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Brian K. Malcarne  
*Brigham Young University - Provo*

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CONSTRUCTIVE ENABLING: APPLYING A WILDERNESS SKILLS  
INTERVENTION TO SUPPORT THE THERAPEUTIC  
CHANGE PROCESS OF ADOLESCENT FEMALES  
IN RESIDENTIAL TREATMENT

by

Brian K. Malcarne

A thesis submitted to the faculty of

Brigham Young University

in partial fulfillment of the requirements for the degree of

Master of Science

Department of Recreation Management and Youth Leadership

Brigham Young University

December 2007

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BRIGHAM YOUNG UNIVERSITY

GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Brian K. Malcarne

This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Stacy T. Taniguchi, Chair

\_\_\_\_\_  
Date

\_\_\_\_\_  
Patti A. Freeman

\_\_\_\_\_  
Date

\_\_\_\_\_  
J. Kelly McCoy

\_\_\_\_\_  
Date

\_\_\_\_\_  
Stephen G. Biddulph

BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the thesis of Brian K. Malcarne in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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Date

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Stacy T. Taniguchi  
Chair, Graduate Committee

Accepted for the Department

---

Patti A. Freeman  
Chair, Department of Recreation Management and  
Youth Leadership

Accepted for the College

---

Gordon B. Lindsay, Associate Dean  
College of Health and Human Performance

## ABSTRACT

### CONSTRUCTIVE ENABLING: APPLYING A WILDERNESS SKILLS INTERVENTION TO SUPPORT THE THERAPEUTIC CHANGE PROCESS OF ADOLESCENT FEMALES IN RESIDENTIAL TREATMENT

Brian K. Malcarne

Department of Recreation Management and Youth Leadership

Master of Science

The purpose of this study was to explore the potential benefits of a primitive wilderness skills intervention (POST) on the therapeutic change process of adolescent females enrolled in a residential treatment center. A qualitative data analysis approach was used. A convenience sample of eight female adolescents was selected by therapist referral. The data were analyzed using open, axial, and selective coding. Data analysis was used to assess participants' progress in the therapeutic change. Further analysis revealed a core theme connecting participants' POST experience with feelings of self-empowerment and reflective connections to their individual therapeutic change process. *Constructive enabling* was the gerund provided to represent this core theme. Attributes of constructive enabling included the opportunity for creative expression, the recognition

of and reliance on social resources, the application of individual effort in challenging situations, the completion of a finished product, and the facilitation of reflective thought.

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Constructive Enabling: Applying a Wilderness Skills Intervention to Support the  
Therapeutic Change Process of Adolescent Females in Residential Treatment

Brian K. Malcarne

Brigham Young University

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### Abstract

The purpose of this study was to explore the potential benefits of a primitive wilderness skills intervention (POST) on the therapeutic change process of adolescent females enrolled in a residential treatment center. A qualitative data analysis approach was used. A convenience sample of eight female adolescents was selected by therapist referral. The data were analyzed using open, axial, and selective coding. Data analysis was used to assess participants' progress in the therapeutic change. Further analysis revealed a core theme connecting participants' POST experience with feelings of self-empowerment and reflective connections to their individual therapeutic change process. *Constructive enabling* was the gerund provided to represent this core theme. Attributes of constructive enabling included the opportunity for creative expression, the recognition of and reliance on social resources, the application of individual effort in challenging situations, the completion of a finished product, and the facilitation of reflective thought.

Key Words: adolescence, adolescent treatment, therapeutic change, primitive wilderness skills, recreation therapy, wilderness therapy, residential treatment

## Introduction

Current statistics estimate one in ten children experience mental health problems severe enough to impair functioning to some degree and to be classified as a mental disorder (McDougall, 2006; National Institute of Mental Health, 2007). Wilderness therapy programs are gaining popularity and empirical credibility as a legitimate treatment option for adolescents with psychiatric problems (Rosol, 2000). Research supports that various therapeutic outcomes are available to adolescents through wilderness therapy, including enhanced self-concept and social skills (Russell & Hendee, 2000), elevated self-esteem and decreased delinquency (Berman & Davis-Berman, 1995), a sense of accomplishment, positive emotional expression, developed coping skills, improved communication skills (Russell, 2001), and a more positive response from adolescents toward treatment (Bacon & Kimball, 1989). Despite applicability and demonstrated outcome benefits of wilderness therapy for adolescents, logistical considerations (e.g., time, money, availability of wilderness areas, etc.) make it unrealistic for all adolescents in psychiatric treatment circumstances to participate in an extensive wilderness therapy program.

While working as a recreation therapist at a residential treatment center (RTC) for female adolescent patients with psychiatric problems, the researcher helped develop a new recreation therapy intervention utilizing primitive wilderness skill instruction (e.g., making hand-drill fires, shelters, plant fiber cordage, gourd canteens, clay pots, etc.) similar to the primitive wilderness skill instruction component of several existing wilderness therapy programs (Anasazi, 2006; Outback, 2006; RedCliff, 2006; Russell &

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Hendee, 2000). This primitive wilderness skills intervention was provided, however, in the non-wilderness context of residential treatment (on campus or at community parks). The intervention became known at the RTC as the Primitive Outdoor Skills Training (POST) intervention. POST was designed to involve more adolescent patients in a wilderness therapy experience without incurring the expenses, liability, and extensive logistical planning typically associated with traditional wilderness therapy programs.

Facilitating any new program for adolescents as a treatment intervention carries with it the responsibility of determining associated treatment outcomes. Indeed, the current trend in health care practice is to conduct research to support productive interventions and to eliminate unproductive ones (Gass, 2005). Although primitive wilderness skills are a major component of several wilderness therapy programs (Russell, 1999), few documented studies exist on the therapeutic application of primitive wilderness skill instruction in adolescent treatment (Clifford, 2003; Henson, 2004). The application and outcomes associated specifically with a primitive wilderness skill instruction component of wilderness therapy is underdeveloped in both wilderness therapy and residential treatment settings.

To date, most of the rationale for using primitive wilderness skills in wilderness therapy programming is based on anecdotal evidence and is in need of empirical research to identify and confirm treatment outcomes. The purpose of this study was to explore the potential benefits of a primitive wilderness skills intervention (POST) on the therapeutic change process of adolescent females enrolled in a residential treatment center.

## Review of Literature

*Adolescent Development and Psychiatric Problems*

The human developmental period of life termed *adolescence* marks the transitional period from childhood to adulthood (Santrock, 1998) occurring within the age range of about 10 to 21 years old (Baumrind, 1991). This is a critical time for development in the life cycle that sets a trajectory course for adulthood. In order to most effectively assist adolescents in being successful during this period of life, it is important to be aware of major developmental influences during this transitional period.

It is typical for adolescents to experience increased levels of stress, challenges, and problems (Chassin et al., 2004) as a result of the major biological changes, cognitive advances, and emerging psychosocial expectations (Harter, 1999) associated with this developmental transition. For example, due to the dramatic physical transformation and the impact of biological changes on psychosocial development, it is common for adolescents to undergo some stress related to biological development (Chassin et al.; Simmons & Blyth, 1987).

In addition, the delayed development of advanced cognitive capacities (i.e., impulse control, strategizing, prioritizing, evaluating consequences, etc.) into late adolescence and young adulthood (Giedd, 2004) may contribute to cognitive-social immaturity. Cognitive-social immaturity combined with egocentric thoughts and sensation-seeking tendencies may help explain the high susceptibility of adolescents to engage in various risk-taking behaviors, such as risky sexual behavior, substance abuse, and delinquent behavior (Arnett, 1992; Greene, Krcmar, Walters, Rubin, & Hale, 2000;

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Igra & Irwin, 1996). Igra and Irwin proposed that negative “risk-taking behaviors are the most serious threats to adolescent health and well-being” (p. 35).

With the onset of adolescence, new social expectations also begin to emerge (Harter, 1999), including the major psychosocial development tasks of self-concept (Harter) and identity (Erikson, 1968; Marcia, 1966). Waterman (1992) argued the formation of a healthy identity is an important contributor to optimal psychological functioning. Specifically, disturbances in the process of identity formation may correlate with other mental health problems, including identity disorders, borderline personalities, and narcissistic tendencies (Markstrom-Adams, 1992).

Hall (1904) presented the expression of *storm-and-stress* to refer to the life stage of adolescence as a time of intense stress and unavoidable problems. More recently, Arnett (1999) proposed a modified storm-and-stress perspective and suggested that although not inescapably predetermined, extreme stress and various problems (e.g., parent-adolescent conflict, mood disruptions, risk-taking behaviors, etc.) tend to occur more frequently during adolescence than any other life stage. In addition to developmental concerns, several risk factors and problematic circumstances have been identified as special concerns for adolescents, such as substance abuse, sexual activity, physical and mental health problems, academic underachievement, and suicide (Sells & Blum, 1996; Takanishi & Hamburg, 1996).

When the major developmental tasks and transitions associated with the transformation of a child into an independently functioning adult are combined with negative environmental influences and events, it is no surprise that some adolescents



experience developmental stress, escalating disturbances, and various problems (Brunstetter, 1998; McDougall, 2006). For example, Chassin et al. (2004) claimed that if developmental stress is not handled properly, it may escalate to emotional distress and unhealthy attempts to cope (e.g., self medicating with illegal substances). The manifestation of adolescent problem behaviors occurring during adolescence may be categorized as internalizing or externalizing disorders (Graber, 2004). Internalizing problems occur more frequently among girls and are usually associated with mood disturbances, behavioral manifestation of inward emotional symptoms, and the disorders of anxiety and depression (Graber). Externalizing problems are more common among boys and generally refer to antisocial behaviors such as conduct disorder, aggression, and delinquency (Farrington, 2004; Graber).

According to McDougall (2006), it is normative that “all children have mental health needs” (p. 1). In some instances, however, these mental health needs may become problematic to development and functioning. When experiencing mental health problems, adolescents generally manifest symptoms through behavioral and/or emotional expression (McDougall). Current statistics estimate one in ten children experience mental health problems severe enough to impair functioning to some degree and to be classified as a mental disorder (McDougall; National Institute of Mental Health, 2007) in need of therapeutic mediation.

#### *Therapeutic Change and the Stages of Change Model*

If unaddressed and left unresolved, many adolescent problems will persist into adulthood and affect long-term functioning (McDougall, 2006). Therefore, it is essential

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that adolescents receive help and learn to make life changes that will alter the trajectory of any existing developmental problems and guide them toward healthy development and functioning (McDougall). Prochaska and DiClemente's (1982) Stages of Change Model is one theoretical model that addresses the process of making intentional change in attitudes and behaviors.

The Stages of Change Model is well established in the literature and regarded as one of the leading models used to help individuals change negative and harmful lifestyles (Levesque, Prochaska, & Prochaska, 1999). It "has been the basis for developing effective interventions to promote health behavior change" (Cancer Prevention Research Center, 2006, para. 1). Although change theory has been applied mostly to behavioral change related to substance abuse, the change model has also been applied to various problem behaviors, including mental health treatment (Cancer Prevention Research Center). Rather than conceptualizing change as a one time event, The Stages of Change Model identifies change as a process that occurs over time within a five stage progression: (a) pre-contemplation, (b) contemplation, (c) preparation, (d) action, and (e) maintenance.

*Pre-contemplation.* In the pre-contemplation stage, individuals are not aware of or do not consider themselves to have a problem (Kern, 2005). For an adolescent in this stage, it is expected that others (i.e., family, friends, therapist, etc.) are more aware than the adolescent that a problem exists (Prochaska, DiClemente, & Norcross, 1992). When confronted about negative behaviors, individuals in this stage may become defensive and deny that their negative behaviors are problematic (Kern). Prochaska, DiClemente, and

Norcross stated that “resistance to recognizing or modifying a problem is the hallmark of precontemplation” (p. 1103). Therefore, individuals are classified in this stage when they do not recognize that their behavior is problematic and they do not intend to change (Prochaska, DiClemente, & Norcross).

*Contemplation.* This is the stage that marks an individual’s awareness of their behavior as problematic. However, the individual is still lacking the commitment to take the immediate action to change (Prochaska, DiClemente, & Norcross, 1992). In this stage, the individual is ambivalent and not seriously considering change. During this stage, individuals may be weighing the pros and cons associated with the needed change (Kern, 2005).

*Preparation.* The preparation stage suggests that the individual has made a commitment to change and is currently making efforts toward change (Kern, 2005). During this stage, individuals are gathering information to prepare for change. Motivation for change may be expressed in change oriented statements regarding the seriousness of the problem, the need to change, and searching for help to change (Kern). Individuals in this stage may have made unsuccessful attempts to change in the past or they may have already started making small changes by reducing negative behaviors (Prochaska, DiClemente, & Norcross, 1992).

*Action.* In the action stage, individuals believe they can change and they are actively making efforts to “modify their behavior, experiences, and environments in order to overcome their problems” (Prochaska, DiClemente, & Norcross, 1992, p. 1104). To accomplish their desired change, individuals in this stage often apply various techniques

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to help themselves succeed, such as premeditating how to handle relapse pressures, aiding motivation through short-term rewards, being open to help, and actively seeking out support from others (Kern, 2005). For an individual to be in the action stage, the newly changed behavior must be consistently demonstrate for at least three months.

*Maintenance.* The maintenance stage is marked by sustained commitment and changed behavior over a time period of 6 months or more (Prochaska, DiClemente, & Norcross, 1992). It is typical for individuals in this stage to be concerned with avoiding temptations and relapse, focusing on past and continued progress, and making life adjustments necessary for maintaining change (Kern, 2005). In order to maintain positive change, these life adjustments must take place at both the individual and environmental levels (Prochaska, DiClemente, & Norcross).

### *Ecological Perspective and Adolescent Treatment*

An ecological perspective is concerned with the idea that “development and change occurs as a result of interactions between the ‘thing’ developing and the environmental context broadly conceived” (Chibucos & Leite, 2005, p. 303). An ecological perspective was first introduced through 19<sup>th</sup> century home economics for viewing family life issues (Chibucos & Leite). During the 1960s and 1970s, the ecological perspective has evolved in versatility and application to a range of several disciplines, including family development (Hook & Paolucci, 1970) and individual development (Bronfenbrenner, 1979; Chibucos & Leite).

Specifically, Dishion and Stormshak (2007) promoted the use of an ecological perspective approach to child and family therapy interventions as being “uniquely suited

to the needs of children and adolescents presenting with mental health difficulties in which problem behavior is a core component” (p. 3). The rationale for a new approach to mental health for children was based on the need for an increased awareness of developmental considerations that may be overlooked when adult models of treatment are applied to children (Dishion & Stormshak). Their rationale for selecting an ecological perspective was also due to the ecological assumption that adolescent mental health is intrinsically connected to family relationships (Dishion & Stormshak).

Additional key features related to an ecological perspective include reciprocal interaction and mutual adjustment between the developing entity and the environment, constant awareness of contextual factors, distinguishing between different levels of contextual influence, and adaptation of the entity to changing circumstances (Chibucos & Leite, 2005). Enrollment of an adolescent in residential treatment involves special environmental considerations. An ecological perspective is one helpful way to consider the role of the adolescent patient within the social context of her family and various health care professionals in psychiatric treatment.

*Adolescent.* One major implication of an ecological theoretical application to a developing adolescent is the reciprocal interaction between the adolescent and her environment. Not only do environmental factors influence adolescent development, but adolescent actions affect their contextual surroundings. Specifically, this suggests that adolescents in psychiatric treatment impact the contexts of their family and their own therapy. This perspective is consistent with family life course theory, suggesting adolescents exercise of human agency through making choices and taking certain actions

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may influence both individual and family experiences and future outcomes (Chibucos & Leite, 2005). In addition, adolescents must be taken seriously as the primary resource to their own therapy process, as active agents in their own developmental outcomes, and as an investment for our future that requires attention (Youniss & Ruth, 2002). Improved access to resources and more effective services are needed to successfully assist youth facing stress and problems during their transition to adulthood (Graber, 2004; Youniss & Ruth).

*Family.* According to Dishion and Stormshak (2007), an ecological perspective argues that “psychopathology is not within the child but rather the child’s maladaptation to a set of relationship experiences” (p. 16). Although adolescent emotional distress and social maladaptation may be determined in part due to genetics, family and other relationship interactions (e.g., peer, teacher, etc.) are thought to contribute to mental health conditions either for improvement, maintenance, or exacerbation (Dishion & Stormshak).

When an adolescent’s mental health problems become unmanageable for families, parents may seek for various adolescent treatment services including residential treatment (Brunstetter, 1998). The decision to enroll an adolescent in residential treatment is accompanied by a major shift in environmental contexts. From an ecological perspective, the adolescent is physically removed from the family micro-system and placed into a treatment micro-system (Bronfenbrenner, 1979). However, the family may still be a major context of influence for the developing adolescent. Family members possess valuable potential to support and contribute to the therapeutic efforts of adolescent

psychiatric treatment (Brunstetter). In addition, Durrant (1993) suggested that parents know their children best and may provide useful insights and advice to treatment professionals.

*Treatment professionals.* Treatment professionals provide a context of influence complete with a multitude of services available to the adolescent. The context of treatment provides a deliberate effort to influence the adolescent in positive ways and to prepare her to interact with and influence her surroundings and relationships in positive and healthy ways. It is a common practice for treatment professionals to communicate, coordinate, and combine treatment efforts through a multidisciplinary team approach. McDougall (2006) described the multidisciplinary team as a “competent network of professionals who can collaborate to provide a comprehensive intervention” (p. 164). The collaboration of professional services may be capable of helping adolescents with a variety of mental health problems across multiple contexts (Dishion & Stormshak, 2007; McDougall).

