 110.618 | 3.955 | .017 | .454 |
| Intercept | 131.461 | 1 | 131.461 | 7.701 | .043 | .198 |
| Age | 93.535 | 1 | 93.535 | 3.345 | .083 | .150 |
| CampGrp | 100.420 | 3 | 33.473 | 1.197 | .338 | .159 |
| Error | 531.360 | 19 | 27.966 | | | |
| Total | 1678.000 | 24 | | | | |
| Corrected Total | 973.833 | 23 | | | | |

Note. a R Squared = .454 (Adjusted R Squared = .339)

The ANCOVA results does not indicate age as a co-variable when associated with differences in camp group. To further investigate, post hoc comparisons were made by the researcher using age as a variable using different linear and quadratic regression statistical analyses of EMFT and Y-OQ score mean differences. Age controlled for with EMFT Improvement (EMFT Pre – EMFT Post) using a quadratic regression model. EMFT Improvement calculated as the DV and age as the IV, indicated $p = 0.006$, $R^2 = 0.3854$ with the quadratic regression model. This data did indicate age as being statistically significant.

Assignment of a camper to a camp group is a practical procedure performed by camp staff at admission to a group most likely fit the camper's needs, based on the camper's age along with his bio-psycho-social development level. This procedure does not provide randomization or selection needed for experimental research design. There is no clear cut off for age, only approximate. It would be possible to have two 12-year old camper in different groups, but there would not be an eight-year old in a group with a 14-year old.

Other data obtained in the quadratic regression indicated the optimal age for EMFT Improvement is age 10 years, two months and the EMFT Improvement scores begin to decline at age 15. These results can assist researchers in further research.

Statistically when the time in program variable was controlled for using ANCOVA with EMFT score difference the results indicated $f(1) = 3.94$ $p = .062$. In the linear regression model with EMFT Improvement scores (DV) compared to weeks in the program (IV) indicated, $r^2(1) = -0.0744$, $p = 0.1969$.

Research Question 3

The third question asks Do program progress scores improve while male youth participate in ThC program? The Y-OQ-30.2 results were used to determine these results. A Paired Sample t -Test compared the means of the Y-OQ Pre and Y-OQ Posttest findings. The results indicated a correlation of $R = .64$ and a score of $T = 4.77$ with significance of $< .001$ (one-tailed). The results of the Paired Sample t -Test indicated statistical significance rejecting the null hypothesis and accepting the alternative, $t(23) = 4.77$, $p \leq .05$. This suggests that the findings for statistical significance with the Y-OQ pretest and posttest (see Table 4.5). *Cohen's d* was found to be $d = 0.881$ suggesting a large ES (Cohen, 1992).

The Y-OQ-30.2 Administration and Scoring Manual (2004) states the best indicator of global change with a child is the Total Score. Accepting the alternative hypothesis indicates there was an improvement in program progress during the 12-week period monitored at Fair Play.

Table 4.7

Paired Sample t-Test Statistics of Y-OQ Pretest and Posttest

| | | <i>M</i> | <i>N</i> | <i>SD</i> | <i>SEM</i> | | | |
|----------|-----------|---------------|--------------|--------------|------------|---------------------|------|--------|
| Pair 1 | Y-OQ pre | 50.63 | 24 | 21.60 | 4.41 | | | |
| | Y-OQ post | 34.29 | 24 | 11.93 | 2.44 | | | |
| | | <i>N</i> | <i>r</i> | <i>p</i> | | | | |
| Pair 1 | | 24 | .64 | .001 | | | | |
| | | 95% <i>CI</i> | | <i>df</i> | <i>t</i> | <i>p (2-tailed)</i> | | |
| <i>M</i> | <i>SD</i> | <i>SEM</i> | <i>Lower</i> | <i>Upper</i> | | | | |
| Pair 1 | 16.33 | 16.79 | 3.43 | 9.25 | 23.42 | 23 | 4.77 | < .001 |

Note. CI = confidence interval

Along with the second question, does age of camper and time in the program affect the emotion regulation and program progress scores in male youth while participating in a ThC program?; The researcher chose to perform an ANCOVA to also control for age in the Y-OQ T pre/post data. The results were produced using SPSS software and reported there was not statistical significance to reject the null hypothesis with the results being $f(1) = 5.90$, $p = .025$ with weeks in the program (see Table 4.8).

Table 4.8

Tests of Between-Subjects Effects

Dependent Variable: Y-OQ Diff

| Source | Type III SS | df | MS | F | Sig. | Partial Eta Sq | Obsr Power ^b |
|-----------------|-----------------------|----|---------|------|------|----------------|-------------------------|
| Corrected Model | 3765.935 ^a | 4 | 941.48 | 3.72 | .021 | .439 | .788 |
| Intercept | 1988.454 | 1 | 1988.45 | 7.85 | .011 | .293 | .758 |
| Age | 1495.110 | 1 | 1495.11 | 5.90 | .025 | .237 | .636 |
| CampGrp | 704.809 | 3 | 234.93 | .92 | .446 | .128 | .215 |
| Error | 4807.023 | 19 | 253.00 | | | | |
| Total | 16099.000 | 24 | | | | | |
| Corrected Total | 8572.958 | 23 | | | | | |

a. R Squared = .439 (Adjusted R Squared = .321)

b. Computed using alpha = .05

Linear regression models produced results with Y-OQ Decrease (DV) and age (IV) as $r(22) = -.63, p = .001$. Quadratic regression model comparing Y-OQ Decrease (DV) and age (IV) produced a correlation $r^2(21) = .44, p = .002$. The regression equation for predicting Y-OQ score decline, age was found to be a covariant with, $Y\text{-OQ Decrease} = 319.90098 + -39.305488 X + 1.2245277 X^2$. The r^2 for this equation was .44; that is, 44% of the variance in Y-OQ score decrease was predictable from the increase in age.

The question also asked if time in the program (Progtimewks) could be a covariant. An ANCOVA and Regression equation provide findings indicating the following results. The ANCOVA results stated: $f(1) = .476, p = .499$. The Regression results concluded Y-OQ difference (DV) and Progtimewks (IV), $r^2(1) = 0.0339, p = .389$.

Chapter Summary

A group of 24 male youth was evaluated at a facility that utilizes ThC. The primary focus of the study was to examine emotion regulation, whether there were differences based on age, time in program, and program progress. The results of the study presented data with findings indicating emotion regulation, was improved during the measured period based on D-REF subscale for emotional functioning. The issue of age being a covariate became interesting, as the ANCOVA results did not find age significant as a covariable when controlled for in the emotional functioning subscale. Further study of participants age did indicate with quadratic regression models as age being a covariable associated with EMFT score differences, and Y-OQ score differences. Time in program did not prove to be a covariate in the EMFT difference results or the Y-OQ difference scores. The final question asked about treatment progress. Program progress data provided by the Y-OQ-30.5 suggested there was overall improvement in program progress. An ANCOVA controlling for age with the program progress and was found

to be a covariable. The next chapter will address conclusions and recommendations based on the results reported above.

CHAPTER FIVE: CONCLUSIONS

Overview

This study proposed there is a lack of mental health services available to children and youth. Some treatments and programs currently being used to address this problem with youth have not been empirically evaluated or reviewed for effectiveness with youth populations. Therapeutic Camping (ThC) is a program modality providing therapeutic programming for children and youth with emotional and behavioral problems. In the current literature and research presented in this dissertation, ThC has operated using programing and therapeutic methods produced from anecdotal results and this study has begun to evaluate the variables of the program at Fair Play. This study was designed to explore and measure the effect of ThC on emotion regulation, evaluate age as a covariant, and measure program progress of youth while participating in a 12-week period at ThC program at Fair Play.

Summary of Interpretation and Findings

This research study using non-experimental/quasi-experimental methods was used to evaluate scores produced by 24 male campers during a 12-week period between March and June 2019. Results revealed a significant increase during the 12-week assessment period of the program in Emotional Functioning and Total Composite scores as measured by D-REF scores, and age of the camper not being a co-variable of Emotional Functioning Scores. The ThC program progress scores measured during the 12-week period suggested improvement during this time period when measured with the Y-OQ-30.2. This resulted in the null hypothesis being rejected in two of the three research questions and accepting the null hypothesis in question two. Due to the program components, organizational and physical layout of Fair Play, a true

experimental method was not found to be appropriate. This led to a pre-experimental/quasi-experimental design.

Although the data produced from the study was able to provide limited results and correlational data, causation or effect could not be stated by the results. The data obtained in the study could be beneficial at Fair Play to indicate further study is needed and increased focus in research dealing with age. This study does produce additional questions that could be addressed in future research and study. With ThC being a process with many variables, beginning to identify these variables offers additional measures to be explored. The study did provide findings indicating improved emotional functioning (EMF/T) and total composite (TC/T) during the 12-week period measured with the D-REF rating forms. The results also indicated improved scores using Y-OQ-30.2 indicating increased program progress during the 12-week period measured. Age evaluated as a covariate with emotional functioning was program progress and found to be a covariate while time in the program was not. Provided below are the impressions and implications for each research question.

Research Question 1

The findings supported rejecting the null hypothesis in research question one which focused on emotion regulation score improvement. Emotion regulation was measured in this study using the Emotional Functioning Score of the D-REF. Emotion regulation and dysregulation has many variables that describe emotion regulation and dysregulation. The research question is very general and could be better defined in future research. The lack of availability of emotion regulation measures limited more specific data.

The results of the Paired Sample t-Test of EMFT pre and posttest provided the statistical results to reject the null hypothesis, although specific causation is not identified providing the

researcher with no capacity to evaluate what caused the effect due to the inability to control for threats to internal and external validity. These validity issues included no comparison across groups due to the not having randomization or control groups (Black, 1999). Other events that occurred during the research also known as extraneous variables potentially increased threats to internal validity. Age was controlled for in the data, although this was only a 12-week period, it may not represent the entire 18-month period a participant is in the program. This presents an external validity problem because the 12-week period is not representative of the entire program. Time in the program was determined not to be a covariable but may be a threat to validity because of the range of this variable.

The results of the Paired Sample t-Test of EMFT pre and posttest scores produced findings implying statistical significance, indicating a mean difference increase and correlation to support the alternative hypothesis, although EMF results of the D-REF gives a general measure of emotion response, not identifying specific problematic emotions or dysfunction. The D-REF Manual reports emotion regulation is a function of social function and other variables like frustration tolerance, social cues, and implicit social rules (Delis, 2012). Decreased frustration tolerance can produce reactions that result in external responses like anger outbursts. This can result in consequences that reduce obtaining desired goals, and this can result in internal responses producing possible depression or anxiety that further reduce obtaining desired goals (Delis, 2012). Emotional response by individuals in specific environments produce intuitive and observed feedback. Accurate evaluation of this feedback increases appropriate emotion regulation. Although the scores statistically improved, many extraneous variables are likely to have influenced this improvement and further data is needed to clarify these.