#### *Residential Treatment and Adolescents*

Professional assistance is available to help adolescents make life changes through improving mental health, buffering emotional strength, and providing behavior modification. Adolescent psychiatric treatment, also known as adolescent behavioral health care, refers to the health care efforts that address adolescent emotional, behavioral, and/or mental problems and disorders (Joint Commission, 2007; Merriam-Webster, 2007). According to McDougall (2006), increasing evidence suggests that therapeutic intervention may offset the developmental trajectory of adolescent mental health

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problems. Many forms of psychiatric treatment are available for adolescents while living at home, including outpatient, day treatment, and community-based treatment (Lyman & Campbell, 1996). However, almost any type of mental problem can lead to a level of severity or crisis requiring the security and intensive therapy offered through residential treatment (Brunstetter, 1998; Lyman & Campbell).

Residential treatment for adolescents typically focuses on treating a variety of mental health diagnoses, including behavior disorders, substance use disorders, and mood disorders (NATSAP, 2006). The National Association of Therapeutic Schools and Programs (NATSAP) defined adolescent residential treatment centers as “boarding schools or programs that provide a highly structured environment, an academic component, and group and individual therapy” (NATSAP). These residential programs include outdoor behavioral healthcare, characterized by the residential use of an outdoor environment combined with clinical therapy, academic programming, and other therapeutic activities as a treatment program for adolescents with problem issues (Russell & Hendee, 2000). Patients in residential treatment usually reside away from home at a program facility for various lengths of time averaging 3 to 18 months (NATSAP). Adolescent residential treatment is one of the many treatment options that have emerged in response to adolescent psychiatric problems.

Previously, only anecdotal evidence and the success stories of individual reports existed to support outcome claims in behalf of residential treatment centers (NATSAP, 2006). In a recent study, NATSAP found that both parents and adolescent patients expressed positive outcomes associated with residential treatment and that “most teens



with serious behavioral and emotional problems that have not responded to other treatments . . . improve during treatment at a private residential treatment program” (para. 2). In comparison to many alternative program designs and approaches, Lyman, Prentice-Dunn, Wilson, and Taylor (1989) proposed that residential treatment maximizes the potential for therapy impact by providing a deliberate treatment focus and qualified clinical professionals. Residential healthcare temporarily removes an adolescent from her/his family context and offers a degree of control through an intense treatment milieu designed to maximize positive outcomes related to therapeutic change (Lyman & Campbell, 1996). At psychiatric treatment facilities for adolescents, members of multidisciplinary treatment teams often include professionals such as a clinical director, therapists, counselors, doctors, nurses, teachers, shift supervisors, and recreation therapists (New Haven, 2007; Provo Canyon School, 2007).

#### *Recreation Therapy and Adolescent Treatment*

Recreation therapy is a quickly developing profession that offers a unique contribution to the multidisciplinary approach to adolescent treatment. According to the American Therapeutic Recreation Association (ATRA), qualified recreation therapy professionals provide recreation interventions in conjunction with treatment techniques to “improve health and well-being” of clients (ATRA, 2006, para. 3). It is thought that adolescents are more receptive to the delivery of therapy when offered through recreation experiences that are perceived as interesting and enjoyable (Sprouse, Klitzing, & Parr, 2005). In addition, recreation therapy may allow for more inclusive involvement despite a participant’s comfort level with verbal interaction that is typically required in traditional

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therapy (Berman & Davis-Berman, 1995). Caldwell (2001) expressed a need for more research and scholarly discussion on the application of recreation therapy for the adolescent population, including the growing and less defined use of wilderness therapy as a recreation therapy modality.

### *Wilderness Therapy and Adolescent Treatment*

Bacon and Kimball (1989) characterized wilderness therapy as an innovative treatment technique that is increasing in popularity among adolescent treatment. In fact, wilderness therapy programs tend to specialize in working with youth requiring treatment, more than any other population (Rosol, 2000). Many wilderness programs use wilderness areas as the residential milieu for adolescent treatment. In addition, residential treatment centers for adolescents often utilize wilderness therapy experiences in the form of outdoor recreation and challenge activities.

The most characteristic feature of wilderness therapy is its deliberate and specialized use of the wilderness environment and outdoor activities to provide therapeutic intervention (Russell, 2001). Rosol (2000) described wilderness therapy as utilizing “aspects of the outdoors to promote change in adolescents with behavioral problems” (p. 42). In addition, by integrating and modifying several previous definitions, Russell defined wilderness therapy as the “involvement in outdoor adventure pursuits . . . under the direction of skilled leaders, with activities aimed at creating changes in targeted behaviors” (p. 73). Although any wilderness experience program may incidentally yield therapeutic benefits and a contribution to the overall well-being of participants, the

intentional application of a wilderness component as a therapeutic intervention is what distinguishes wilderness therapy (Berman & Davis-Berman, 2000).

Determining the effectiveness of wilderness therapy interventions is highly important, especially since these programs are implemented as an alternate form of traditional treatment (Berman & Davis-Berman, 1995). In Gibson's (1979) comprehensive literature review of therapeutic outcomes associated with wilderness programs, he concluded that wilderness programs served as a powerful intervention for influencing positive outcomes in areas of personality, self-concept, behavior, and social functioning. In a more recent literature research review, Russell and Hendee (2000) demonstrated support for wilderness therapy outcomes related to positive development of self-concept and social skills. Additional studies have also demonstrated positive wilderness therapy outcomes related to elevated self-esteem and decreased delinquency (Berman & Davis-Berman), a sense of accomplishment capable of being generalized, emotional awareness and expression, enhanced self-concept, the development of coping skills, and the development of interpersonal communication skills (Russell, 2001). Bacon and Kimball (1989) also suggested that wilderness experiences may solicit a more positive response from adolescents toward treatment as compared to traditional therapeutic interventions.

Autry (2001) pointed out that most of the research on adventure therapy programs (including wilderness therapy) for adolescents has focused on male and co-ed participant groups. Research supports that gender-based differences exist for participants in adventure therapy programs with females being more interested than males in the trust

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building component of program activities (Witman, 1993). In addition, co-ed groups may alter the experience of female participants, suggesting that single gender programs may provide “opportunities to learn skills that they might not try if they were in a co-educational group” (Culp, 1998).

Several common factors exist that are indicative of wilderness treatment programs. Some of these factors include small treatment groups, group cohesion, natural consequences to decisions, challenging experiences, skill mastery, peer and staff mentoring, and techniques to help participants process meaning from experiences (Bacon & Kimball, 1989; Russell, 1999). One of the major components of a wilderness experience is the application of a wilderness context. The term wilderness therapy seems to imply that such an experience may only take place in a wilderness environment (Bacon & Kimball). However, Bacon and Kimball argued that the essential characteristic of a wilderness setting is simply providing an unfamiliar environment which may be replicated in any unfamiliar environment, including urban settings. In addition to an unfamiliar wilderness environment, there are various components that make up each wilderness therapy program. Whether intentionally programmed or just a convenient by-product, all wilderness programs offer some type of skill development and several provide instruction in primitive wilderness skills (Conner, 2007).

### *Primitive Wilderness Skills*

Primitive wilderness skill instruction is a major component for several wilderness therapy programs (Russell, 2001). Primitive skills require the reliance on natural resources and primitive techniques to complete a task or project. Primitive living skills

and primitive skill projects include instruction on hands-on skills and projects such as primitive fire making, building shelters, cooking on an open fire, fashioning a backpack, etc. (Conner, 2007). The use of these types of primitive wilderness skills have uniquely contributed to the development and application of wilderness therapy programs (Russell & Hendee, 2000).

Russell and Hendee (2000) identified the use of primitive wilderness skill instruction as a “key theoretical and practical influence” (p. 26) on the foundational developments of wilderness therapy. The initial use of primitive skills in outdoor programming is attributed to Larry Olsen and Doug Nelson in the 1960s, who utilized primitive wilderness skill instruction as a major component of a wilderness experience course for university students (Russell & Hendee). The influence of this program has since evolved to influence the development of various wilderness therapy programs that use primitive skill instruction as a major program component, including SUWS, Aspen Achievement, and Anasazi (Russell & Hendee). The continued instruction of primitive wilderness skills as a major component for several wilderness therapy programs seems to suggest that some type of benefits must be perceived by program directors in order to justify the instruction of these skills.

Wilderness therapy programs often teach wilderness skills designed to assist participants in becoming more successful in wilderness environment living, overcoming natural challenges, and fostering a positive self-concept through task and project completion (Russell, 1999). However, due to a lack of research, wilderness therapy programs tend to apply primitive wilderness skill instruction based on anecdotal

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evidences. Only two documented studies concerning the application and role of these skills were found during this study. Clifford (2003) found that learning primitive wilderness skills encourages pro-environmental attitudes and behaviors within participants. Within residential treatment, Henson (2004) proposed a framework of primitive wilderness skills to provide a context for instructing and practicing social skills. Research on the applications and outcomes of primitive wilderness skills in wilderness therapy and residential treatment are underrepresented in the literature. More research on the component of primitive wilderness skills is important to the development and application of wilderness therapy interventions for adolescents.

### *Summary*

In summary, the stage of adolescence involves several major developmental transitions and an increased risk for the manifestation of psychiatric problems. Because psychiatric problems may interfere with adolescent functioning and development, it is necessary for adolescents to experience therapeutic change that will disrupt the trajectory of problem behaviors into adulthood. When problems are severe enough, some families seek for professional assistance through residential treatment. An ecological perspective supports that a multidisciplinary team approach with the involvement of the adolescent and family members in the treatment process is most useful for addressing the various contexts of life affected by the psychiatric diagnosis.

Recreation therapy is one approach to therapy that caters uniquely to adolescents. One recreation therapy technique is the use of wilderness therapy, an increasingly more popular treatment intervention for adolescents with psychiatric problems. Although

residential treatment facilities may have limited access to wilderness resources in which to apply wilderness therapy techniques, the application of wilderness skill instruction at a residential treatment facility provides a unique context that may prove beneficial in therapeutic intervention. The application of primitive wilderness techniques at a residential treatment facility is a fairly new concept with little existing research. Therefore, it was proposed that a pilot program providing primitive wilderness skill instruction be administered as a recreation therapy intervention to adolescents at a residential treatment center. The application of qualitative research was used to explore the potential relationship between the POST experience and adolescent attitudes toward therapy and the therapeutic change process.

## Methods

### *Rationale for Qualitative Approach*

A qualitative research approach was selected for this study due to a lack of existing research on wilderness skills, for the purpose of assessing individualized participant outcomes, and for evaluating various stakeholder perspectives. Although primitive wilderness skills are a major component of several wilderness therapy programs (Russell, 1999), research on the application and outcomes of primitive skills are underrepresented in the literature. Only descriptive information of primitive wilderness skills (Russell) and two documented studies concerning the application of these skills were identified during this study (Clifford, 2003; Henson, 2004).

Specifically, the implementation of primitive wilderness skill instruction as a recreation therapy intervention for adolescents enrolled in a residential treatment facility

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is a unique application of wilderness skills for which more research is needed.

Exploratory evaluation is a productive method for gathering a set of initial data “to understand enough about what is happening in the program and what outcomes may be important to then identify key variables that may be operationalized quantitatively” (Patton, 1987, p. 37). It was anticipated that qualitative methods may contribute to the ground work for future exploration, description, quantitative research, and the theoretical development of wilderness skill instruction as a therapeutic intervention (Patton).

The use of qualitative methods allows for each participant to express their own perceptions, providing personalized descriptions of their experiences with POST. Because every adolescent had her own individual background, circumstances, needs, and goals, it was expected that they may perceive different outcomes from participation in the same experience (Patton, 1987). Qualitative data collection and analysis techniques allow for the expression of each participant’s POST experience in terms of individualized outcomes.

Finally, when considering the adolescent treatment, various stakeholders are invested in the outcomes of the treatment interventions. For the purpose of this study, three primary stakeholders were identified, including the adolescent patient, at least of her one parents, and her primary therapist. In this way, the researcher was able to gather various perspectives from the primary stakeholders involved in the adolescent treatment process while being aware of and sensitive to potentially conflicting perspectives (Guba & Lincoln, 1981; Patton, 1987).



### *Study Participants*

This study consisted of a convenience sample of eight adolescent females who were part of the identified population of adolescent patients enrolled in a psychiatric RTC. The decision to select females was based on their under-representation in most wilderness and adventure therapy research as compared to male and co-educational groups (Autry, 2001). The sample size was selected based on the typical number of participants in this type of recreation therapy intervention at the RTC. All participants had at least one clinical diagnoses indicating psychiatric treatment needs in areas of individual functioning (e.g., depression, anger, substance abuse), family functioning (e.g., defiance, aggressiveness), social relationships (e.g., delinquency), and/or academic performance.

Selection of the POST participants was based on the following criteria: (a) participants were enrolled in a psychiatric RTC, (b) participants were female, (c) participants were within the ages of 12 to 18 years old, (d) participants were selected per therapist recommendation, (e) participants were not currently regarded as a therapeutic risk to themselves or others, and (f) participants did not have a projected graduation date prior to the last scheduled POST activity. In addition, at least one parent and the primary therapist of each participant were invited to participate in the study through pre- and post-intervention interviews about the participant.

### *Procedures*

Participants were recruited by referral from their primary therapists. Referral selection was finalized based on participant requirements for the study. The selected

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sample of adolescents participated in an introductory meeting that described POST, explained the research project, and provided students with the opportunity to accept or decline their invitation to participate. Prior to the study, informed consent was obtained from adolescent participants, parents, and therapists.

The POST intervention consisted of 10 meeting times with an introduction session, eight primitive skill activities (lasting up to four hours each), and a closing focus group discussion. The activities took place over a 10-week time frame at an average of one per week and were held either on campus or at nearby park locations. A standard protocol format was used as a framework for all of the POST activities: (a) introduction, (b) hand binding journals, (c) resource recognition activity, (d) primitive shelters, (e) hand-drill fires, (f) cordage, (g) hand-spinning wool with a drop spindle, (h) pinch pot pottery, (i) leatherwork, and (j) final group discussion.

### *Data Collection*

Data were gathered from adolescent participants, at least one parent, and the therapists assigned to each adolescent. Dyadic interviews, ongoing participant activity journals, and a focus group discussion were all techniques used in the collection process. Pre- and post-intervention data were collected so as to provide comparative data to assist in documenting the therapeutic change process of each individual. The following data collection topics are addressed: (a) question development, (b) dyadic interviews, (c) focus group discussions, (d) activity journals, and (e) raw data.

*Question development.* All interview and focus group discussion questions were carefully prepared so as to meet the criteria of being “open-ended, neutral, singular, and

clear” (Henderson, 1991, p. 79). Open ended questions avoid *yes* or *no* responses and seek the respondent’s detailed perspectives. Neutrality was enhanced by avoiding questions that lead the respondent to answer in a certain way. The singular nature of a question is simply that only one question is being asked at a time and that the question may only be interpreted as one question. Clarity of questions was established by keeping questions short, simple, straight-forward, and free from technical words.

*Dyadic interviews.* Henderson (1991) suggested that “interviewing is the best method for pursuing a subject in depth” (p. 71). Qualitative interviewing is often seen as a conversation guided in a general direction by the interviewer (Babbie, 2001; Henderson). Interviews were designed to gather detailed information concerning participants’ perceptions toward therapy, their experience with POST, and the therapeutic change process. Pre- and post-intervention interviews were conducted for comparison so as to document the extent that participants demonstrated therapeutic change as indicated by Prochaska and DiClemente’s (1982) Stages of Change Model.

The interview schedule was divided into three sections. The first section focused on building rapport with respondents, answering questions, and addressing concerns. The second section consisted of five questions based on in Prochaska and DiClemente’s (1982) Stages of Change Model to assign each participant into one of the five stages of change. The third section solicited perceptions relative to the POST experience.

*Focus group discussion.* Henderson (1991) suggested that focus group discussions could be appropriately used at any phase of a program. A focus group discussion was conducted at the conclusion of the POST program. The timing and structure of the

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discussion provided the group with the opportunity to talk about the POST program experience in an evaluative way. Participants were asked to talk about their overall experience with POST and how one of the activities applied to their therapy, if any.

*Activity journals.* Following each POST activity, participants were asked to write a half-page response to their experience. It was anticipated that a writing activity would help participants reflect on their experiences (Brew, 2003). It was presented as free-writing activity about the participants' experience with POST and how it might relate to therapy, if at all. To encourage the emergence of naturalistic expression, participants were instructed to write without concern for editing and were ensured that their writing would not be judged (Brew).

*Raw data.* With parent, therapist, and participant consent, interviews and focus group discussions were digitally recorded as audio files and activity journals were photocopied. All raw data were stored in a secure location. Pseudonyms were arbitrarily assigned to participant data to ensure anonymity and confidentiality. Raw data were transcribed and managed by the QSR NVivo software package for data analysis.

### *Data Analysis*

This study utilized a qualitative data analysis (QDA) approach as described by Strauss and Corbin (1998). The data analysis process attended to the guiding research question through open, axial, and selective coding. Open coding was used to identify concepts and define conceptual categories as they emerged from the data (Strauss & Corbin). The technique of line-by-line analysis was employed to ensure close examination of the data. Next, axial coding was used to facilitate the development of

categorical attributes and relationships that may offer insights into scientific phenomena. The comparative analysis technique was applied to compare and contrast emerging concepts so as to assign them into conceptual categories based on shared attributes (Strauss & Corbin). Finally, selective coding was used to compare and link together major categories. The selection of a central theme from the data narrowed the focus of the findings. In addition, refinement and validation were added to the findings by considering how major categories of analysis supported the central theme.

#### *Validity Plan for Establishing Trustworthiness*

A validity plan was implemented during the data analysis process to establish trustworthiness of the findings by addressing the qualitative standards of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). The techniques of methodological triangulation and member check were used to increase the credibility of the research by capturing the most accurate representation of the sample as possible (Marshall & Rossman, 1989). Methodological triangulation was accomplished by utilizing multiple data sources (i.e., students, parents, therapists) and multiple collection techniques (i.e., interview, focus group, journal entries). Toward the conclusion of the data analyses process, a member check was conducted with as many of the original participants as possible so they could review and offer their feedback regarding the research findings.

Transferability of the research was achieved by maintaining detailed documentation of the research methods, analysis, and findings so as to provide a framework for other researchers to replicate this study with additionally identified

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populations of interest. Dependability of the research was accomplished through an external audit technique used to demonstrate consistency and reproducibility within the research methods. Confirmability refers to the purity of the emerging outcomes from the data and the absence of researcher bias. A third party peer review and a confirmability audit were used to strengthen the neutrality of the study findings (Lincoln & Guba, 1985). Thus, several sources contributed to the trustworthiness of the data analysis process and research findings through review, revision, and validation.

### Findings

The initial qualitative analysis revealed findings relative to the Stages of Change Model. Further analysis revealed a core theme of interest. The findings are organized into three sections: (a) participant demographics, (b) findings related to the Stages of Change Model, and (c) findings related to the core variable.

### *Demographics*

Study participants selected to receive the POST treatment intervention consisted of eight female adolescents enrolled as patients in a RTC for psychiatric therapy. The ages of participants ranged from 14 to 17 years old, with a mean of 14.8 (SD = 1.1) years old. The length of time that participants were enrolled in the RTC before participating in POST ranged from 4 to 12 months, with a mean of 7 (SD = 2.5) months. All of the participants had been enrolled for treatment based on one or more clinical diagnosis in connection with various psychiatric problems affecting major areas of life functioning critical to adolescent development. Diagnosis included Oppositional Defiant Disorder (6), Poly Substance Abuse (3), Major Depressive Disorder (3), Depression (1), Attention

Deficit Hyperactivity Disorder (1), Borderline Personality Disorder (1), Post Traumatic Stress Disorder (1), and Reactive Attachment Disorder (1).

### *Stages of Change Model*

Pre- and post-intervention data collected from participants, parents, and therapists were used to categorize each participant in Prochaska and DiClemente's (1982) Stages of Change Model. As previously mentioned, these five stages contain key identifying criteria: (a) pre-contemplation stage (ignorant to change), (b) contemplation stage (passive or resistant to change), (c) preparation stage (experimenting with change) (d) action stage (consistent behavior change for at least 3 months, and (e) maintenance stage (consistent behavior change for at least 6 months).

Participants were assessed just prior to the intervention, immediately following the intervention, and again at a three month follow-up in order to provide snapshots of their statuses in the stages of change. Pre-intervention data showed that participants were categorized in the first three stages of change: pre-contemplation (1), contemplation (2), and preparation (5). A comparison of pre- and post-intervention data revealed that four of the participants progressed, three maintained their position, and one digressed in the stages of change (see Table 1). Not only did half of the participants progress in the stages of change, but all of the participants openly expressed that their experience with POST was overall positive and beneficial to them in some way.

### *Emerging Grounded Theory*

Open and axial coding revealed several topics and categories. During selective coding, a prevailing theme was illustrated by expressions of an increased sense of

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personal empowerment with direct and metaphorical applications to the therapeutic change process of their individual treatment circumstances. This sense of empowerment was considered relevant from an ecological perspective on adolescent treatment, which suggests adolescents have the potential to contribute to and influence the circumstances of their own treatment and eventual therapeutic outcomes (Chibucos & Leite, 2005). Based on the identified attributes that contributed to this sense of empowerment, the gerund *constructive enabling* was selected to descriptively represent the core theme of this study.

#### *Constructive Enabling*

Constructive enabling refers to the experiential process through which programmatic elements of the POST intervention may have contributed to participants' expressed sense of empowerment accompanied by formulated connections to therapy. All of the study participants expressed feelings of empowerment in connection with the POST intervention. They conveyed that their involvement resulted in positive and culminating perceptions of efficacy related to their performance. Respondents expressed this increased sense of enablement in terms of feeling and being "capable", "confident", "accomplished", "productive", "proud", and "successful." For example, concerning the POST activities, Sophia stated "I liked being able to feel like I am accomplishing something; being productive with things." Likewise, Madison stated regarding her experience hand sewing a leather bag and completing other POST activities:



It was fun and I thought I did good . . . sometimes I feel like I am not good at anything but it helped me tell myself I did something good . . . I think everything that we did . . . you can be proud of yourself when you are done with it.

The expressed sense of enablement was observed as being constructive to participants' therapy. They were able to build therapeutic meaning from these empowering experiences that applied to their individual treatment circumstances and the therapeutic change process. For example, Madison summed up her experience with POST and related it to her treatment needs:

I thought the group was really cool, some of the things were kind of difficult at first, but after you picked it up it was good. I think that it is the same as life after we leave here (the RTC); you think it's going to be absolutely perfect because we're not (in treatment) and it's going to be good, but you have to work to have a life. I know when I get home -- I can't associate with any of my friends that I used to before because they all use drugs. I think we underestimate how difficult it's going to be when we get back (home).

Identified attributes of POST that were frequently mentioned by participants in conjunction with constructive enabling included the opportunity for creative expression, the recognition of and reliance on social resources, the application of individual effort in challenging situations, the completion of a finished product, and the facilitation of reflective thought in order to connect the experience to therapy. These attributes and the sense of empowerment were often connected by participants to the therapeutic change process that they were undergoing. The findings agree with the ecological assumption

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that adolescents have the potential to contribute to and influence their treatment circumstances (Chibucos & Leite, 2005).

### *Creative Expression*

One attribute that seemed to contribute to the constructive enabling process was the opportunity for individuals to express themselves creatively while working on various wilderness projects. Creative expression was described by students both in connection with the general atmosphere of POST and the opportunity to personalize their projects. Regarding atmosphere, participants expressed that POST provided a positive respite from the high level of structure commonly associated with the treatment center. This respite was connected with expressions of freedom and a deliberate focus on creating their wilderness projects. Sarah commented “just getting away from the same structured environment . . . being able to be free.” In reference to the various skill projects of POST, Ava stated, “They’re just fun and relaxing. You get sent to a little wilderness training thing and just get away from this awful building . . . even if it is in the building, you’re still away from it.” In addition, Madison related that “It (POST) is kind of like an escape from treatment . . . whenever you are doing your project . . . I was like, I’m not at (the RTC) - I’m working on this!”

In addition to the general atmosphere of POST, opportunities for creative expression seemed to be associated with individual expression and personalization of projects. One example was Ava’s expressed value of independence to create by her own volition without external influences. She stated, “Spinning the yarn, or making the bags, or the clay pots . . . no one can really tell you how to do your own thing.” In addition,

several comments were expressed regarding the freedom to express oneself through creation. Sarah commented that “we made things, so it gave me a chance to express myself . . . our little (leather) pouches didn’t have to be a certain way.” Madison captured the value of creative liberty in designing and personalizing her own hand-bound journal when she stated:

When I created the (cover) page that we design ourselves, I felt as if I could be creative. My cover almost describes me, because I’m very diverse. There are so many complex things about myself. I’m not a simple person and when I make things, they are automatically individualized.

In regard to making treatment connections, Emily stated that “(POST) helps you realize how you can take creativity and put it into use and realize how it can relate to life.” The attribute of creative expression was most evident in participants’ reflective expressions related to adaptability and personal responsibility. With adaptability, Sophia, who was currently struggling with adjusting to a new therapist, indicated the need to adapt to changing environments. She stated, “When you can adapt to your environment, you can do most things.” In addition, Emily commented on the need to adapt during life transitions:

All the groups related to my therapy, but that one stuck out for me quite a bit because I know that I will be going home and with all the changes that are happening now and with my home visit coming up. It’s kind of like, ‘oh wow!’ and it just shows me with change that you have to get adapted to what you’re going to do.

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Another treatment connection to creativity expression was that participants made references to their personal responsibility to creatively adapt to the situations that they might face. For example Emily stated, “This can relate to life because you choose what to get yourself into.” In comparing the process of making cordage to treatment progress, Ava indicated her reliance on her therapist but concluded with the thought “I am really the only one who can really cordage myself together.” She also compared working with clay to influencing life outcomes when she stated “You’re molding your life; you form it the way you want to, if you want a positive life or a negative life.”

POST appeared to create an atmosphere where participants focus on creatively expressing themselves and personalizing their projects. Therapeutic connections related to creative expression often focused on topics of adaptability and personal responsibility. The opportunity for creative expression may have contributed to constructive enabling by helping participants to feel empowered through self-expression, personalized outcomes, and their individual applications to treatment.

### *Social Resources*

The attribute of social resources is another potential attribute of constructive enabling with regard to participants’ recognition of available social support. All of the activities provided opportunities for social interaction and support from peers, but the group projects (i.e., snow cave, natural resource recognition, and fire starting) necessitated teamwork in order to successfully complete the product. Participants seemed to recognize the enabling contribution of social support to the successful completion of group projects. For example Emily related, “Making the (snow) shelter was tough, but we

did it when we all worked together.” Madison explained, “We all needed to work and be continuously putting in our input in order to have a good snow shelter.” Even students who typically reported that their preference was to work alone on projects also commented on the benefits offered by their peer group support system. Sophia stated:

We had to use a lot of teamwork . . . I like working individually more, but when we did the snow cave, we had to work as a group and that was fun and I felt accomplished after . . . It is sometimes hard for me to be a part of a group because I feel that I could do better solo, but if I am part of a group, I have others to help me and to fall back on.

A few of the participants indicated how their interactions with peers during POST aided the process of making connections to therapy. Olivia stated “the way that you communicate with people while doing (the activities) interacts with your therapy.” Sarah commented specifically on the benefit of having group support through discussions after the activities. She stated, “When I listened to other peoples’ feedback, it kind of has little triggers that help me.” Most participants made therapeutic applications that reflected the component of social support as an empowering resource for them to succeed in therapy and in life. For example, Ava identified several sources of social support available to her. She wrote in her activity journal about the resource recognition activity:

It’s really weird to see how things you’d never expect to help you turn out to save you life. No matter what kind of situation you’re in, you can use your resources.

Mine are my family, therapist, positive friends, and my sponsor (when I get one).

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Many comments focused on the idea of relying on others for help and support as an enabling factor to success. Emily commented, "The more I open up to my therapist and family, the more I get help from them. It helps me realize that I can do it." Relating her therapist to the cordage activity, Ava stated, "By the time I leave (treatment), my therapist will have helped cordage me together. I'll be strong and reliable . . . prepared for anything that comes my way."

The social component of POST was most evident in regard to team projects requiring cooperation in order to succeed. Social interactions were framed by participants from the perspective of being able to recognize and cooperate with social resources. Therapeutic connections centered on the identification of important relationships in the treatment process and the importance of asking others for help. Social resources seemed to contribute to constructive enabling by empowering individuals to succeed through relying on the support of others.

### *Individual Effort*

The attribute of putting forth effort to accomplish the POST activities contributed to constructive enabling as participants recognized their individual potential to address the conditions for successfully completing a skill project. In reference to making hand drill fires, Madison stated "when we had to create the fire . . . we had to continuously be putting effort into making the fire, because you can't stop and start doing it again or it will go away." Participants compared the need for making effort to being successful in other areas of life. In one general comparison to life, Madison stated, "I need to be constantly putting in effort to succeed in life." More specifically, effort was described as

being important for achieving success within the contexts of overcoming challenges and working with consequences.

Many of the participants' expressions of individual effort were within the context of learning new things, facing challenges, and coping with frustrations. Referring to the skill projects, Madison shared that "some of the things were kind of difficult at first but after you picked it up it was good." As participants were successful during tasks that required more personal effort, they expressed even greater feelings of empowerment. Madison wrote in her journal about the POST activities, "Whenever I learn something new and I don't get it at first and then I understand it, it helps my self-esteem."

Participants made comparisons between making effort to accomplish a challenging project with making effort to succeed in life circumstances. For example, Sophia wrote about applying effort to accomplish a project:

Making a medicine bag requires dainty handiwork and concentration. You have to be careful doing it because it is so small. Many things in life must be handled with delicacy which can be frustrating. Sometimes if you get so mad but you keep going until it's done, it is a great satisfaction.

Referring to the hand drill fire, Sophia stated:

Making a fire with a hand drill is very frustrating; many things in life are frustrating, when you actually succeed in making a fire, then you feel very accomplished. It is the same with other things in life; they may be hard but can be worth the effort and frustration.

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Ava made a specific application between making a medicine bag and therapy. She shared, “I learned that it’s tough to make (a medicine bag) and in therapy it’s also hard to like work and be open about everything. But afterward you feel accomplished.”

The need to apply effort in the face of consequences was described by participants in terms of understanding that the successful outcome of a project was accomplished by following necessary instructions and steps. In talking about making a clay bowl, Sarah stated, “there are different steps that you have to take to make something and you have to do it in a certain order.” Sophia also linked the process to the result when she said:

It shows that for things to work, they have to be done well. By twisting (the cordage), it shows work being done to ensure the strength of the rope. Sometimes when you don’t bother to take the necessary steps to doing things, they don’t work out.

In addition, Alexis demonstrated that learning about the process of a project contributed to a successful experience. She stated, “You have to ask a lot of questions . . . knowing how to put things together the right way made it a lot better - just taking it step by step.”

Participants made comparisons between their expressed ability to make personal effort in order to influence and improve project outcomes with their needs for making therapeutic progress. For example, Sarah talked in the focus group about how her journal entry compared making the clay bowl to advancing in the RTC’s program statuses. She shared:

I basically wrote that there are different steps that you have to take to make something and you have to do it a certain order. Like, you can’t make your



statuses and then start working. You have to start working and then make your statuses. Like with the clay bowl, you can't start from the top and work to the bottom because it won't work. I felt good when I was done.

POST seemed to present the need for participants to apply effort in order to learn the necessary skills to successfully accomplish their projects. Therapeutic applications referred to making logical and consistent effort in order to make progress in therapeutic change. Individual effort appeared to help the constructive enabling process by empowering participants to recognize that their efforts are directly linked to outcomes and the ability to overcoming challenging situations.

#### *Finished Product*

Another contributing attribute of constructive enabling may be the final product resulting from individual effort and creative expression. Developed skills and completed projects served as concrete evidence for the participants to realize their degree of competence and success during POST. Madison made the following comment in reference to finishing a POST skill project, "It's cool (and) you can also be proud of yourself when you're done with it." Similar to the attribute of individual effort, participants did not seem to mind when activities were challenging as long as there was a finished product to represent success. Sarah shared her view about overcoming frustrations and challenges when she stated, "I like challenge, but it's still frustrating. It's . . . the end that matters to me - just being able to have it accomplished by the end is pretty cool." In addition, Alexis wrote in her journal, "Making a snow shelter was hard at first . . . but had a good outcome."

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The completion of the project was usually connected to participants' pronouncements of their feelings of enablement. Regarding hand drill fires Sophia stated, "When you actually succeed in making a fire, then (you) feel very accomplished." In addition Sarah shared, "I felt really good at the end of the hand drill (activity) because just being able to accomplish building a fire with two sticks was amazing."

Participants made reference to completed projects in therapeutic comparisons. Ava shared a comparison between completing the hand spun yarn with therapy. She stated:

I especially loved the yarn thing. And the therapy thing I got out of it was, I think with the (hand) spindle because you took something basically raw and you made it into something that you could use and you can relate that to therapy . . . in therapy you take your issues and things that you have problems with and you turn them into . . . something that you can work with and make into something you can use.

The wilderness projects associated with POST seemed to allow participants to feel empowered through achieving a finished product. Therapeutic connections focused on the end products of their efforts in therapy and the change process. The attribute of finished products appeared to contribute to constructive enabling through empowerment and participants' ability to connect completed projects to their potential to be successful in therapy and life.

*Reflective Thought*

The attribute of reflective thought refers to the adolescents' mental processing of the experience so as to draw comparisons and metaphors relevant to their treatment circumstances. All of the participants indicated that certain aspects of POST guided them to think about their experiences in relation to therapy. For example Ava stated, "I thought it was worthwhile because you got to think about it. Like, how does this relate to my therapy or how does this relate to life. .. POST group involves a lot of thinking."

Specifically, the elements of journal writing, group discussions, and the use of outdoor skill projects were identified by participants as helping to initiate and direct their thoughts toward making therapeutic connections. For example, Sarah shared her thoughts about how the program elements of group discussions and journal entries helped her to think about and make connections to therapy. She stated:

I think that it was when we processed about it after we did (the activities) and we had to write in our journals about how it related to therapy . . . I think that's what helped me, because I usually don't think about it, I just think 'this is fun.'"