The Total Composite Score (TC) comprised of emotion functioning core index score along with behavioral and executive function score also supported statistical significance when pre and posttest means were compared using statistical methods. Although not part of the research question, these other subscales on the D-REF indicated improved scores during the 12-week period of the study.

The research also provided additional data and statistical findings indicating campers generally maintained or improved their change score as indicated with the URICA for the 12-week research period monitored. This finding suggested that there was statistical improvement in change scores although the results remained within the Contemplation Stage of change.

Research Question 2

The second research question focused on the problem of age and time in program confounding the findings in the inference of the first research question. Although this research question was presented as an individual question formally in the dissertation, it was essentially an additional statistical process pertaining to research questions one and two. An ANCOVA statistical models were used to control for age and time in program as a covariable in relation to EMFT score differences in research question one. The ANCOVA findings did not indicate age to be a covariant, although linear and quadratic regression results allowed the null hypothesis to be rejected in reference to EMFT scores controlling for age. Post hoc statistical review using statistical models including ANOVA, Linear, and Quadratic Regression Models to analyze the data. These statistical models supported findings indicating age was a covariant, with $p = 0.006$, $R^2 = 0.3854$, and the camp group was not a covariate. This suggests emotional functioning was influenced by age, although other influences should be considered. Post hoc quadratic regression testing not only produced age and group correlations with emotion function score improvements,

but it produced quadratic regression findings suggesting participant's EMFT scores for the 12-week period improved most at age 10 years, two months and at age 15 years the scores were no longer significant. Findings for age as a covariable in program progress scores will be discussed in the next session. These results do not provide indication for the causation of EMFT score improvement. There are multiple developmental, cognitive, and environmental factors to consider requiring further research. Although empirical data was lacking, practical implications discussed could enhance programming development and strategies at Fair Play.

Time in program was controlled for in with EMFT difference scores as well. This was controlled for using ANCOVA and regression. The results indicated time in program as non-significant in both equations, thus is not covariable with EMFT difference scores during the 12-week period observed.

Research Question 3

The third research question focused on overall treatment outcome at Fair Play. The instrument used to measure this was the Y-OQ-30.2. The results were statistically evaluated using a Paired Samples *t*-Test resulting in findings of statistical significance to reject the null hypothesis and accept the alternative. An ANCOVA statistical model was used to control for age and time in program as a covariable in relation to Y-OQ pre and posttest score differences in research question three. The ANCOVA findings indicated age to be a covariant, thus rejecting the null hypothesis in reference to Y-OQ scores. The time in program variable results did not find covariance with Y-OQ score difference as reported above. Along with the ANCOVA, a post hoc statistical review was performed using other statistical models including ANOVA, Linear, and Quadratic Regression Models to analyze the data. Linear regression models produced results with Y-OQ Decrease (DV) and age (IV) as $r(22) = -.63, p = .001$. YOQ Decrease =

108.59783 - 6.9252476 Age. Quadratic regression model comparing Y-OQ Decrease (DV) and age (IV) produced $r^2(21) = .3977$, $p = .0022$. These regression results indicate 44% of the Y-OQ decrease was attributed to age as measured by the Y-OQ-30.2 scores. The quadratic regression model also predicted the rate of Y-OQ improvement to decrease at a rate of approximately two-and-a-half points per age in years, whereas, $\frac{dy}{dx} = 2.449(\text{Age}) - 39.3$. This regression model also suggested $\frac{dy}{dx} = 2.449(\text{Age}) - 39.3 = 0 \rightarrow \text{Age} = 16.05$ years at which time the Y-OQ score improvement begins to decrease. This is the age where decrease stopped according to the regression model.

The findings support improved program progress scores with ThC programing at Fair Play as indicated by the Y-OQ-30.2 (Delis, 2012; Gillis et al., 2016). The pretest and posttest Total Score means were used on the Y-OQ-30.2 to measure program progress typically used to assess a child's general functioning compared to normative populations (Burlingame et al., 2004). The results indicated statistically significant improved program progress scores during the 12-week period at Fair Play, although age did was a covariable, time in program was not.

Implications

ThC has been a program modality for male youth with behavioral and emotional problems since 1946 (Loughmiller, 1965; McNeil, 1957; White, 2015). The program operated on assumptions it was effective due to anecdotal reports by parents, staff, and boys associated with a ThC program (Gass et al., 2012; Loughmiller, 1965; White, 2015). There was little if any empirical research to support the anecdotal reports (Gass et al., 2012; White, 2015). The only reported research cited by Loughmiller (1965) was a University of Texas study could not be located through extensive searches during this research (Gass et al., 2012; White, 2015).

Although, the current research has limitation, it did provided data supporting and challenging historical assumptions regarding ThC.

The findings indicate in this research suggest during a 12-week period of observation, ThC Emotional Functioning Scores (EMF) and Total Composite Scores (TC) statistically improved. Anecdotal reports suggest campers' behaviors improve along with social skills and problem-solving skills while involved in the program and after completion of the program (Fair Play Wilderness School & Camp, 2015; Loughmiller, 1965). The results presented in this study are inconclusive to suggest causation of the improved scores. The independent variable in the study is difficult to deconstruct due to the known and unknown variables. Possible extraneous variables are difficult to measure and include, nature, perceived adventure, community, structure, group dynamics, and the integration of these (Bandoroff, & Newes, 2004; Gass et, al., 2012). This study has begun to identify and address potential components of ThC by exploring an independent variable and the effect on the dependent variable. Since there has been little to no research and data concerning ThC directly, comparison of the results in this study was not as robust as studies that follow-up, compare research, or replication of research. This study resulted in producing more questions than answers and may be the initial implication for further ThC research. The next section presents data findings and provides implications.