The element of outdoor skill projects, however, was the most often referred to catalyst to making therapy connections. Olivia described that it was easy to make connections between the primitive skill projects and therapy:

(I liked) the activity in itself, how it taught you different things. I can pretty much connect anything to therapy, but just like how a lot of (the activities) did really connect to (therapy) and I didn't have to think as hard to be able to connect it to life. Just the skills you have to do in the activity . . . and the way you

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communicate with the activity itself. Not that I talk to my (clay) bowl or my fire or anything but, like . . . non-verbally communicate with it, I guess, like just doing it. This sounds weird but I think that the activity like communicates with you and tells you what to do when you are doing it wrong and puts you in your own head and gets you to communicate with yourself.

Participants expressed that the elements of POST contributed to their mental processing of the experience so as to formulate therapeutic applications. All of the participants, including those expressing flagrant resistance to therapy, demonstrated their ability to craft personalized therapeutic metaphors and comparisons to various aspects of their treatment. The facilitation of reflective thought may have been the necessary component to constructive enabling by helping participants to feel empowered to make their own personalized connections to therapy.

### Discussion

The initial analysis of the data was from a change theory perspective (Prochaska & DiClemente, 1992). This analysis revealed that four of the participants advanced in the stages of therapeutic change, three maintained their current stages, and one regressed to a former stage. The Stages of Change Model was an effective tool to conceptualize change and to qualitatively determine pre- and post-intervention change statuses. Considered alone, however, the model provided only a general assessment of change that was insufficient to explain the specific connection between POST and the therapeutic change process.

Having qualitative data allowed a closer examination of the rich description given by the participants of their POST experience. It was discovered that despite their attitudes toward therapy or their current stage of change, all participants expressed positive perceptions associated with POST. Even the participants that consistently vocalized negative perceptions toward therapy still described the POST intervention in positive terms and with applications to their treatment. In this way, the contribution of POST to therapeutic change process could be more fully explored, despite all of the other numerous variables potentially influencing the therapeutic change process.

The findings from this study demonstrated that all participants expressed some type of therapeutic benefits in conjunction with the POST intervention. Within these expressed benefits, a prevailing theme emerged of individual empowerment with direct and metaphorical applications to the therapeutic change process. The gerund constructive enabling was provided to represent this core theme. Constructive enabling best describes how POST made a positive contribution to the overall treatment environment and facilitated therapeutic benefits to each individual.

The theme of constructive enabling attempts to capture the expressed sense of empowerment that accompanied participation in the POST intervention and how individuals were empowered to build therapeutic meaning from their experiences. Identified attributes of the POST intervention that were frequently mentioned in conjunction with the participants feeling empowered included the opportunity for creative expression, the recognition of and reliance on social resources, the application of individual effort in challenging situations, the completion of a finished product, and the

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facilitation of reflective thought in order to connect the experience to therapy. These five attributes and this sense of empowerment were often directly and/or metaphorically connected by participants, through their own reflective thoughts, to the therapeutic change process that they were undergoing.

The attribute of creative expression appeared to be important to the constructive enabling process. Several of the participants made references that the atmosphere associated with POST and the opportunity to personalize their projects were positive contributors to the creative process. Therapeutic connections based on creative expression focused on adaptability and personal responsibility in the change process. Creative expression contributes to constructive enabling by helping participants to feel empowered through self-expression, personalized outcomes, and their individual applications to treatment.

It appeared that the attribute of creative expression was dependent on participants feeling a sense of perceived freedom from a highly structured environment. For example, several comments regarding the creative atmosphere of POST made reference to freedom from the typical high degree of structure associated with being at a residential treatment program. In addition, opportunities to personalize projects were framed with the perspective of being free to create projects according to the participants' choice and personality. This sense of perceived freedom has been regarded as an important element of recreation and leisure experiences (Goodale & Godbey, 1988).

Social resources were identified as an attribute that supported constructive enabling. Participants' experience of receiving help from others during individual

projects and working with the entire group on team projects contributed to constructive enabling by increasing perceptions of empowerment. Therapeutic reflections on social resources focused on identifying key contributors to the treatment process such as family, therapists, and positive friends. While the other attributes of constructive enabling contribute understanding to how a participant can be empowered to influence her therapeutic environment, identifying and relying on social resources seemed to present a perspective of teamwork and allowing others to influence personal efforts. From an ecological perspective, relying on positive social resources appears to be an important point for adolescents in treatment to understand. The implications of various benefits of an individual interacting with her social surroundings appears to contribute to constructive enabling by empowering individuals to succeed based on receiving positive support.

Providing activities that offer a degree of challenge may have been an important programming element for facilitating participant effort and contributing to constructive enabling. All of the POST activities required at least a minimal degree of effort to learn the skills and complete the projects. As a result, it was the act of exerting effort to master skills, complete projects, and overcome various challenges that translated to feelings of empowerment and comparative reflection to making progress in therapeutic change. In addition, respondents also indicated that accomplishing projects with increased levels of challenge resulted in stronger feelings of empowerment. The need for individual effort during POST was most often facilitated by the creative process and overcoming various challenges. The attribute of individual effort may help the constructive enabling process

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by empowering participants to recognize that their efforts are directly linked to outcomes and the ability to overcoming challenging situations.

The attribute of having a finished product contributed to the core theme of constructive enabling. Participants were always able to observe and assess the final outcome of their efforts in the form of a completed project. The experience of obtaining a final product gave participants a sense of accomplishment and empowerment. These personal feelings of enablement in connection with their accomplishments may be similar to the self-efficacy theory concept of enactive mastery experiences as a source for individual efficacy (Bandura, 1997). Participants being able to see a project through to completion appeared to contribute to their ability to compare the finished products to individual potential to be successful in therapy and life pursuits.

Reflective thought provided an important contribution by helping participants to make therapeutic connections as part of the constructive enabling process. The participants indicated that they were more likely to make therapeutic comparisons between POST and therapy if they invested time thinking about it. This provides support for Bacon and Kimball's (1989) claim that facilitation techniques and strategies are needed in order to help adolescents make connections to therapy. Participants identified journal writing, group discussions, and the type of skill projects as programming elements that helped them to reflect on and formulate therapeutic comparisons. All of the participants, including those expressing flagrant resistance to therapy, crafted therapeutic metaphors relating the POST experience to at least one aspect of their therapy. This contribution to the emergent theme of constructive enabling brought out the role of



recreation therapy interventions for female adolescents as being applicable to the mental processing of various treatment circumstances. Participants self-selected ways to apply the POST experiences to their therapy. All of the participants selected therapeutic comparisons that were individualized and considered relevant to their treatment circumstances.

### *Implications*

Findings provide support that the POST program may be implemented as a productive recreation therapy intervention with potential contributions to the therapeutic change process of female adolescents enrolled in a psychiatric residential treatment center. These qualitative findings represent an effort to respond to the increasing expectation for demonstrating outcomes associated with specific programs and interventions so as to determine their worthiness for further consideration (Gass, 2005).

Findings support the value of utilizing primitive wilderness skill projects as a recreation therapy tool in non-wilderness environments. They contribute an empirical element to the descriptive literature on primitive wilderness skills (Russell & Hendee, 2000) and add to the few existing studies on primitive wilderness skill instruction (Clifford, 2003; Henson, 2004). Findings also support the anecdotal assumptions of wilderness therapy programs that providing primitive wilderness skill instruction is a therapeutically beneficial program component. In addition, support is given to Bacon and Kimball's (1989) claim that wilderness therapy programming does not need to occur in a wilderness environment in order to produce therapeutic outcomes. More research is needed on the application of primitive wilderness skills in wilderness programming,

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including a comparison of participant outcomes between providing primitive skill instruction in a wilderness environment versus a non-wilderness environment.

The emergent theme of constructive enabling and its contributing attributes ought to be deliberately considered and emphasized in any additional applications of POST or other similar interventions. Replication of this study will help to refine the attributes of constructive enabling and to demonstrate the consistency of those research findings.

### *Recommendations*

Additional research on the POST intervention is needed to determine the value of change theory for outcome evaluation of recreation therapy services for adolescents. It is recommended that further research be used to develop and refine the core theme and attributes of constructive enabling. Further research is also needed to further develop the POST program so as to improve treatment services for adolescents and most effectively contribute to the therapeutic change process of participants.

Lack of communication about POST between the participants and their parents and therapists was an identified weakness of this study. Interview data from therapists and parents lacked insight into the participants' experience with POST. For example Sophia's mother stated, "she hasn't really talked about (POST) in therapy, we have so little communication." It is recommended that future research explore effective strategies for family and therapist involvement in the therapeutic outcomes related to POST. Further research should help determine the best way to apply therapeutic connections from programs like POST to other areas of therapy without triggering resistance from the adolescent participants, especially those with a negative attitude toward therapy.

It is recommended that the POST intervention be tested with various populations, therapy programs, and treatment circumstances. More research is necessary in determining what demographic and treatment factors may influence participants' benefits from POST so as to maximize the positive impact of therapeutic programming. For example, it is recommended that similar studies be replicated with male participants, mixed gender groups, families, therapy groups, various age groups, different treatment diagnoses, and other psychiatric treatment programs.

In addition, more research is needed on how participants in different stages of change may respond to the intervention. This study only included participants in the first three stages of change. The action and maintenance stages have yet to be explored in relation to POST. It is also recommended that the attributes of constructive enabling be researched within other therapeutic programming modalities beyond primitive wilderness skills. Such research may help determine whether the attributes of constructive enabling may be incorporated as useful programming considerations for other recreation therapy and experiential learning programs.

### *Conclusion*

According to the data, the POST intervention contributed to the therapeutic change process of female participants by facilitating feelings of empowerment and enabling them to create applicable therapeutic reflections between their experience with POST and their individual treatment circumstances. Although the stages of change model was a useful tool for conceptualizing change and documenting therapeutic progress, it served more as a general assessment that was not sensitive to the degree of contribution

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provided by specific interventions such as POST. In the rich description of the data, however, all of the participants expressed positive therapeutic benefits associated with POST. Further qualitative analysis revealed a common and prevailing theme of all participants expressing feelings of empowerment in connection with POST with expressed application to aspects of the therapeutic change process. In conclusion, not only did the POST intervention do no harm to participants, it contributed to the overall treatment milieu of the RTC by providing opportunities for therapeutic progress by facilitating individual feelings of enablement with participants initiating reflective applications supportive of the therapeutic change process.

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Table 1

*Summary of Participants' Stages of Change*

	Pre-intervention	Post-intervention	3 Month Follow-up
Participant	Stage of Change	Stage of Change	Stage of Change
Olivia	Pre-contemplation	Contemplation	Preparation
Sarah	Contemplation	Contemplation	Contemplation
Alexis	Contemplation	Contemplation	Contemplation
Sophia	Preparation	Preparation	Contemplation
Madison	Preparation	Preparation	Preparation
Hannah	Preparation	Preparation	Action
Ava	Preparation	Preparation	Action
Emily	Preparation	Preparation	Action

Appendix A

Prospectus

## Chapter 1

### Introduction

Wilderness therapy programs are gaining increasing popularity and credibility for working with adolescents with psychiatric disorders (Rosol, 2000). While working as a recreation therapist at a residential treatment center (RTC) for female adolescent students with individual, family, relationship, and academic problems, a colleague and I created an intervention program using primitive wilderness skill instruction. This type of instruction is a common component of many wilderness therapy programs. Our plan was to offer our students a wilderness experience by providing a set of primitive wilderness skill instruction activities conducted on or close to campus. This program became known at the RTC as the Primitive Outdoor Skills Training (POST) recreation therapy intervention.

Little research exists specific to the therapeutic application of primitive wilderness skill instruction in adolescent treatment (Clifford, 2003; Henson, 2004). Facilitating any new program for adolescents as a treatment intervention carries with it the responsibility of determining associated treatment outcomes. Indeed, the current trend in health care practice is to conduct research and report treatment outcomes that support useful interventions and eliminate unproductive ones (Gass, 2005). It is proposed that this study explore the impact of a primitive wilderness skill instruction program (POST) on adolescent female attitudes toward therapy and the therapeutic change process from a change theory perspective. Perceptions will be gathered from the primary stakeholders involved in adolescent psychiatric treatment, including the adolescent, her parents, and her primary therapist.



*Statement of the Problem*

The problem of the study is to explore the perceived impact of a primitive wilderness skills intervention program (POST) on adolescent female attitudes toward therapy and the therapeutic change process from a change theory perspective.

*Purpose of Study*

Exploring the impact of a primitive wilderness skills program (POST) on female adolescent attitudes toward therapeutic change may help determine the usefulness of applying wilderness skills as a therapeutic intervention for adolescents at a residential treatment center. If adolescent participants in treatment express positive outcomes related to participation in a primitive wilderness skills intervention, then results may help guide future research in determining the most effective ways to implement similar wilderness skill instruction experiences as recreation therapy interventions for adolescents in residential treatment. *Significance of Study*

Empirical research supports the credibility of wilderness therapy programs as a legitimate treatment intervention for adolescents with mental, behavioral, and emotional problems (Rosol, 2000). Wilderness therapy programs have been shown to offer various therapeutic outcomes for adolescents, including enhanced self-concept and social skills (Russell & Hendee, 2000), elevated self-esteem and decreased delinquency (Berman & Davis-Berman, 1995), a sense of accomplishment, positive emotional expression, developed coping skills, and improved communication skills (Russell, 2001). In addition, Bacon and Kimball (1989) suggested wilderness experiences solicit a more positive

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response from adolescents toward treatment as compared to other forms of therapeutic intervention.

Despite applicability and demonstrated outcome benefits of wilderness therapy for adolescents, logistical considerations (e.g., time, money, availability of wilderness areas, etc.) make it unrealistic for all adolescents in treatment circumstances to participate in an extensive wilderness therapy program. The POST intervention program is one way to involve more adolescent patients in a wilderness therapy experience without incurring the expenses, liability, and extensive logistical planning typically associated with traditional wilderness therapy programs. The POST intervention program utilizes primitive wilderness skill instruction (e.g., making hand-drill fires, shelters, plant fiber cordage, gourd canteens, clay pots, etc.) based on the regular application of these techniques as a common program component of several wilderness therapy companies such as SUWS, Aspen Achievement, Anasazi, Outback, and RedCliff Ascent (Anasazi, 2006; Outback, 2006; RedCliff, 2006; Russell & Hendee, 2000).

Although primitive wilderness skills are a major component of several wilderness therapy programs (Russell, 1999), only two documented studies concerning the application and role of these skills were found during this study. First, Clifford (2003) found that learning primitive wilderness skills encourages pro-environmental attitudes and behaviors within participants. Second, Henson (2004) proposed a framework of primitive wilderness skills to provide a context for instructing and practicing social skills within residential treatment. Most of the rationale for using primitive wilderness skills in wilderness therapy programming is based on anecdotal evidence only and in need of

empirical research to identify and confirm treatment outcomes. For example, according to RedCliff Ascent Field Director L. Sorensen, some wilderness therapy programs include primitive wilderness skill instruction as a deliberate program component anticipated to produce therapeutic outcomes for adolescents, such as generating self-confidence, fostering a sense of responsibility, helping participants develop self-control, facilitating staff and student relationships through skill mentoring, and using skill experiences as therapeutic metaphors to enhance treatment, (personal communication, August 31, 2006).

Due to a lack of existing research and representation in the literature, it is proposed that this study conduct a systematic qualitative analysis to explore the impact and outcomes associated with adolescent participation in the POST intervention experience from a change theory perspective. Perceptions will be gathered from the primary stakeholders in the treatment of an adolescent, which include the adolescent, her parents, and her primary therapist. The use of qualitative research methods will be especially suited for evaluating the individual outcomes for each participant as well as identifying the various perspectives of the major stakeholders involved in the treatment of each adolescent female. It is anticipated that qualitative results may contribute to the ground work for future exploration, description, quantitative research, and theoretical development of wilderness skill instruction as a therapeutic intervention (Patton, 1987).

In conclusion, the application and outcomes associated specifically with a primitive wilderness skill instruction component of wilderness therapy is underdeveloped in both wilderness therapy and residential treatment settings. It is anticipated that research results will help evaluate the impact of the POST program and the outcomes

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associated with primitive wilderness skill programming for adolescent females enrolled at a psychiatric RTC. Results may also contribute to refining program effectiveness with consideration to intervention format, compatible philosophical frameworks and therapeutic techniques, target populations, and transference of therapeutic benefits to therapy and the overall therapeutic change process in the residential treatment milieu.

### *Delimitations*

The study is delimited to

1. A purposive sample of at least 8 adolescent females between the ages of 12 and 18 years old, that are currently enrolled as students in a psychiatric RTC.
2. Dyadic interviews, reflective journal assignments, researcher observation, and a focus group discussion will be utilized in qualitative data collection.
3. The POST recreation therapy intervention program that is composed of 10 outdoor skill activities scheduled to meet on an average of one per week.
4. The eight POST intervention skill activities.
5. The study being conducted from December 2006 to February 2007.

### *Limitations*

The study will be limited by

1. The use of a qualitative research design which prevents generalization of findings beyond the research sample and context.
2. Day-to-day activities and the regular therapeutic milieu offered to the students at the RTC, beyond participation in the POST intervention program, will not be controlled.