Emotion Regulation

Children and youth may experience difficulties regulating emotion and acting out in dysfunctional ways (Gross, 2014; Fernandez, Jazaieri, & Gross, 2016; Kring & Sloan; Saarni, 2009; Schore, 2012; 2003a; 2003b). Problems therapists, teachers, and parents report youth experience include frustration, anger, and mood issues (Southam-Gerow, 2013). Professionals who research and provide resources for youth, report children and adolescent populations with

mental health issues are increasing, causing tension on an overcrowded mental health system and providers (Children's Defense Fund, 2014; Tucker et al., 2016).

This study suggests that during a 12-week period, ThC increased emotional functioning as indicated by pre and posttest EMF scores. This would suggest during the 12-weeks ThC program, participants improved in areas such as increasing frustration tolerance, reducing rapid mood changes, and internalizing behaviors leading to possible depression and anxiety (Delis, 2012). Improved emotional functioning has shown to improve social functioning (Delis, 2012; Southam-Gerow, 2013). These results indicate EMF score improvement and not causality of the improvement.

Age

Age was shown to be a covariant to emotional functioning scores (EMF) and program progress improvement score (Y-OQ) as indicated by linear and quadratic regression. Camp groups at Fair Play typically have been formed by age-group based on programing and attrition needs, and camp group was not found to be a covariable. Although age and group were measured, other confounding variables need to be considered such as maturation, group changes, staff changes, and environmental conditions. Results of quadratic regression model did predict the age for improved emotional functioning scores (EMFT) for boys in the program along with the age where scores (EMFT) no longer show improvement. This data could be beneficial to Fair Play staff to monitor and increase focus on programing in emotional functioning skills for those age groups.

Although other variable can confound the EMFT scores, age was found to be a covariant during the 12-weeks the participants were observed. Additional longitudinal research or time series research designs with periods longer than 12-weeks could provide beneficial data

concerning age and time in program. Maturation is considered a threat to both internal and external validity. With participants in ThC programs spending up to two-years in a program, the participant's maturation may produce developmental changes in biological, psychological, social, and spiritual characteristics of a participant. EMFT score changes could be affected by maturation due to typical developmental growth. Gross (2014) suggests adolescents experience emotion regulation differently than children or adults. ThC programs serve participants who are in their childhood stage and adolescent stage (Adler-Tapia, 2012; Gross, 2014). Adolescents' emotion is reported to be more intense, experiencing negative and mixed emotions more often than younger and older humans (Gross, 2014). Adolescents emotional experiences also give way to socioemotional adaptation. The developmental periods experienced during an 18-month admission to a ThC program could begin during childhood and complete his experience as an adolescent. The 18 to 24-month period allows time for emotion regulation to occur from, but not limited to developmental changes and social adaptation.

Group

Although, Loughmiller (1965) indicated the group was crucial for individual change in ThC, this study presented regression results indicating the group did not affect emotional functioning scores (EMFT). This finding does not infer cause and effect but does indicate more than one variable or combination of variables that affect ThC processes. Loughmiller (1965) suggested the individual camper was influenced by the group where his social skills are reinforced and his problem-solving skills, including behavior are directly and indirectly encouraged or confronted. Others have also suggested the group is foundational to therapeutic programming and treatment programs (Bandoroff, & Newes, 2004; Gass et al., 2012; Priest &

Gass, 2005). The results of regression models found supporting statistical data suggesting the group was not significant predictor of EMFT score improvement.

Although not a predictor of EMFT score improvement, researchers have reported the importance of group in development of socialization, emotion regulation, and mental health treatment (Delis, 2012; Gass et al., 2012; Southam-Gerow, 2013; Yalom, 2005). The statistical findings of this research, including ANOVA and quadratic regression models indicate group was not statistically significant with emotional functioning scores (EMFT) during the 12-week period and EMFT score change was predicted with regression models. These findings also indicate additional research is needed at Fair Play to evaluate other variables related to group effect on ThC at Fair Play.

This being one of the first known studies of ThC the baseline has been established for other researcher to explore ThC. Although cause and effect were not established in the study there were findings to suggest something happened and ThC is a therapeutic program currently being used implying a need for further study and research to clarify the process and the outcomes.

Therapeutic vs. Therapy

In Chapter Two, an exploration of ThC compared to AT/WT determined ThC did not meet criteria for the definition largely used due mental health providers not overseeing the ThC program (Gass et al., 2012). Proponents of ThC have argued ThC programs provide prescribed changes in campers including, but not limited to improving behaviors, improved family relations, improved social skills, and improved emotion regulation (Bandoroff, 2004; Gass et. al., 2012; Loughmiller, 1979). Unfortunately, little empirical data exists to provide evidence of these changes. The Y-OQ scores indicated program progress score increases during the 12-week

observation period (Burlingame et al., 2004). Emotional, behavioral, and executive functioning scores decreased indicating improvement indicated by D-REF (EMF and TOC) scores during the 12-week period observed. This suggests additional research is needed to evaluate these specific indicators in relation to therapeutic improvements associated with programming and longitudinal research. Participants, proponents and participants of ThC report improvement anecdotally as the results of a ThC program and the findings of this study report improved scores in EMFT and program progress. Further research is needed to determine if the results of this study are consistent throughout the 18 to 24-month therapeutic camping program. The ThC program with addition of mental health professionals could provide other research and programming changes useful to ThC.

Limitations

The primary limitations of this study were the design issues preventing empirical research with randomization and the length of the study being limited to 12-weeks. This study being a PhD Dissertation research study had limitations of time, money, and resources. The researcher had time limitations due to being a student and a fulltime mental health clinician. The researcher lacked a dedicated research staff requiring most of the work to be performed without assistance. The isolation of the facility along with the daily routine of the campers made true experimental types of research problematic. This study used non-experimental/quasi-experimental design due to the inability to randomize the preselected non-randomized groups. The use of non-experimental research design typically increases the possibility of Type II errors, internal and external validity issues, and provided no inference of causation (Black, 1999; Kazdin, 2003; Warner, 2008). The independent variables of ThC are difficult to deconstruct and contain extraneous variables, potential covariates, and confounding variables. This study found age being a covariate, with additional time other findings may have been obtained if other covariables had been controlled for in this research. Multiple

observers, such as camp staff and participant guardians would have enhanced the data, providing additional strength to the results. Delis (2012) suggests multiple observers rating participants provides researchers and clinicians with data from various environments, such as home and camp. Further studies should consider other research designs increasing power and reduce sources of invalidity.

Internal validity concerns limited the study due to not having a control group, as it would be difficult to establish a control group due to not being able to identify extraneous variables in ThC, thus replicating them with a control group. Social interaction was also possible due to the amount of time the participants are together. Emotion regulation is influenced by social expectations which cannot be determined if the interaction was part of the ThC program specific or due to general interaction. Another limitation involving historical internal validity threat is the five-day visit campers receive at the end of each six-week period (Kazdin, 2003). The effect of this variable is unknown and would be difficult to control. Each individual home environment and each specific visit could potentially confound results.

Sample size was known to be an issue during design of the study. The capacity of Fair Play is 40 campers. After inclusion criteria produced eligible participants, 26 participants began the study with two participants being lost to attrition. This produced a small sample $N = 24$ and even smaller sample size within groups. Typically, sample size affects statistical power. The convenience sample used in this research was small due to exclusion criteria and the camper population that prevented increasing the sample size to increase statistical power (Black, 1999; Kazdin, 2003; Warner, 2008). Black (1999) suggests methods to enhance statistical power that include increasing the sample size and quality, measuring procedures, statistical testing decisions, and treatment. The Effect Size (ES) considered and reported in results presented above indicated all having medium ES. Future research should consider increasing power through enhanced design or statistical methods including stage sampling.

Another limitation identified is the ability to replicate due to extenuating variables that are unknown and difficult to control. The daily activities in ThC programs are approximate and not exact and trip activity away from camp are typically not to the same location. Campers and staff have attrition affecting replication of further studies. Replication limitations affect experiments that occur in well controlled labs causing replication issues, so this could be an issue with this experiment with many unknowns causing potential result differences (Black, 1999; Kazdin, 2003).

Evaluation across and between groups suggesting limited comparison although the only difference between groups evaluated statistically in this study was age of participants. The data from the four groups provided variables used in ANOVA, ANCOVA, and regression results. The EMF, TOC, and Y-OQ results were evaluated statistically using Paired T-test to evaluate statistical significance. The groups in the study are not equivalent and potentially is a threat to internal validity. The groups are open allowing new campers to enter and leave the program randomly. Although limited, this design did provide findings to potentially enhance ThC programming considerations and focus.

Outdoor programming and therapeutic programs like adventure and wilderness therapy have been progressive using globalization, accreditation, and research allowing for these field's development (Gass et al., 2012; Norton et al., 2015; Tucker et al., 2016; White, 2015). ThC appears to have remained isolated, serving local and regional populations. Fair Play and ThC generally adhere to traditional programming, relying on anecdotal reports of effectiveness. Although Fair Play camp continues traditional ThC concepts and philosophies, they were receptive to research and graciously accommodated this study.

Exclusion and attrition of participants at Fair Play resulted in 58% the campers being evaluated. Inclusion and exclusion did produce changes in the sample size within the groups during the 12-weeks measured. Although excluded campers were not tested, most remained in the group producing validity threats due to selection bias (Kazdin, 2003). Black, (1999) suggests sample

stability is important in reducing internal and external validity threats with loss or addition of participants, producing extraneous variables and changes in group make-up, causing generalization issues. More powerful data could be obtained with a larger sample. With additional time and resources stratified, cluster, and stage sampling could be used to provide randomization.

Although Fair Play admits younger campers this study had no participants under the age 10, so the data does not provide any statistical conclusions for this younger population. The study was limited to a male population only due to philosophical and organizational design of this facility. There are female facilities using ThC and research specific to a female ThC program would improve generalization.

The research design used in this study limited the results, especially with statistical issues such as randomization, power, and lack of experimental design (Black, 1999; Kazdin, 2003; Knight & Tetrault, 2017; Warner, 2008). Multiple regression provided results for statistical comparison produced by ANCOVA used to control for age and time in program co-variability. Although there were limitations, statistical findings were presented for all research questions.

Gass and others (2012) have argued Adventure Therapy (AT) “is the prescriptive use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on cognitive, affective, and behavioral levels” (p.1). Given this is an accepted operational definition for AT, programs such as ThC have provided results indicating improvements in EMF, TC, and Y-OQ scores occurred during a 12-week period. In contrast ThC has not historically relied on mental health professionals and addition of mental health professionals changes the philosophical foundation of ThC. This 12-week study suggests ThC provided adventure experiences and programming resulting in improvement in emotional function scores and ThC program progress at Fair Play.