3. The degree of openness and honesty in participant responses.

#### *Assumptions*

The study will be conducted upon the following assumptions

1. Participants will participate openly and honestly.
2. The sample of at least 24 participants (8 students, 8 parents/legal guardians, and 8 clinical professionals) will provide enough data to reach a point of saturation where no new information is emerging during the analysis phase (Strauss & Corbin, 1998).
3. The interviewer will not lead the participants in their responses so as to focus only on the experience and perceptions of the respondents as they emerge.
4. The staff providing the treatment (POST) will be competent in recreation therapy, wilderness skill instruction, and principles of therapeutic change.

#### *Definition of Terms*

*Adolescence.* Marks the human developmental stage and transitional period from childhood to adulthood; occurring during the age range of approximately 10 to 21 years old (Baumrind, 1991).

*Adolescent in treatment.* Refers to an individual in the adolescent stage of life that has received a formal, mental health diagnosis (Berman & Davis-Berman, 2000) and is currently involved in therapy interventions designed to target this diagnosis. Youth in these life circumstances have also been identified with alternate terms, such as *at-risk youth*, *youth at risk* (Sprouse, Klitzing, & Parr, 2005) and *troubled youth* (Berman & Davis-Berman, 1995).

*Primitive outdoor skills.* Primitive wilderness living and outdoor skills are a major component of some wilderness therapy programs such as SUWS, Aspen Achievement, Anasazi, Outback, and RedCliff Ascent. The content of these wilderness therapy programs includes a strong focus on primitive skill instruction and projects, such as primitive fire making, building shelters, cooking on an open fire, fashioning a backpack, etc. (Conner, 2007). For the purpose of this study, primitive outdoor skills will refer specifically to those skills selected for the eight activities that make up the POST treatment intervention: (a) hand binding journals, (b) resource recognition activity, (c) primitive shelters, (e) hand-drill fires, (f) cordage, (g) hand-spinning wool with a drop spindles, (h) pinch pot pottery, and (i) leatherwork (see Appendix A).

*Primitive outdoor skills training (POST) intervention.* A current recreation therapy intervention being implemented at a psychiatric RTC located in Utah. The POST intervention is designed to specifically utilize primitive outdoor skill instruction as a wilderness therapy experience adapted for adolescents enrolled in a psychiatric RTC. The intervention format consists of 10 meeting times (up to four hours each) presented over a two month time frame at an average of one activity per week.

*Residential treatment.* Residential treatment refers to healthcare treatment that offers living accommodations for enrolled patients. Wilderness programs may also be regarded as residential treatment due to the circumstance in which the patients live in the wilderness continuously for the duration of their treatment.

*Residential treatment center (RTC).* For the purpose of this study, a residential treatment center will refer to a non-wilderness, healthcare facility characterized by a clear

and deliberate treatment program with trained clinical professionals (Lyman, Prentice-Dunn, Wilson, & Taylor, 1989) that provides patients with living quarters on location during their enrollment in the treatment center.

*Wilderness therapy.* Russell (1999) indicated that wilderness therapy is the “involvement in outdoor adventure pursuits . . . under the direction of skilled leaders, with activities aimed at creating changes in targeted behaviors” (p. 73).

*Wilderness therapy programs.* Also known as outdoor behavioral healthcare programs (Russell & Hendee, 2000), wilderness therapy is a category of intervention programs distinguished by their implementation of a combination of wilderness experiences and therapy techniques as a means to facilitate positive treatment outcomes in participants.

## Chapter 2

### Review of Literature

The problem of the study is to explore the perceived impact of a primitive wilderness skills intervention program (POST) on adolescent female attitudes toward therapy and the therapeutic change process from a change theory perspective. In an effort to better understand the background literature that may apply to the implementation of a primitive wilderness skills training intervention for adolescents enrolled in a psychiatric RTC, the following topics will be addressed: (a) adolescent development concerns, (b) adolescent psychiatric problems, (c) stages of change model, (d) ecological perspective, (e) residential treatment, (f) recreation therapy, (g) wilderness therapy, (h) primitive wilderness skills, and (i) summary.

#### *Adolescent Development Concerns*

The human developmental period of life termed adolescence marks the transitional period from childhood to adulthood (Santrock, 1998). Baumrind (1991) suggested that the developmental phase of adolescence occurs during the age range of about 10 to 21 years old. The time period of adolescence may be further divided into three stages, including early adolescence (10 to 15 years), mid adolescence (15 to 18 years), and late adolescence (18 to 21 years) (Baumrind).

It is not uncommon for the years of adolescence to be accompanied with some concerns related to developmental stress and challenges (Chassin et al., 2004). The developmental transition from childhood to adulthood involves several major biological changes, cognitive advances, and emerging psychosocial expectations (Harter, 1999).



*Biological development.* Adolescents experience major changes related to biological development. The emergence of external biological changes associated with puberty signal the beginning stages of adolescence (Brunstetter, 1998; Katchadourian, 1977). Katchadourian suggested the average age for contemporary western adolescents to begin puberty is typically earlier for girls (10 to 11 years old) than for boys (11 to 12 years old). Biological development during adolescence includes both external bodily changes (e.g., body shape, size, muscle development) and internal bodily changes (e.g., hormones, organs, reproductive system, brain development) (Giedd, 2004; Katchadourian).

The cumulative result of adolescent biological development is the physical maturation of a child into an adult. In addition, these changes create further distinction between the physical characteristics of the male and female sexes (Katchadourian, 1977). Pubertal timing with the accompanying physical changes in body height, size, and shape has been shown to affect aspects of adolescent body image and relationships with members of the opposite sex (Simmons & Blyth, 1987). Specifically for females, pubertal timing is also linked to levels of independence granted by parents, school behavioral problems, and risk of self-esteem problems related to potential body image dissatisfaction (Simmons & Blyth). Overall, due to the dramatic physical transformation and the impact of biological changes on psychosocial development, it is common for adolescent to undergo some developmental stress related to biological development (Chassin et al., 2004; Simmons & Blyth).

*Cognitive development.* The development of cognitive faculties that occurs during childhood continues throughout adolescence. The appearance of formal operational thought during early adolescence increases the individual's mental capacity to conceptualize personal thoughts and the thoughts of others (Elkind, 1967; Inhelder & Piaget, 1958). In addition, the development of more advanced cognitive capacities (i.e., impulse control, strategizing, prioritizing, evaluating consequences, etc.) continues into late adolescence and young adulthood (Giedd, 2004).

Until cognitive capacities are fully developed, it is common for many early adolescents to adopt some egocentric tendencies including thoughts and behaviors related to the concepts of imaginary audience (the illusionary perception that others are constantly observing the adolescent) and personal fable (thoughts of uniqueness or invincibility) (Elkind, 1967; Greene, Krcmar, Walters, Rubin, & Hale, 2000). In addition, some adolescents display traits of sensation-seeking that contribute to a lack of inhibition and increased impulsivity in decision making (Greene et al.). Adolescent cognitive-social immaturity combined with egocentric traits and sensation-seeking may help explain the high susceptibility of adolescents to engage in various risk-taking behaviors, such as risky sexual behavior, substance abuse, and delinquent behavior (Arnett, 1992; Greene et al.; Igra & Irwin, 1996). Although healthy adolescent development ought to include exploratory behaviors that may be considered constructive risk-taking, Igra and Irwin proposed that negative "risk-taking behaviors are the most serious threats to adolescent health and well-being" (p. 35).

*Psychosocial development.* With the onset of adolescence, new social expectations begin to emerge (Harter, 1999). Major tasks of psychosocial development for adolescents include the development of self-concept and identity. The developmental progress of self-concept occurs throughout all three stages of adolescence. While developing self-concept, adolescents learn to formulate self-representations and to account for inconsistencies in those self-representations. Inconsistencies in self-representations exist due to the normative application of multiple selves across various circumstances to accommodate for several relationship and role expectations (Harter).

Adolescence is the life stage most significantly associated with the formation of personal identity (Erikson, 1968). Markstrom-Adams (1992) emphasized that various factors contribute to an adolescent's formation of a personal sense of identity. In Marcia's (1966) identity status model, two theoretical dimensions (exploration and commitment) are set forth from which the following four identity statuses may result: (a) diffusion (lacking firm identity commitments and effort to form them), (b) moratorium (currently exploring options without having made firm identity commitments), (c) foreclosure (having elected firm identity commitments without sufficiently exploration identity options), and (d) achievement (making firm identity commitments based on a sufficient period of identity exploration). Waterman (1992) argued the formation of a healthy identity is an important contributor to optimal psychological functioning. Specifically, disturbances in the process of identity formation may correlate with other mental health problems, including identity disorders, borderline personalities, and narcissistic tendencies (Markstrom-Adams). More generally speaking, psychosocial immaturity in

adolescence may make mood regulation, impulse control, and behavioral management more difficult (Steinberg & Scott, 2003).

### *Adolescent Psychiatric Problems*

Hall (1904) presented the idea of *storm-and-stress* to refer to the life stage of adolescence as a time of intense stress and unavoidable problems. More recently, Arnett (1999) proposed a modified storm-and-stress perspective and suggested that although not inescapably predetermined, extreme stress and various problems (e.g., parent-adolescent conflict, mood disruptions, risk-taking behaviors, etc.) tend to occur more frequently during adolescence than any other life stage. A recent report from the Carnegie Council on Adolescent Development determined that “American adolescents . . . are at greater risk for a wide variety of serious problems than ever before” (Takanishi & Hamburg, 1996, p. 52). In part, these problems may be related to numerous risk factors and problem circumstances, such as substance abuse, sexual activity, physical and mental health problems, academic underachievement, and suicide (Sells & Blum, 1996; Takanishi & Hamburg). Psychiatric problems for adolescents may be of an emotional, behavioral, and/or mental nature (Merriam-Webster, 2007).

When the many developmental tasks and transitions associated with the transformation of a child into an independently functioning adult are combined with negative environmental influences and events, it is no surprise that some adolescents experience developmental stress, escalating disturbances, and various psychiatric problems and disorders (Brunstetter, 1998; McDougall, 2006). Chassin et al. (2004) claimed that if developmental stress is not handled properly, it may escalate to emotional

distress with unhealthy coping attempts to deal with the stress (e.g., self medicating with an illegal substance). The manifestation of adolescent problem behaviors occurring during adolescence may often be categorized as internalizing or externalizing disorders (Graber, 2004). Dishion and Stormshak (2007) agreed with these same concepts, but referred to turning stress inward as emotional distress and turning distress outward toward others as social maladaptation. Internalizing problems occur more frequently among girls and are usually associated with mood disturbances, behavioral manifestation of inward emotional symptoms, and the disorders of anxiety and depression (Graber). Externalizing problems are more common among boys and generally refer to antisocial behaviors such as conduct disorder, aggression, and delinquency (Farrington, 2004; Graber).

According to McDougall (2006), it is normative that “all children have mental health needs” (p. 1). In some instances, however, these mental health needs may become problematic to the child’s development and functioning. Current statistics estimate one in ten children experience mental health problems severe enough to impair functioning to some degree and to be classified as a mental disorder (McDougall; National Institute of Mental Health, 2007). When experiencing mental health problems, adolescents generally manifest symptoms through behavioral and/or emotional expression (McDougall). It is common for these mental health problems to interfere with adolescent functioning and development (National Institute of Mental Health).

*Stages of Change Model*

If unaddressed and left unresolved, many adolescent problems will persist into adulthood and affect long-term functioning (McDougall, 2006). Therefore, it is essential that adolescents learn to make life changes that will alter the trajectory of any existing developmental problems and guide them toward healthy development and functioning (McDougall). Prochaska and DiClemente's (1982) Stages of Change Model is one theoretical model that addresses the process of intentional change in attitude and behavior.

The Stages of Change Model is well established in the literature and regarded as one of the leading models used to help individual change negative and harmful lifestyles (Levesque, Prochaska, & Prochaska, 1999). It "has been the basis for developing effective interventions to promote health behavior change" (Cancer Prevention Research Center, 2006, para. 1). Although change theory has been applied mostly to behavioral change related to substance abuse, the change model has also been applied to various problem behaviors, including mental health treatment (Cancer Prevention Research Center). The Stages of Change Model identifies change as a process that occurs over time within a five stage progression, rather than a one time event. The progression through these five stages of change is: (a) pre-contemplation, (b) contemplation, (c) preparation, (d) action, and (e) maintenance.

*Pre-contemplation.* In the pre-contemplation stage, individuals are not aware of or do not consider themselves to have a problem (Kern, 2005). For an adolescent in this stage, it is expected that others (i.e., family, friends, therapist, etc.) would be more aware

than the adolescent that a problem exists (Prochaska, DiClemente, & Norcross, 1992). When confronted about negative behaviors, individuals in this stage may become defensive and deny that their negative behavior is problematic (Kern). Prochaska, DiClemente, and Norcross stated that “resistance to recognizing or modifying a problem is the hallmark of precontemplation” (p. 1103). Therefore, individuals with a problem behavior are classified in this stage when they do not recognize their behavior as problematic and/or they do not intend to change their behavior (Prochaska, DiClemente, & Norcross).

*Contemplation.* This is the stage that marks an individual’s awareness of their behavior as problematic. The individual is seriously considering surmounting their problem but lacking the commitment to immediate action (Prochaska, DiClemente, & Norcross, 1992). In this stage, the individual is often ambivalently weighing their options for change. This weighing may include thoughts concerning positive vs. negative aspects, benefits vs. costs, and short-term vs. long-term considerations in making behavioral changes (Kern, 2005).

*Preparation.* The preparation stage suggests that the individual has made a commitment to change and is currently making efforts toward change (Kern, 2005). During this stage, individuals are gathering information to prepare for change. Motivation for change may be expressed in change oriented statements regarding the seriousness of the problem, the need to change, and searching for help to change (Kern). Individuals in this stage may have made unsuccessful attempts to change in the past and may have

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already been successful in making small changes in the form of reduced negative behavior (Prochaska, DiClemente, & Norcross, 1992).

*Action.* In the action stage, individuals believe they can change and they are actively making efforts to “modify their behavior, experiences, and environments in order to overcome their problems” (Prochaska, DiClemente, & Norcross, 1992, p. 1104). In order to accomplish their desired change, individuals in this stage often apply various techniques to help themselves succeed, such as premeditating how to handle relapse pressures, aiding motivation through short-term rewards, being open to help, and actively seeking out support from others (Kern, 2005).

*Maintenance.* The maintenance stage is marked by sustained commitment and changed behavior over a time period of 6 months or more (Prochaska, DiClemente, & Norcross, 1992). It is typical for individuals in this stage to be concerned with avoiding temptations and relapse, focusing on past and continued progress, and making life adjustments necessary for maintaining continued change (Kern, 2005). In order to successfully maintain positive change, these life adjustments must take place at the individual and the environmental level (Prochaska, DiClemente, & Norcross).

### *Ecological Perspective*

An ecological perspective was first introduced through 19<sup>th</sup> century home economics for viewing family life issues (Chibucos & Leite, 2005). During the 1960s and 1970s, the ecological perspective has evolved to more readily application in several disciplines, including family and individual development (Chibucos & Leite). Dishion and Stormshak (2007) promoted the use of an ecological perspective approach to child



and family therapy intervention as “uniquely suited to the needs of children and adolescents presenting with mental health difficulties in which problem behavior is a core component” (p. 3). Their rationale for presenting a new approach to mental health included an increased awareness of developmental considerations that may be overlooked when adult models of treatment are applied to children (Dishion & Stormshak). Additional rationale specifically for an ecological perspective is based on the ecological assumption that adolescent mental health is intrinsically connected to family relationships (Dishion & Stormshak).

An ecological perspective is concerned with the idea that “development and change occurs as a result of interactions between the ‘thing’ developing and the environmental context broadly conceived” (Chibucos & Leite, 2005, p. 303). Additional key features related to an ecological perspective include reciprocal interaction and mutual adjustment between the developing entity and the environment, constant awareness of contextual factors, distinguishing between different levels of contextual influence, and adaptation of the entity to changing circumstances (Chibucos & Leite). An ecological perspective is versatile in its application to a range of disciplines such as economics, geography, sociology, etc. (Bubolz & Sontag, 1993), and has also evolved to approach family development (Hook & Paolucci, 1970) and individual development (Bronfenbrenner, 1979). Specifically, an ecological perspective will be used to consider the role of the adolescent patient, her family, and various professionals in the psychiatric treatment process.

*Adolescent.* One major implication of an ecological theoretical application to a developing adolescent is the reciprocal interaction between the adolescent and her/his environment. Not only do environmental factors influence adolescent development, but adolescent actions affect their contextual surroundings. Specifically, this suggests that adolescents in psychiatric treatment impact the contexts of their family and their own therapy. This perspective is consistent with family life course theory, suggesting adolescent exercise of human agency through making choices and taking certain actions may influence both individual and family experiences and future outcomes (Chibucos & Leite, 2005). In addition, adolescents must be taken seriously as the primary resource to their own therapy process, as active agents in their own developmental outcomes, and as an investment for our future that requires attention (Youniss & Ruth, 2002). Improved access to resources and more effective services are needed to successfully assist youth facing stress and problems during their transition to adulthood (Graber, 2004; Youniss & Ruth).

*Family.* When adolescent mental health problems become unmanageable for families, parents may seek for various adolescent treatment services including residential treatment (Brunstetter, 1998). The decision to enroll an adolescent in residential treatment is accompanied by a major shift in environmental contexts. From an ecological perspective, the adolescent is physically removed from the family micro-system and placed into a treatment micro-system (Bronfenbrenner, 1979). However, the family may still be a major context of influence for the developing adolescent. According to Dishion and Stormshak (2007), an ecological perspective argues that “psychopathology is not

within the child but rather the child's maladaptation to a set of relationship experiences" (p. 16). Although adolescent emotional distress and social maladaptation may be determined in part due to genetics, family and other relationship (e.g., peer, teacher, etc.) interactions are thought to contribute to mental health conditions either for improvement, maintenance, or exacerbation (Dishion & Stormshak). Family members possess valuable potential to support and contribute to the therapeutic efforts of adolescent psychiatric treatment (Brunstetter). In addition, Durrant (1993) suggested that parents know their children best and may provide useful insights and advice to treatment professionals.

*Treatment professionals.* Treatment professionals provide a context of influence complete with a multitude of services available to the adolescent. The context of treatment provides a deliberate effort to influence the adolescent in positive ways and to prepare her to interact with and influence her surroundings and relationships in positive and healthy ways. It is a common practice for treatment professionals to communicate, coordinate, and combine treatment efforts through a multidisciplinary team approach. McDougall (2006) described the multidisciplinary team as a "competent network of professionals who can collaborate to provide a comprehensive intervention" (p. 164). The collaboration of professional services provides a treatment milieu capable of helping adolescents with a variety of mental health needs and problems across multiple contexts (Dishion & Stormshak, 2007; McDougall).

#### *Residential Treatment*

Professional assistance is available to help adolescents make life changes through improving mental health, emotional strength, and behavior modification. Adolescent

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psychiatric treatment, also known as adolescent behavioral health care, refers to the health care efforts that address adolescent emotional, behavioral, and/or mental problems and disorders (The Joint Commission, 2007; Merriam-Webster, 2007). According to McDougall (2006), increasing evidence suggests that therapeutic intervention may offset the developmental trajectory of adolescent mental health problems. Many forms of psychiatric treatment are available for adolescents while living at home, including outpatient, day treatment, and community-based treatment (Lyman & Campbell, 1996). However, almost any type of mental problem can lead to a level of severity or crisis requiring the security and intensive therapy offered through residential treatment (Brunstetter, 1998; Lyman & Campbell).

The National Association of Therapeutic Schools and Programs (NATSAP) defined adolescent residential treatment centers as “boarding schools or programs that provide a highly structured environment, an academic component, and group and individual therapy” (NATSAP, 2006). These residential programs include outdoor behavioral healthcare, characterized by the residential use of an outdoor environment combined with clinical therapy, academic programming, and other therapeutic activities as a treatment program for adolescents with problem issues (Russell & Hendee, 2000). Patients in residential treatment usually reside away from home at a program facility for various lengths of time averaging 3 to 18 months (NATSAP). Adolescent residential treatment is one of the many intervention milieus that have emerged in response to adolescent psychiatric problems. Residential treatment for adolescents typically focuses

on treating a variety of mental health diagnoses, including behavior disorders, substance use disorders, and mood disorders (NATSAP).

Previously, only anecdotal evidence and the success stories of individual reports existed to support outcome claims in behalf of residential treatment centers (NATSAP, 2006). In a recent study, NATSAP found that both parents and adolescent patients expressed positive outcomes associated with residential treatment and that “most teens with serious behavioral and emotional problems that have not responded to other treatments . . . improve during treatment at a private residential treatment program” (para. 2). In comparison to many alternative program designs and approaches, Lyman et al. (1989) proposed that residential treatment maximizes the potential for therapy impact by providing a deliberate treatment focus and qualified clinical professionals. Residential healthcare temporarily removes an adolescent from her/his family context and offers a degree of control through an intense treatment milieu designed to maximize positive outcomes related to therapeutic change (Lyman & Campbell, 1996). At psychiatric treatment facilities for adolescents, members of multidisciplinary treatment teams often include professionals such as the clinical director, therapists, counselors, doctors, nurses, teachers, shift supervisors, and recreation therapists (New Haven, 2007; Provo Canyon School, 2007).

### *Recreation Therapy*

The recreation therapist is one multidisciplinary treatment team member that offers something unique to adolescents in treatment. The use of recreation in a treatment context is gaining popularity among youth programs. Recreation programming for

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adolescents goes beyond filling free time and can be deliberately planned as an intervention for positive peer socialization, stress management, developing healthy leisure interests, and leadership development (Sprouse, Klitzing, & Parr, 2005). It is thought that adolescents are more receptive to the delivery of therapy if offered through recreation experiences. Adolescents tend to perceive recreation opportunities as interesting and enjoyable, thus attracting them to therapeutic intervention delivered through recreation (Sprouse, Klitzing, & Parr). In addition, outdoor recreation programs offer an active component for participants to become involved despite their comfort level with verbal interaction required for traditional group therapy discussions (Berman & Davis-Berman, 1995).

Recreation therapy is a relatively new field, but it is a quickly developing profession within various adolescent treatment settings. According to the American Therapeutic Recreation Association (ATRA), qualified recreation therapy professionals practice recreation and treatment techniques in conjunction to “improve health and well-being” of their clients (ATRA, 2006, para. 3). Recreation therapy has been further described as a “specialized application of recreation . . . interventions that assist in maintaining or improving the health status, functional capabilities, and ultimately the quality of life of people with special needs” (Carter, Van Andel, & Robb, 2003, p. 9). Because recreation therapy services are used to assist youth in various treatment settings, Caldwell (2001) expressed a need for more research and scholarly discussion on the application of recreation therapy for the adolescent population. More specifically, Caldwell pointed out the need for professional attention and research on the growing and

less defined application of wilderness therapy as a recreation therapy intervention for adolescents.

### *Wilderness Therapy*

Bacon and Kimball (1989) characterized wilderness therapy as an innovative treatment technique that is increasing in popularity among adolescent treatment. In fact, wilderness therapy programs tend to specialize in working with youth requiring treatment, more than any other population (Rosol, 2000). Many wilderness programs use wilderness areas as the residential milieu for adolescent treatment. In addition, residential treatment centers for adolescents often utilize wilderness therapy experiences in the form of outdoor recreation and challenge activities. The following topics related to wilderness therapy will be reviewed: (a) wilderness experience programs, (b) wilderness therapy defined, (c) wilderness therapy outcomes, and (d) wilderness therapy components.

*Wilderness experience programs.* Since the incipient documentation of outdoor professionals utilizing wilderness environments specifically for the health benefits of adolescents in the 1930s (Gibson, 1979), the emerging and rapidly growing field of wilderness therapy has struggled with establishing a commonly agreed upon definition among practitioners and researchers (Russell, 2001). Russell stated that part of the challenge of establishing a unique identity for the field of *wilderness therapy* is that several terms have been used interchangeably to describe therapeutic interventions within an outdoor context. These terms include *adventure-based therapy*, *wilderness experience programs*, *challenge courses*, *wilderness programs*, and *outdoor behavioral health programs* (Conner, 2007; Russell; Russell & Hendee, 2000).

According to the literature, wilderness therapy may be most appropriately placed categorically under the broader and related umbrella of wilderness experience programs (Friese, Hendee, & Kinziger, 1998). Wilderness experience programs have been defined by Friese et al. as outdoor programs that utilize a wilderness environment “for purposes of personal growth, therapy, rehabilitation, education or leadership/organizational development” (p. 40) outcomes for participants. Thus, wilderness therapy is the specialized application of wilderness experiences as a therapeutic intervention (Russell).

*Wilderness therapy defined.* Historically, the lack of a commonly accepted definition has been a challenge to the field of wilderness therapy (Russell, 2001). More recently, Rosol (2000) generally described wilderness therapy as utilizing “aspects of the outdoors to promote change in adolescents with behavioral problems” (p. 42). In addition, Russell presented a more detailed definition by integrating several previous definitions set forth by various professionals including his own perceived understanding of wilderness therapy. Russell indicated that wilderness therapy is the “involvement in outdoor adventure pursuits . . . under the direction of skilled leaders, with activities aimed at creating changes in targeted behaviors” (p. 73).

The most characteristic feature of wilderness therapy is its deliberate use of the wilderness environment and outdoor activities to provide therapy intervention. Berman and Davis-Berman (2000) explained the professional application of the term *therapy* infers a “process of assessment, treatment planning, the strategic use of counseling techniques, and the documentation of change” (p. 1). Although any wilderness experience program may incidentally yield therapeutic benefits and a contribution to the overall



well-being of participants, the intentional application of a wilderness component as a therapeutic intervention is what distinguishes wilderness therapy (Berman & Davis-Berman). In accordance with the professional trend of establishing researched based outcomes for health care treatment, increased research on wilderness therapy outcome benefits for adolescent participants is needed (Gass, 2005).

*Wilderness therapy outcomes.* Wilderness therapy has been gaining increased credibility as a legitimate therapeutic intervention (Rosol, 2000). Determining the effectiveness of wilderness therapy interventions is highly important, especially since these programs are implemented as an alternate form of traditional clinical treatment (Berman & Davis-Berman, 1995). In Gibson's (1979) comprehensive literature review of therapeutic outcomes associated with wilderness programs, several potential participant benefits were identified. Although Gibson questioned the methodological soundness of many of the existing studies of that time, he concluded that wilderness programs served as a powerful intervention for influencing positive outcomes in areas of personality, self-concept, behavior, and social functioning.

In a more recent literature research review, Russell and Hendee (2000) demonstrated support for outcome benefits related to wilderness therapy, with the most prominent participant outcomes being positive development of self-concept and social skills. Additional studies have demonstrated generally positive outcomes associated with wilderness therapy related to elevated self-esteem and decreased delinquency (Berman & Davis-Berman, 1995), a sense of accomplishment capable of being generalized, emotional awareness and expression, enhanced self-concept, the development of personal

skills (e.g., coping skills), and the development of interpersonal skills (e.g., communication) (Russell, 2001). Bacon and Kimball (1989) suggested wilderness experiences may also solicit a more positive response from adolescents toward treatment as compared to other forms of therapeutic intervention. Various components of a wilderness therapy experience may contribute separately and/or in a combined effort to produce these types of participation outcomes.

Autry (2001) pointed out that most of the research on adventure therapy programs (including wilderness therapy) for adolescents has focused on male and co-ed participant groups. Research supports that gender-based differences exist for participants in adventure therapy programs with females being more interested than males in the trust building component of program activities (Witman, 1993). In addition, co-ed groups may alter the experience of female participants, suggesting that single gender programs may provide “opportunities to learn skills that they might not try if they were in a co-educational group” (Culp, 1998).

*Wilderness therapy components.* One of the major components of a wilderness experience is the application of a wilderness context. The term wilderness therapy seems to imply that such an experience may only take place in a wilderness environment (Bacon & Kimball, 1989). In an assessment of wilderness therapy programs, Russell and Sibthorp (2003) observed greater participant impact as a correlate with programs that spend longer amounts of time in a wilderness setting. Rosol (2000) suggested that the wilderness context is completely necessary for wilderness therapy to have the greatest amount of impact on participants. However, Bacon and Kimball argued that the essential

characteristic of a wilderness milieu is simply the contribution of an unfamiliar environment which may be replicated in any unfamiliar environment, including urban settings.

In addition to the use of an unfamiliar wilderness environment, there are various components that make up each wilderness therapy program. Several common factors indicative of wilderness treatment programs include small treatment groups, group cohesion, natural consequences to decisions, challenging experiences, skill mastery, peer and staff mentoring of pro-social values, and techniques to help participants process meaning from experiences (Bacon & Kimball, 1989; Russell, 1999). Whether intentionally programmed or just a convenient by-product, all wilderness programs offer some type of skill development and several provide instruction in primitive wilderness living skills (Conner, 2007).

#### *Primitive Wilderness Skills*

One type of skill instruction unique to wilderness therapy programming is the use of primitive wilderness skill instruction and practice (Russell, 2001). Primitive living skills and primitive skill projects are a major component of several wilderness therapy programs. In considering the application of primitive wilderness skills in wilderness therapy, the following topics will be addressed: primitive skills defined, emergence of primitive skills, and primitive skill benefits.

*Primitive skills defined.* Primitive skills rely on natural resources and primitive techniques to complete a task or project. Primitive living skills and primitive skill projects include instruction on hands-on skills and projects such as primitive fire making,

building shelters, cooking on an open fire, fashioning a backpack, etc. (Conner, 2007). Additional primitive wilderness applications include skills and projects, such as bow drill fires, hand drill fires, pump drills, leather work, carving, pottery, beadwork, fashioning primitive tools, flint knapping arrowheads, gourd water containers, plant fiber cordage, and tanning animal hides, as described by RedCliff Ascent Field Director L. Sorensen (personal communication, August 31, 2006). The use of these types of primitive wilderness skills have uniquely contributed to the development and application of wilderness therapy programs (Russell & Hendee, 2000).

*Emergence of primitive skills.* Russell and Hendee (2000) identify the use of primitive wilderness skill instruction as a “key theoretical and practical influence” (p. 26) on the foundational developments of wilderness therapy. The initial use of primitive skills in outdoor programming is attributed to Larry Olsen and Doug Nelson in the 1960s (Russell & Hendee). A major component of the wilderness experience course offered for Brigham Young University (BYU) students was the application of primitive wilderness skill instruction (Russell & Hendee). The influence of this program has since evolved to the development of various wilderness therapy programs that continue to use primitive skills as a major program component, including SUWS, Aspen Achievement, and Anasazi (Russell & Hendee). In addition, other wilderness therapy programs report using primitive wilderness skills as an important program component (Outback, 2006; RedCliff, 2006). The continued instruction of primitive wilderness skills as a major component for several wilderness therapy programs seems to suggest that some type of

benefits must be perceived by program directors in order to justify the instruction of these skills.

*Primitive wilderness skill benefits.* Wilderness therapy programs often teach wilderness skills designed to assist participants in becoming more successful in wilderness environment living, overcoming natural challenges, and fostering a positive self-concept through task and project completion (Russell, 1999). However, due to a lack of research, wilderness therapy programs tend to apply the use of primitive wilderness skills based on anecdotal evidences as noted by RedCliff Ascent Field Director L. Sorensen (personal communication, August 31, 2006).

Only two documented studies concerning the application and role of these skills were found during this study. Clifford (2003) found that learning primitive wilderness skills encourages pro-environmental attitudes and behaviors within participants. Within residential treatment, Henson (2004) proposed a framework of primitive wilderness skills to provide a context for instructing and practicing social skills. Research on the applications and outcomes of primitive wilderness skills in wilderness therapy and residential treatment are underrepresented in the literature. More research on the component of primitive wilderness skills is important to the development and application of wilderness therapy interventions for adolescents.

### *Summary*

In summary, the stage of adolescence involves several major developmental transitions and an increased risk for the manifestation of psychiatric problems. Because psychiatric problems may interfere with adolescent functioning and development, it is

necessary for adolescents to experience therapeutic change that will disrupt the trajectory of problem behaviors into adulthood. When problems are severe enough, some families seek for professional assistance through residential treatment. An ecological perspective supports that a multidisciplinary team approach with the involvement of the adolescent and family members in the treatment process is most useful for addressing the various contexts of life affected by the psychiatric diagnosis. The recreation therapist is one treatment professional that offers an approach to therapy that caters uniquely to the adolescents free time activities.

The use of wilderness therapy programs are an increasingly more popular treatment intervention for adolescents with psychiatric problems. Although residential treatment facilities may have limited access to wilderness resources in which to apply wilderness therapy techniques, the application of wilderness skill instruction at a residential treatment facility provides a unique context that may prove beneficial in therapeutic intervention. The application of primitive wilderness techniques at a residential treatment facility is a fairly new concept with little existing research. The use of wilderness therapy techniques as a treatment modality for adolescents carries with it the responsibility to determine therapeutic impact and outcomes of the provided intervention. Therefore, it is proposed that a pilot program providing primitive wilderness skill instruction be administered as a recreation therapy intervention to adolescents at a residential treatment center. The program will be accompanied by qualitative research to determine perceptions related to this experience as a therapeutic program designed to aid adolescents in the therapeutic change process.

## Chapter 3

## Methods

The problem of the study is to explore the perceived impact of a primitive wilderness skills intervention program (POST) on adolescent female attitudes toward therapy and the therapeutic change process from a change theory perspective. A qualitative approach will be used in this study to explore the perceived therapeutic outcomes for adolescents who are involved in a recreation therapy program that utilizes primitive outdoor skill instruction as an intervention to support psychiatric treatment. The researcher will gather perceptual feedback from the adolescent participants, their families, and their primary therapist in response to the intervention. The following methodological topics will be addressed in this chapter: (a) rationale for a qualitative approach, (b) study participants, (c) procedures, (d) data collection, (e) data analysis, and (f) a validity plan for establishing research trustworthiness.

*Rationale for a Qualitative Approach*

It is proposed that a qualitative approach be used to explore perceptions regarding the POST intervention for adolescents in residential treatment. The main rationale for applying qualitative methodology for this study includes a lack of existing research, evaluating individualized outcomes, and identifying various stakeholder perspectives.