Suggestions for Further Research

The need for an increased range of mental health services for youth has been established in this study. With limited availability of practitioners and facilities, additional options should be researched and considered. There are therapies and treatments that use a level of care or criteria to assign program and treatment (ASAM, 2020). With these models, the level of care is determined by criteria that determines what level of care is needed. In addition treatment ASAM levels of care include early intervention, out-patient/partial hospitalization, residential/inpatient services, and medically managed intensive inpatient services (ASAM, 2020).

In mental health care, level of care presents as intervention, support groups, accountability/sponsor, coaching, lay counseling, pastoral counseling, individual counseling, clinical counseling, psychotherapy, and psychiatry. All mental health care is not conducted at the same level of provider qualification or provide equivalent services. The table below (Table 5.1) provides features and limitations of the three categories of adventure-based therapy field (Bandoroff & Newes, 2004; Gass, 1993; Gass et. al., 2012). The use of various levels of care such as Outdoor Programing (OP), Outdoor Therapeutic (OT), ThC, and AT/WT could increase access for youth needing mental health care. As with other levels of care, such as ASAM, criteria could be established to guide referral to OT, WT, and AT programs and facilities.

Table 5.1

Outdoor Therapeutic, Wilderness Therapy, and Adventure Therapy Comparison.

| | Foundational Theory or philosophy | Therapeutic Relationship | Experiential | Group Focus | Mental Health Professional | Prescribed/Wilderness |
|--------|-----------------------------------|--------------------------|--------------|-------------|----------------------------|-----------------------|
| WT | * | X | X | X | X | X |
| AT | * | X | X | * | X | * |
| ThC | X | X | X | X | | X |
| OP | X | * | X | * | | * |
| ABPT | | X | X | * | X | |
| Psy Th | * | X | | * | X | |

Note: WT- Wilderness Therapy; AT-Adventure Therapy; ThC-Therapeutic Camping; OP-Outdoor Programming; ABPT-Adventure Based Psychotherapy; Psy Th-Psychotherapy. X=Included *= Potentially included.

The need for further research is well implicated in this study. Additional studies could be performed to address the limitations listed above. Studies should be expanded to include addition of randomization, longer observation, more participants to increase power, and include research of additional IVs. A more focused study of emotion regulation with measures of specific emotions like anger, anxiety, depression, trust, and happiness could prove beneficial. Research including families as observers and participants could add additional data for further research. Additional observation of participants by staff, additional research focused on the staff, and Fair Play programming would be beneficial and would potentially illuminate the differences between the groups, helping to further understand the study limitation. This study is only the beginning for ThC research and should be built upon with further studies and research. Upon entering the PhD program, Dr. Fred Milacci stated that our research would be adding a brick to the existing wall of research and with very few bricks being laid on the wall of ThC research; my hope is that my brick is soon built upon.

Chapter Summary

This chapter provided a review of the findings along with the limitations found in the study with recommendations for further research. The research produced statistically significant findings indicating Emotional Functioning Scores and program progress scores improvement over a 12-week period at Fair Play. Age was not shown to be a covariant to EMFT scores or Y-OQ scores but does have effect on the group variable as indicated by regression scores. Since there is little if any empirical research on ThC, there is a need to further expand this study. Several limitations were determined in the study but could be reduced with other types of research design.

Conclusion

Children and youth continue to struggle with mental health problems with limited treatments options and services. The inability to develop emotion regulation skills has been shown to be the result of biological, psychological, social, family, and spiritual factors. The outdoor environment has long been known to produce the reality and perception of adventure, wilderness, and change. ThC occurs in an outdoor setting and anecdotally has been reported to be a program that works, using group and nature to promote positive change. This study has taken two aspects of ThC claims and statistically examined emotional functioning scores and program progress scores for statistical significance. This study produced findings indicating emotion regulation as defined by EMFT scores improved as did program progress defined by Y-OQ scores. The data presented in this study provides limited findings, suggesting the program at Fair Play improved emotion regulation and maintained program progress. Additional programming implementations based on these findings may help future services at Fair Play, potentially helping our mental health crisis for children and youth.

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APPENDIX A

January 29, 2019

Stephen E. Talley

IRB Approval 3614.012919: The Effects of Therapeutic Camping on the Emotional Regulation of Male Child and Adolescent Campers

Dear Stephen E. Talley,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

Your study involves surveying or interviewing minors, or it involves observing the public behavior of minors, and you will participate in the activities being observed.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

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APPENDIX B

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Protocol # 3614.012919

PARENT/GUARDIAN CONSENT FORM

The Effects of Therapeutic Camping on the Emotional Regulation of Male Child and Adolescent Campers

Stephen E Talley
Liberty University

Department of Counseling and Family Studies, School of Behavioral Science

Your child is invited to be in a research study on how therapeutic camping at Fair Play Wilderness Camp and School affects the way youth regulate or manage their emotions (e.g. anger, frustration, sadness, fear, etc.). He was selected as a possible participant because your child is a camper at the facility and is already involved in the program. Please read this form and ask any questions you may have before agreeing to allow him to be in the study. Stephen E Talley, a doctoral candidate in The Department of Counselor Education and Family Studies, School of Behavioral Science at Liberty University, is conducting this study.

Background Information: The purpose of this study is to answer these questions.

- 1) Does therapeutic camping improve emotion regulation and decrease emotion dysregulation in male youth at Fair Play?
- 2) Will a decrease in emotion dysregulation and an increase in emotion regulation be seen in the home environment while the male youth is participating in the therapeutic camping program at Fair Play?
- 3) Does age affect the emotion regulation and dysregulation in male youth while participating in a therapeutic camping program?
- 4) Does therapeutic camping at Fair Play produce positive treatment outcomes?

Procedures: If you agree to allow your child to be in this study, I would ask him to do the following things:

1. At the beginning of a 12 week cycle your child will be asked complete three questionnaires called pre-tests. This should take less than 20 minutes per questionnaire to complete. If your child is under the age of 12, his "Chief" will complete a questionnaire after observing your child using a questionnaire specifically designed for this. Your child (or his Chief) will be asked to place his name and age at the top of the questionnaire.
2. At the end of the 12-week cycle your child will be asked to complete the three

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questionnaires again, this is called a post-test. This should take less than 20 minutes per questionnaire. Again, if your child is under the age of 12, his Chief will answer the questionnaire designed for this. Your child will again be asked to place his name and age at the top of the questionnaire.

3. Once the questionnaires are completed, they will be placed in sealed envelopes and collected by the researcher. The researcher will process the data at his office in a secure location.

Risks: The risks involved in this study are minimal, which means they are equal to the risks your child would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study. Benefits to society include verifying therapeutic camping as a method to address emotion regulation and potentially decrease the effects emotion dysregulation has on youth.

Compensation: Your child will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. In any sort of report, I might publish, I will not include any information that will make it possible to identify your child. Research records will be stored securely and only the researcher will have access to the records. I may share the data I collect from your child for use in future research studies or with other researchers; if I share the data that is collected, I will remove any information that could identify him, if applicable, before I share the data.

- All data will be collected via questionnaire. This data will be scored using validated computer scoring methods that includes confidentiality procedures.
- Your child's data will be given a code to prevent your child's identity from being linked to the data. The researcher will be the only person with the code information. Legal and ethical guidelines will be utilized to provide security to the research data. Raw data and questionnaires will be destroyed three years after the research as required by law.
- The record of consent and data from the study will be in the possession of the researcher (Stephen E Talley). This information and data will be personally secured, locked in secure facilities, or password protected if digital data is stored on electronic devices. The data may be used in future presentations, but all raw and electronic data will be deleted after three years. The identity of participants will not be linked to data or results.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not affect his current or future

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relations with Liberty University or Fair Play Wilderness Camp and School. If you decide to allow your child to participate, he is free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you or your child chooses to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you or your child choose to withdraw, no further participation will be expected and any data collected from or about him, will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is Stephen E. Talley. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at setalley@liberty.edu. You may also contact the researcher's faculty advisor, Dr. David Jenkins, at djenkins@liberty.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child to participate in the study.

Signature of Minor Date

Signature of Parent Date

Signature of Investigator Date

APPENDIX C

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ASSENT OF CHILD TO PARTICIPATE IN A RESEARCH STUDY**What is the name of the study and who is doing the study?**

The Effects of Therapeutic Camping on The Emotional Regulation of Male Child and Adolescent Campers, by Stephen E Talley, Liberty University Department of Counselor Education and Family Studies, School of Behavioral Science.

Why are we doing this study?

We are interested in studying emotions like anger, sadness, and being happy while you are at Fair Play.

Why are we asking you to be in this study?

You are being asked to be in this research study because you are already a camper at Fair Play.

If you agree, what will happen?

If you are in this study, you will not have to do anything different at camp except complete three questionnaires at the beginning and end of a 12-week period. This will take about 20 minutes per questionnaire. You will answer several questions about how you feel and how you are doing at Fair Play.

Do you have to be in this study?

No, you do not have to be in this study. If you want to be in this study, then tell your Chief or the researcher. If you don't want to, it's OK to say no. The researcher will not be angry. It's up to you.

Do you have any questions?

You can ask questions any time. You can ask now. You can ask later. You can talk to the researcher. If you do not understand something, please ask the researcher to explain it to you again.

Signing your name below means that you want to be in the study.

Signature of Child

Date

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Protocol # 3614.012919

The researcher conducting this study is Stephen E. Talley. You may ask any questions you have now. If you have questions later, contact him at setalley@liberty.edu. You may also contact the researcher's faculty advisor, Dr. David Jenkins, at djenkins@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact:

Liberty University Institutional Review Board,
1971 University Blvd, Green Hall 2845, Lynchburg, VA 24515
or email at irb@liberty.edu.

APPENDIX D

January 2018

Daniel Hochstetler, Director
Fair Play Wilderness Camp
347 Wilderness Trail,
Westminster, SC 29693

Dear Daniel:

As a doctoral student in the Department of Counseling and Family Studies, School of Behavioral Science at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is *The Effects of Therapeutic Camping on the Emotional Regulation of Male Child and Adolescent Campers* and the purpose of my research is to determine:

- 1) Does therapeutic camping improve emotion regulation and decrease emotion dysregulation in male youth at Fair Play?
- 2) Will a decrease in emotion dysregulation and an increase in emotion regulation be seen in the home environment while the male youth is participating in the therapeutic camping program at Fair Play?
- 3) Does age affect the emotion regulation and dysregulation in male youth while participating in a therapeutic camping program?
- 4) Does therapeutic camping at Fair Play produce positive treatment outcomes?

I am writing to request your permission to conduct my research at Fair Play Wilderness Camp School. Participants will be asked to be observed by camp staff and parents/guardians. Selected camp staff will be asked to observe and evaluate campers weekly on written evaluations. Parents/guardians will be asked to observe and evaluate their son at the end of the “homesday” period by written or electronic evaluations. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, respond by email to setalley@liberty.edu.