*Lack of existing research.* Although primitive wilderness skills are a major component of several wilderness therapy programs (Russell, 1999), only two documented studies concerning the application and role of these skills were found during this study. Clifford (2003) found that learning primitive wilderness skills encourages pro-

environmental attitudes and behaviors within participants. Within residential treatment, Henson (2004) proposed a framework of primitive wilderness skills to provide a context for instructing and practicing social skills. Research on the applications and outcomes of primitive wilderness skills in wilderness therapy and residential treatment are underrepresented in the literature. Specifically, the implementation of primitive wilderness skill instruction as a recreation therapy intervention for adolescents enrolled in a residential treatment facility is a unique application of wilderness skills for which more research is needed.

Because the POST intervention is in its early stages of development, it is also unclear which of the various existing quantitative program measures would best fit to evaluate the therapeutic outcomes for participants. Due to the lack of existing research, it is proposed that this study conduct a systematic exploratory evaluation so as to provide an emic analysis of participant perspectives related to the POST intervention experience with accompanying impact and outcomes. Exploratory evaluation is useful for gathering a set of initial data “to understand enough about what is happening in the program and what outcomes may be important to then identify key variables that may be operationalized quantitatively” (Patton, 1987, p. 37). It is anticipated that qualitative methods may contribute to the ground work for future exploration, description, quantitative research, and theoretical development of wilderness skill instruction as a therapeutic intervention (Patton).

*Evaluating individualized outcomes.* Qualitative methodology is designed to be naturalistic and unobtrusive in its approach to gathering data from participants (Patton,



1987). The researcher will act as a co-facilitator to the intervention allowing him to gain some rapport with the student participants in the role of recreation therapist while making participant observations and prior to conducting interviews and the focus group discussion. It is anticipated that building this rapport will avoid or at least decrease participant feelings of being observed and evaluated which could result in negative reactions (Patton). The use of qualitative analysis allows for each individual to share their experience and express their perceptions, providing rich data and a thick description of their experiences. Analysis of this data may provide understanding that will benefit future patients.

Because every adolescent has individual needs and goals, it is expected they may perceive different outcomes from participation in the same experience (Patton, 1987). In reference to psychiatric treatment for adolescents, understanding potential outcomes of a specific program may assist professionals in the appropriate alignment of treatment services to match individual client needs (Patton). Especially useful for new programs, participant feedback may also serve as a formative evaluation of program quality from which to further develop and improve the program (Patton). Perceptions offered by participants may be helpful in determining what components of the program are most effective and what developmental changes may improve the program experience (Patton). Facilitator program expectations, as well as others invested in the treatment process, may also be compared with participant feedback on program outcomes to evaluate the usefulness and effectiveness of the program.

*Identifying various stakeholder perspectives.* Finally, when considering the treatment of an adolescent, various stakeholders are invested in the outcomes of the treatment interventions. For the purpose of this study, three primary stakeholders have been identified, including the adolescent patient, her parent(s)/legal guardian, and her therapist. In this way, the researcher may gather various perspectives from all invested stakeholders while being aware of and sensitive to potentially conflicting perspectives (Guba & Lincoln, 1981; Patton, 1987).

#### *Study Participants*

The study will consist of a convenience sample of at least eight adolescent females who are part of the purposively identified population of adolescent patients enrolled in an RTC. Females were selected for this study due their under-representation in most wilderness and adventure therapy research compared to male and co-educational groups (Autry, 2001). All patients at the RTC have at least one or more clinical diagnoses indicating psychiatric treatment needs in the area(s) of individual functioning (e.g., depression, anger, substance abuse), family functioning (e.g., defiance, aggressiveness), social relationships (e.g., delinquency), and/or academic performance. In addition, at least one parent/legal guardian and the primary therapist of each participant will be invited to participate in the study by interviewing with the researcher about the patient. Guidelines for selecting POST participants require the following: (a) participants are enrolled in a psychiatric RTC, (b) participants will be female, (c) participants will be within the ages of 12 to 18 years old, (d) participants will be selected per therapist recommendation, (e) participants must not be currently regarded as a therapeutic risk to themselves or others,

and (f) participants will not have a projected program discharge or graduation date prior to the last scheduled POST activity.

### *Procedures*

The procedures for this study will be primarily concerned with appropriately implementing the POST intervention program for the selected sample of participants. The following procedural topics will be addressed in this section: (a) research approval, (b) participant recruitment, (c) informed consent, (d) POST facilitators, and (e) POST intervention.

*Research approval.* There are three governing bodies that must be satisfied in order to gain approval for this study. They are the BYU Recreation Management and Youth Leadership (RMYL) thesis committee, the BYU Office of Research and Creative Activities (ORCA) Institutional Review Board (IRB) for human subjects, and the administrative council for the residential treatment center (RTC).

With approval from the thesis committee, the researcher will send an application to the BYU IRB for a full board review at the university level. No attempt will be sought for an exempt review by the college due to the obvious concerns of sample vulnerability (i.e., minors in treatment). The RTC administrative council will also be given a copy of the BYU IRB application so as to obtain informed approval from the RTC for this study. No action to begin the study will be taken until all three parties have granted approval.

*Participant recruitment.* The recruitment process for study participants will begin with a presentation about the POST intervention and the research study at a therapy department meeting at the RTC. Based on the presentation details, the therapists will be

asked to provide patient referrals for research participants. From those referrals, the recreation therapist will help finalize the list of participants based on logistical considerations (e.g., patient discharge dates, graduation dates, group therapy conflicts, etc.) and participant requirements for the study. The selected sample of adolescents will participate in an introduction meeting that describes the POST program, explains the research project, and allows time for potential participants to ask questions. At this point, the students have the opportunity to accept or decline the invitation for them to participate in the POST program as research subjects.

*Informed consent.* Prior to beginning the study, informed consent must be obtained from the adolescent participants, primary guardians, and primary therapists. Adolescent participants must provide written assent (see Appendix B) if they are to participate as volunteers. Written parental consent (see Appendix C) must be obtained from the primary parents/guardians for each participating adolescent. In addition, parental consent forms indicate that parents/guardians will be asked to participate in two interviews as part of a corollary sample. Finally, the primary therapists of each student will be asked to provide written consent (see Appendix D) so as to also participate as a corollary sample through two interview sessions.

*POST facilitators.* POST intervention activities will be facilitated by the primary researcher and one recreation therapy professional employed at the RTC where the participants reside. A recreation therapy facilitator will be selected based on national certification and Utah state licensure as a Therapeutic Recreation Specialist, as well as

previous experience with primitive outdoor skills. Additional staff at the RTC may also be involved in the activities as needed for logistical support.

*POST intervention.* POST is one of the established recreation therapy interventions available at the RTC. The POST intervention will consist of 10 meeting times with one introduction session, eight primitive outdoor skill activities (lasting up to four hours each), and a closing group discussion session. These meeting times will take place over a 10-week time frame at an average of one activity per week. Skill activities will be held either on campus or at nearby park locations. Special consideration will be taken so as to avoid interfering with the participants' academic classes and regularly scheduled therapy.

Each POST activity will follow a standard activity protocol format for providing the students with a primitive outdoor skills therapy experience. This format will include: (a) project introduction, (b) instruction, (c) demonstration, (d) skill practice activity, (e) individual or group skill project, (f) therapeutic discussion, and (g) reflective journal entry assignments. Protocols also contain specific activity goals, objectives, and equipment/supply lists (see Appendix A).

The activity protocol format will serve as a framework for all 10 primitive outdoor skill activities. Primitive skill instruction activities will include: (a) introduction, (b) hand binding journals, (c) resource recognition activity, (d) primitive shelters, (e) hand-drill fires, (f) cordage, (g) hand-spinning wool with a drop spindle, (h) pinch pot pottery, (i) leatherwork, and (j) a final group discussion (see Appendix A).

*Data Collection*

The data collection methods for this study are designed to triangulate multiple data sources and collection methods in an effort to gather a rich data supply that contributes to the trustworthiness of the data. Data will be gathered from all adolescent participants, at least one parent/guardian of each participant, and the primary therapist of each participant. The researcher will collect data by interview, focus group discussion, and participant activity journals. Taking strict confidentiality measures, raw data will be stored and processed for analysis. The following data collection topics will be addressed in this section: (a) question development, (b) dyadic interviews, (c) focus group discussions, (d) activity journals, (e) raw data, and (f) transcription.

*Question development.* All interview and focus group discussion questions have been carefully prepared so as to meet the criteria of being “open-ended, neutral, singular, and clear” (Henderson, 1991, p. 79). Open ended questions avoid *yes* or *no* responses and seek the respondent’s detailed perspectives. Neutrality may be enhanced by avoiding questions that lead the respondent to answer in a certain way. The singular nature of a question is simply that only one question is being asked to the respondent at a time and that the question may only be interpreted as one question. Clarity of questions will be established by keeping questions short, simple, straight-forward, and free from technical and verbose words. In addition to applying these criteria to each question, all focus group discussions and dyadic interviews will be conducted by the primary researcher to maintain interviewer consistency throughout the data collection process.

*Dyadic interviews.* Henderson (1991) suggested that “interviewing is the best method for pursuing a subject in depth” (p. 71). Simply described, qualitative interviewing is a conversation guided in a general direction by the interviewer (Babbie, 2001; Henderson). Interviews will be designed to gather detailed information concerning participant attitudes toward therapy and the therapeutic change process. The first phase of interviews will be conducted during the beginning half of the POST program to establish a baseline of responses. The second phase of interviews will occur after the completion of the POST program and be compared to the initial interviews to explore consistencies and changes in response patterns. Both phases will include interviews with all POST participants, at least one parent/guardian, and their primary therapists.

The interview style for this study follows Patton’s (1980) interview guide approach as a model for question development and selection (as cited in Henderson, 1991). The interview guide approach presents participants with prepared questions to generate discussion on previously identified areas of interest. Although the interview guide will be a prepared schedule of general questions, it will also allow flexibility for the exploration of new topics and issues as they emerge. The majority of the interview questions are designed to address the problem of the study to explore the perceived impact of the POST intervention on female participants’ attitudes toward therapy and the therapeutic change process for problem behaviors from a change theory perspective. As stated by Lincoln and Guba (1985) “the problem of interest is expected to arise from the respondent’s reaction to the broad issue raised by the inquirer” (p. 268). The guiding research question is concerned with the impact of participation in the POST program on

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adolescent female attitudes toward therapy and the therapeutic change process from a change theory perspective

The initial interview agenda outline includes seven content areas to be utilized for gathering data from all POST participants (see Appendix E), at least one parent/guardian (see Appendix F), and their primary therapists (see Appendix G), consistent with the guiding research question of the study. The first content area will focus on building rapport with the respondent and answering questions and addressing concerns. During the second round of interviews, questions referring to the participants overall experience will be included in this section. The next five content areas will address the five stages of change presented in Prochaska and DiClemente's (1982) Stages of Change Model. The model will serve as the basis for most of the interview questions. The purpose for using the Stages of Change Model is to solicit data from respondents that will assist in the assessment of which stage of change each participant is current in as it relates to their attitude toward therapy and therapeutic change. One question has been created for each of the five stages to solicit information specifically related to each stage. A seventh content area will be provided for parents and therapist to provide an objective ranking of where they perceive the participant in the Stages of Change Model and how long she has been there. Following initial responses to interview questions, it is expected that verbal probing may be necessary to elicit more detailed information. Adjustments, additions, and/or deletions to interview questions will take place as necessary according to the information obtained through data collection and analysis.



*Establishing rapport.* In order to promote a comfortable atmosphere for successful interviews and discussions, the establishment of rapport with respondents must be addressed (Henderson, 1991). Due to the nature of the study, the primary researcher will be involved in an introductory activity designed to inform the participants about the POST intervention and the research study. In addition, the primary researchers will co-facilitate the POST intervention with a full-time recreation therapist employed at the treatment center where this study will be based. In these ways, the primary researcher may build rapport with participants prior to assuming the role of interviewer.

*Focus group discussion.* A focus group is a body of individuals that are formally gathered together to address one or more topic areas selected to guide the discussion (Babbie, 2001). Henderson (1991) suggested that focus group discussions could be appropriately used at any phase of a program. Whether used at the beginning, during, or following a program, Henderson maintained that “a suitable problem (must be) chosen that lends itself to the group interview” (p. 82). A focus group discussion will be conducted at the conclusion of the POST program. The structure of this discussion will provide the group with the opportunity to talk about the POST program experience in an evaluative way. Participants will be asked to share their overall impression of the POST experiences as well as selecting one activity of their choice to highlight and to share therapeutic applications from the activity to their therapy, if applicable. Additional questions may be asked during the focus group based on the analysis and findings of previously collected data during the first round of dyadic interviews.

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*Activity journals.* Following each POST intervention activity, participants will be asked to complete a reflective writing assignment in response to their experience during the activity. It is anticipated that this assignment will facilitate an opportunity for participants to reflect on their experiences (Brew, 2003). Participants will be asked to complete this assignment as soon as possible, while the experience is still fresh on their minds. The assignment will be presented as unstructured free-writing and participants will be instructed to focus on their thoughts, feelings, attitudes, and perspectives in relationship to their experience. The journal entries will be unstructured and free from any specific content requirements so as to encourage the emergence of naturalistic expression without concern for editing or having their writing judged (Brew). Data gathered in the form of participants' journal entries will be analyzed so as to identify any supportive data in relationships to the categories and themes that emerge from the interview data.

*Raw data.* With parent/guardian, therapist, and participant consent, interviews and focus group discussions will be audio recorded with a digital recorder. In addition, entries from participant activity journals will be photocopied with permission from the participant. Raw data will be kept on site at the residential treatment center or at BYU. Audio files will be saved on a password protected computer and all data will be stored in a secure location under lock and key, to meet legal requirements for healthcare confidentiality. Only the +researchers and individuals directly involved with the study will have access to the data. To help maintain confidentiality, subjects will be asked to use first names and to avoid using last names or any other identifying information during

data collection. Pseudonyms will be arbitrarily assigned to each subject so that absolutely no identifying information will be attached to the data during the data transcription and analysis process. When the research is complete, the raw data sources will be destroyed. Audio files will be disposed of by deleting the files and emptying the desktop 'recycle bin' in order to prevent retrieval. Photocopied materials will be shredded.

*Transcription.* Access to raw data will only be made available to the researchers involved in the study and to one individual assisting with the transcription process. The individual assisting with the transcription process will be a BYU student (undergraduate or graduate) in the RMYL academic program. As much as possible, the student will be blind to the identity of the subjects. The student will also be instructed in maintaining security of the data and confidentiality of any identifying information that may be revealed in the data during the transcription process. Raw data will be transcribed into Microsoft Word documents, saved in a rich text format, and imported into QSR NVivo for qualitative analysis.

#### *Data Analysis*

Data will be analyzed by the research team using the qualitative data analysis (QDA) approach as described by Strauss and Corbin (1998). The QSR NVivo software package will be used to store and manage all textual data during the analysis process. The data analysis process will address the initial research question in three phases of coding: (a) open, (b) axial, and (c) selective.

*Open coding.* The analytical process of coding the data will begin with the method of open coding as described by Strauss and Corbin (1998). The focus of open

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coding is to identify concepts and define conceptual categories as they emerge from the data. If possible, open coding will coincide with data collection in an iterative manner so that conceptual findings may contribute to guiding the data collection process. The technique of line-by-line analysis will be employed during open coding to ensure a close examination of the data. Although line-by-line analysis is considered time consuming, Strauss and Corbin stated that it is a productive technique for discovering concepts in the data. Next, the comparative analysis technique will be applied to compare and contrast emerging concepts so as to assign them into conceptual categories based on shared attributes (Strauss & Corbin). These categories will continue to be developed and refined as information continues to emerge during open coding. The process of open coding will be complete when a saturation point is reached when no new conceptual information is found emerging from the data (Strauss & Corbin).

*Axial coding.* When a few categories are successfully generated during open coding, axial coding will also begin to take place. Strauss and Corbin (1998) describe axial coding as a process that links categories of scientific phenomena with subcategories that provide information that describes those phenomena. The main purposes for axial coding are to facilitate the development of categorical attributes and to discover relationships between categories that may offer insights into scientific phenomena. Strauss and Corbin's comparative analysis technique, aided by QSR NVivo assay and search tools (e.g., matrix intersections), will be used extensively during axial coding in order to assist in describing the data and moving those descriptions toward identifying categorical themes and emerging relationships among the data. The process of axial

coding will be complete when a saturation point is reached where no new categorical information emerges from the data (Strauss & Corbin).

*Selective coding.* Selective coding will be initiated toward the end of the data analysis process. Strauss and Corbin (1998) defined selective coding as “the process of integrating and refining categories” (p. 143) to form theory. As major categories are compared and linked together, the research question narrows and a central category or emerging theme will be selected from the data. The emerging theory will continue to be refined and validated as all of the major categories will be reconsidered in regard to how they relate to and contribute to the explanation of the central theme.

#### *Validity Plan for Establishing Trustworthiness*

Establishing trustworthiness refers to the researcher’s ability to design and implement a validity plan with appropriate methodological techniques that will promote and satisfy expected standards of research quality. Lincoln and Guba (1985) explained that the role of establishing trustworthiness is to persuade your audience “that the findings of an inquiry are worth paying attention to, worth taking account of” (p. 290). According to Erlandson, Harris, Skipper, and Allen (1993), “establishing trustworthiness enables a naturalistic study to make a reasonable claim to methodological soundness” (p. 131). If a qualitative study is to be esteemed as trustworthy, a well designed validity plan must be set up prior to data collection and analysis. The research design of this qualitative study is complete with an established validity plan. The strategic design of this validity plan is to satisfy current qualitative standards and to promote trustworthiness at every

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step of the research process (i.e., data collection, analysis, interpretation, and theory development).