Sincerely,

Stephen “Eddie” Talley
Doctoral Candidate,
Liberty University Department of Counseling and Family Studies,
School of Behavioral Science

APPENDIX E

Stephen Talley

From: Daniel Hochstetler <daniel@fairplaycamp.org>
Sent: Monday, December 3, 2018 11:08 AM
To: Talley, Stephen Edward
Subject: Re: Research

Eddie,

I am excited to hear from you and to see that your project is moving forward. Please use this email as Fair Play Camp formally accepting and giving permission for you to conduct your research at Fair Play Camp School. I will be happy to coordinate the staff and Campers who are willing to volunteer to work with you to complete this evaluation for you.

If you need any other type of documentation, please contact me.

Daniel Hochstetler
Executive Director

Fair Play Camp School
www.fairplaycamp.org
Office: 864.647.4311
Cell: 864.985.9022
daniel@fairplaycamp.org

From: [Talley, Stephen Edward](#)
Sent: Thursday, November 29, 2018 10:18 AM
To: [Daniel Hochstetler](#)
Subject: Research

Daniel,

Attached is a permission letter required by the University. Please respond back with an email or letter of permission. This will be sent to the school. Upon approval from the school, I will contact you to begin setting up a time-line with you.

Thank You!

Eddie

APPENDIX F

Evaluation Procedures:

Once the camper is selected his parent/guardian will be notified of the research project, informed consent and permission will be presented to the parent/guardian. Upon receipt of signed consent, the parent/guardian will be invited to the evaluator training meeting. Camp staff and parent/guardians (evaluator) participating in the research will be required to attend training where the evaluator will be presented with (a) information concerning an overview of the research, (b) presentation of the instruments being utilized, (c) manufacturer's instructions for taking the instrument, (d) internet-based responses, and (e) question and answer opportunity. The camp staff and parent/guardians will receive their briefings at different times due to logistical issues such as location and availability, although the same material will be presented.

The research will utilize three test instruments, the Delis-Rating of Executive Functioning (D-REF), Youth Outcome Questionnaire (Y-OQ), and University of Rhode Island Change Instrument (URICA). Each of these instruments are commercially produced and has been normed and validated. The D-REF is distributed and scored by Pearson and the Y-OQ is distributed and scored by QC Measures. These instruments have been validated and normed, with both being used clinically and in empirical research.

Camp Staff

The camp staff will be responsible for the administration of the instruments during the research period. The evaluations of campers who fall below the age cutoff will be completed using teacher/parent forms of instruments. Due to the camp environment, paper evaluations will be completed by all participants. The Camp Staff will place the completed evaluations in a

secure receptacle at the administrative building that will be collected and analyzed by the researcher.

Collection of Data

The data will be collected by the researcher. The researcher will collect the paper data from the research site and paper forms that are mailed to the researcher. The paper forms will be entered in provided cloud-based collection platforms. The data will be securely stored in the researcher's cloud account at Pearson Q-Global and QC-Measures. The data can be utilized by the researcher as needed and data is password protected and stored by the name of the campers. For confidentiality purposes the campers, staff, and parent/guardian will be referred to in published information as a numeral identifier. The name-number reference will only be accessible by the researcher and will be secured by password protected storage.

Observer Training (Staff and Parent/Guardian)

All observers will be required to attend a brief training to familiarize observers with observation expectations, instrument familiarization (manufacture instructions), recording procedures and observation schedules. The researcher's contact information will also be presented to the observers. This training will be provided to the Camp Director initially, and observers will be trained by the Camp Director.

Research Timeline

Dissertation proposal approval.

Institutional (Fair Play) approval letter obtained.

IRB Approval.

Selection of campers and parent/guardian notification of selection.

Informed consent obtained.

Camp staff research training.

Observation begins, Pre-test administered and collected

Observation ends at the end of 12-week period and collected

All data collected and processed, Chapters Four and Five completed.

Data reviewed by the statistician.

APPENDIX G

Instrumentation and Software

The following instruments were used to obtain data for the study. The information was current as of June 2020. The researcher obtained licenses to use the instruments were considered public domain.

Delis Rating of Executive Functions (D-REF)

The researcher utilized the D-REF developed by Dean Delis to measure issues associated with executive functioning. This study used the paper-pencil administration of both the Self Rating Form and the Teacher Rating Form. The D-REF is distributed by PsychCorp an imprint of Pearson Clinical Assessment©. Inquiries and technical data for the D-REF can be obtained from Pearson at www.PearsonClinical.com. Scoring of the D-REF was performed using Q-global™ web-based system by Pearson. Information and inquiries may be found at www.pearsonassessments.com/professional-assessments/digital-solutions/q-global/about.html.

Youth Outcome Questionnaire™-30 Version 2.0 (Y-OQ®-30.2)

The Y-OQ-30.2 developed by Gary Burlingame, Ph.D. was used to measure overall treatment outcome in this study. The study used paper-pencil administration of the Y-OQ-30.2. The self-report (SR) and parent report (PR) instrument were used. The Y-OQ-30.2 is distributed by OQ Measures, LLC. Information and inquiries may be found at www.OQMeasures.com. Scoring of the Y-OQ-30.2 was performed by hand using the Administrative and Scoring Manual.

University of Rhode Island Change Assessment Score (URICA)

The URICA is a public domain instrument developed by Carlo C DiClemente, PhD and was used to measure readiness to change. The study used paper-pencil administration of the URICA. The instrument and scoring information was found at <https://habitslab.umbc.edu/urica/>.

IBM® SPSS Statistics© Version 26

SPSS Version 26 was used to perform statistical outcomes reported in the study. The researcher maintained current license of the product during this study.