Lincoln and Guba (1985) introduced the following four research validity constructs, which are commonly accepted as evaluative criteria for judging qualitative research: (a) credibility, (b) transferability, (c) dependability, and (d) confirmability. The following sections provide a definition of each of these four constructs with a descriptive outline of how the research validity plan will utilize various methodological techniques to address these constructs and establish trustworthiness in the research.

*Credibility.* The construct of credibility refers to whether or not the research design and process are valid in their attempt to capture an accurate representation of the selected sample. Marshall and Rossman (1989) defined the goal of credibility as “ensur(ing) that the subject was accurately identified and described” (p. 145). Strauss and Corbin (1998) further describe credibility within substantive theory as the “ability to speak specifically for the populations from which it was derived and to apply back to them” (p. 267). The research findings must be credible in order for the study to be considered meaningful. The techniques that will be applied to address the research credibility of this study are methodological triangulation and member check.

The technique of triangulation will be applied to the data collection methods of the study (Lincoln & Guba, 1985). Three qualitative data collection methods will be employed to gather information: focus group discussions, dyadic interviews, and written journal entries. By describing and comparing data that were collected using different techniques, the researchers will implement methodological triangulation to promote

credibility during the data analysis process. In addition, data sources will be triangulated by interviewing student participants, at least one of their parents, and their primary therapist. Having multiple sources for data information will also support the credibility of the data analysis.

Erlandson et al. (1993) stated, “The purpose of naturalistic inquiry is to understand the constructions of the respondents on their own terms” (p. 132). Following the data analyses process, a formal member check will allow the original study participants to review the research. This provides an opportunity for the sample respondents to provide feedback regarding the research analysis and results. This feedback may serve to confirm or critique sections of the research, thus increasing confidence and validity in the research findings prior to submitting a final report. The study will involve the original participants in a follow-up member check. Lincoln and Guba (1985) suggested that the member check technique is the most valuable strategy for promoting credible research.

*Transferability.* For a study to be useful beyond the context of the original sample, the research findings must possess the efficacy to apply to additional research contexts (Marshall & Rossman, 1989). The construct of transferability refers to the degree of cross-contextual relevance established through the research process and findings. A detailed account of research methods and findings will be clearly documented so as to aid other researchers in replicating this study for additionally identified populations of interest.

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*Dependability.* The construct of dependability is the qualitative counterpart to the quantitative concept of reliability and refers to consistency and reproducibility within the research methods (Lincoln & Guba, 1985). Babbie (2001) provided a general definition of reliability signifying that the repeated application of a particular technique to an object will continually yield consistent results. Therefore, a study is deemed dependable if it is evident that the replication of the study, with the same sample and under the same conditions, will produce the same results.

The researchers will be using a dependability audit technique (Lincoln & Guba, 1985) to establish dependability within the study. A dependability audit allows an external auditor to review and offer critique regarding the study methods and procedures. The external auditor will be a fellow undergraduate/graduate level student or faculty who is unassociated with this research study but generally familiar with qualitative methodology. The strategy of creating a detailed collection of audit trail materials throughout the research process will significantly enhance the audit process. All raw data materials related to the study will be saved and kept on file until the study is complete. In addition, the data analysis process and formulation of emerging themes and theory will be documented in the NVivo computer software project file and research journal.

*Confirmability.* The construct of confirmability deals with the neutrality of the study findings (Lincoln & Guba, 1985). This refers to the purity of the emerging outcomes from the data and the absence of researcher bias. It emphasizes reliability in the confirmation of the study findings by another researcher (Marshall & Rossman, 1989). A fellow undergraduate/graduate student peer review of the analysis paper trail and



proposed research findings will help guide the development of the research with as much of a neutral perspective as possible.

A confirmability audit (Lincoln & Guba, 1985) will be utilized to examine the research methods to evaluate if the primary researcher's research findings are accurately representative of the initial data and unbiased from human interpretation. The confirmability audit will take place in both the academic and professional arenas. First, members of the academic thesis committee will review and critique the research data, analysis notes, and findings. This audit will be conducted by Dr. Stacy Taniguchi, Dr. Patti Freeman, and Dr. Kelly McCoy. A team audit will provide the opportunity to compare and contrast research findings in a collaborative manner. Second, the research process and findings will be exposed to a peer-review from the clinical director and recreation therapist assisting with the facilitation of the POST intervention. They will be asked review the research findings and to provide feedback based on their professional experience working with adolescents in treatment. Thus, several sources will be able to contribute to the final interpretation and results of the analyzed data through confirmation and/or critique of the researcher's findings.

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Appendix A-1a

POST Intervention Protocols

POST Intervention Protocol: Activity 1

**Activity 1: Introduction**

---

**Activity Format**

- **Introduction:** Intro to the POST intervention; Primitive skills presentation
- **Instruction:** Contributing to the team experience; Expectations
- **Demonstration:** Show an example of a natural resource
- **Therapeutic Discussion:** Initial group goals
- **Assignment:** To be completed next activity.

**Presentation: Primitive Skills Workshop**

---

Discuss concepts related to wilderness skills

**Goals and Objectives**

- Introduce the group to student participants
- Show examples of completed projects to the group

## **Activity 2: Personalizing the Experience**

---

### **Activity Format**

- **Introduction:** Personalizing the Experience
- **Instruction:** Hand binding journal; journal instruction
- **Demonstration:** Organizing materials and tying journal bindings
- **Skill Practice:** Complete first journal assignment
- **Individual Project:** Bind journal
- **Therapeutic Discussion:** Experiences as metaphors for life
- **Assignment:** Journal response

### **Skill Activity: Journal Entry**

---

Complete first journal assignment. Students should have the opportunity to share with the group part of what they wrote about.

### **Project: Hand Bound Journals**

---

Discuss project logistics

Successful student demonstration of project

Students complete their individual journal binding projects

### **Goals and Objectives**

To demonstrate the ability to complete a hand bound journal project.

- By the end of the activity, the student will be present a completed journal project with
  - (a) properly organized pages
  - (b) a securely tied binding

**Equipment & Supplies:** Journal paper, natural cover paper, hemp string, hole-punches (several), pencils.

## POST Intervention Protocol: Activity 3

**Activity 3: Resource Recognition**

---

**Activity Format**

- **Introduction:** Resource Recognition
- **Instruction:** Explain activities
- **Skill Practice:** Resource Activity #1
- **Group Project:** Resource Activity #2
- **Therapeutic Discussion:** Resources to therapy
- **Assignment:** Journal response

**Activity:**


---

Have the group sit together in a circle. Present a wilderness survival situation where they are lost and want to evaluate what resources they have with them. First, every student should empty their pockets and inventory what they have (i.e. comb, pencil, glasses, shoe lace, etc.). Next, ask each member to choose one of their items and determine another use for it for the survival scenario. Discuss concepts of resource identification and the keys to survival

**Project: Prioritizing Exercise**


---

Have the group sit together in a circle. Provide a survival scenario and a list of several items to the group. Instruct each individual to prioritize each item in relation to the other items. Next, have the group discuss and prioritize the items. Possibly suggest that they can only have a certain number of the items and must leave the rest. Discuss prioritizing and the concepts of needs and wants.

**Goals and Objectives**

To demonstrate the ability to work together with a group to discuss prioritized resources

**Equipment & Supplies:** Hand-out on activity scenario and list of equipment for group activity

### Activity 4: Adaptation

---

#### Activity Format

- **Introduction:** Primitive shelters
- **Instruction:** Concepts relate to primitive shelters
- **Demonstration:** Build a model-sized debris hut
- **Skill:** Selecting a site; Using shovels
- **Group Project:** Group snow shelter
- **Therapeutic Discussion:** Adaptation
- **Assignment:** Journal response



#### **Skill:** Selecting a site and using shovels

---

The group will work together to select a site. Each student will learn how to use the shovels safely.

#### **Goals and Objectives**

To demonstrate basis snow shelter concepts

- the group will work together to select a site for the shelter
- each student will practice using the shovels

#### **Project: Group Snow Shelter**

---

Students work as a group to complete the shelter project

#### **Goals and Objectives**

To demonstrate the ability to construct an a group snow shelter, the students will

- present a completed snow shelter that meets construction criteria as explained by staff
- have all actively participated in constructing
- all be able to crawl into the shelter

**Equipment & Supplies:** Snow shovels (at least 6), warm clothing, boots



## POST Intervention Protocol: Activity 5

**Activity 5: Natural Consequences**

---

**Activity Format**

- **Introduction:** Primitive fires; Friction fires
- **Instruction:** Concepts related to hand drill fires
- **Demonstration:** Making a fire with a hand drill
- **Skill Activity:** Practice basic hand drill techniques
- **Group Project:** Work in groups of four to make a hand drill fire
- **Therapeutic Discussion:** Natural consequences
- **Assignment:** Journal response

**Skill: Primitive Fire Techniques**

---

Skills: hand drill technique, tinder bundles, firewood preparation

**Goals and Objectives**

To demonstrate the skills to make a primitive fire

- By the end of the activity, the student will be able to prepare for a primitive fire by
  - (a) constructing a tinder bundle with natural materials
  - (b) demonstrating proper hand drill and fire board techniques
  - (c) preparing appropriate firewood

**Project: Group Primitive Fire**

---

Students arranged in groups of four complete the project together.

**Goals and Objectives**

To demonstrate the ability to complete a group primitive fire project

- By the end of the activity, the students will create a primitive fire by
  - (a) being actively involved in the project
  - (b) working together
  - (c) applying their new skills

**Equipment & Supplies:** Firewood, pocket knives, tinder nest materials (e.g., jute string, juniper bark, etc.), hand drills, fire boards, and food.



## Activity 6: Skill Acquisition

---

### Activity Format

- **Introduction:** Uses of cordage in wilderness living
- **Instruction:** Concepts related to making primitive cordage
- **Demonstrate:** Proper cordage techniques
- **Skill Activity:** Cordage artificial sinew
- **Project:** Cordage necklace
- **Therapeutic Discussion:** Skill acquisition
- **Assignment:** Journal response

### Skill: Cordage

---

Students will learn to make cordage.

### Goals and Objectives

To demonstrate the ability to make cordage

- The student will demonstrate how to make cordage by
  - (a) trying the ends of two strings together
  - (b) twisting each individual string in the same direction
  - (c) twisting the two strings in the opposite direction



### Project: Cordage Necklace

---

Students will complete a necklace project.

### Goals and Objectives

To demonstrate the ability to make a necklace

- By the end of the activity, the students will make a cordage necklace by
  - (a) using proper cordage skill techniques
  - (b) experimenting with various cordage lengths and strand amounts

**Equipment & Supplies:** Artificial sinew, scissors

POST Intervention Protocol: Activity 7

**Activity 7: Primitive Tools**

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**Activity Format**

- **Introduction:** Concept of twisting fibers, primitive tools, and hand weaving
- **Instruction:** Concepts related to drop spindles
- **Demonstration:** Drop spindle technique
- **Skill Activity:** Hand twist fibers
- **Individual Project:** Hand spin wool on a drop spindle
- **Therapeutic Discussion:** Ingenuity
- **Assignment:** Journal response

**Skill: Drop Spindles**

---

Student will learn the skills necessary to hand spin a ball of yarn with a drop spindle.

**Goals and Objectives**

To demonstrate how to use a drop spindle

- By the end of the activity, the student will demonstrate drop spindle techniques by
  - (a) properly attaching the wool to the spindle
  - (b) spinning the drop spindle in the right direction



**Project: Card Weaving**

---

Students will work together as a team to complete a ball of yarn.

**Goals and Objectives**

To demonstrate the ability to make a ball of yarn

- By the end of the activity, the students will present a ball of yarn
  - (a) completed using proper drop spindle techniques

**Equipment & Supplies:** Drop spindles, strand wool

### Activity 8: Project Creation

---

#### Activity Format

- **Introduction:** Discuss primitive pottery
- **Instruction:** Concept related to making a pinch pot
- **Demonstration:** Pinch pot techniques
- **Skill Practice:** Learning to work with clay
- **Project:** Pinch pot
- **Therapeutic Discussion:** Project creation
- **Assignment:** Journal response



#### Skill: Working Clay

---

Students participate in the skill activity of working clay.

#### Goals and Objectives

To demonstrate skills related to working clay

- By the end of the activity, the student will demonstrate pottery skills by
  - (a) showing how to form a ball (without needing to wedge the clay)
  - (b) Keeping proper and consistent thickness of clay walls

#### Project: Pinch Pot

---

Each student will use clay to make a pinch pot suitable to use for campfire cooking.

#### Goals and Objectives

To demonstrate the ability to make a pinch pot

- By the end of the activity, the students will present a completed pinch pot that meets wall thickness criteria for firing

**Equipment & Supplies:** Clay, pottery tools, newspaper

POST Intervention Protocol: Activity 9

**Activity 9: Project Completion**

---

**Activity Format**

- **Introduction:** Concepts related to leatherwork
- **Instruction:** Concepts related to making a leather project
- **Demonstration:** How to make a leather bag
- **Skill Practice:** Learn to use tools (needle & awl)
- **Project:** Leather bag
- **Therapeutic Discussion:** Project creation
- **Assignment:** Journal response

**Skill: Leatherwork**

---

Discuss skills for designing patterns, punching holes in leather, and sewing with sinew

**Goals and Objectives**

To demonstrate the ability to prepare for making a leather bag

- By the end of the activity, the student will demonstrate how to
  - (a) design a leather bag pattern
  - (b) use necessary tools properly and safely
  - (c) conserve leather by planning material use and pre-drawing the pattern

**Project: Leather Bag**

---

Each student will complete a leather bag project.

**Goals and Objectives**

To demonstrate the ability to sew a leather bag

- By the end of the activity, the students will present a completed leather bag
  - (a) sewn with artificial sinew
  - (b) securely attached to their cordage necklace

**Equipment & Supplies:** Leather, leather scraps, artificial sinew, scissors, pencils, and the previously made cordage necklaces.

### Activity 10: Final Discussion

---

#### Activity Format

- **Introduction:** Final group meeting time
- **Therapeutic Discussion:** POST experience
- **Assignment:** Turn in journal

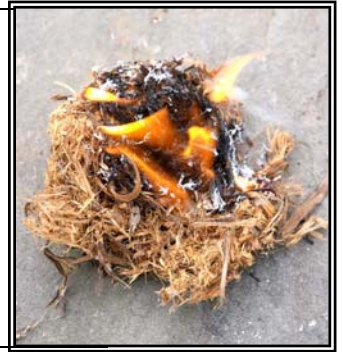
#### Skill: Individual Comments

Discuss over experience and one example of an activity metaphor

#### Goals and Objectives

To demonstrate the ability to evaluate the POST experience

- The student will be able to share comments about the POST program by
  - (a) describing the overall experience of the POST program
  - (b) describing one favorite activity and how it represents life



#### Project: Focus Group Discussion

Discuss as a group the overall experience of the POST program

#### Goals and Objectives

To demonstrate the ability to discuss the POST experience as a group

- The students will demonstrate the ability to discuss their experience by
  - (a) each contributing to the discussion
  - (b) sharing their opinions and perspectives about the POST experience

Appendix A-1b

Consent Forms

Student Participant Assent Form

Dear Student,

The Primitive Outdoor Skills Training (POST) group is part of recreation therapy (RT) and a Brigham Young University (BYU) school study and research project. The POST group will have one activity a week for the next 10 weeks. Groups will be after school and will last from 2 to 4 hours long. During the group, you will learn outdoor skills and discuss therapy goals. Being part of this study is voluntary. It is up to you whether or not you want to be part of the study. If you choose to be part of the study and then change your mind, you may simply stop being a part of the study at any time without penalty. The only risks of being part of the study are normal risks of learning outdoor activities and talking about therapy goals. There are no rewards for being part of the study, but it may help you with therapy goals.

As part of the research, you will also be asked to answer a few questions before the first activity and after the last activity. Your answers to these questions will be kept confidential. This means that only the recreation therapist that you talk to will know which answers were yours. The recreation therapist will not record your name with your answers.

If you have any questions about this study, please have your therapist contact me, Brian Malcarne (Recreation Therapist) at any time. If you have any questions concerning your rights as a study participant, you may also have your therapist contact Dr. Renea Beckstrand, Institutional Review Board (IRB) Chair, at BYU.

Student: I have read, understand, and have received a copy of this permission form. By signing, I choose to be a part of this study.

_____ Name of Student (Please Print)	_____ Signature of Student	_____ Date
_____ Witness Name (Please Print)	_____ Signature of Witness	_____ Date

Thank you for your time,

Brian Malcarne, BYU Graduate Student  
Phone: (801) 360-8738  
Email: [bkmalcarne@gmail.com](mailto:bkmalcarne@gmail.com)





Parent Consent Form

Dear Parent/Legal Guardian,

As a Brigham Young University (BYU), Youth and Family Recreation graduate student, I am conducting a graduate thesis research project in cooperation with Provo Canyon School (PCS). This study is designed to evaluate the benefits of participation in an established PCS recreation therapy intervention combined with applied principles regarding therapeutic change. This recreation therapy intervention is known at PCS as the Primitive Outdoor Skills Training (POST) intervention program. The POST program will have about one activity a week over a 10-week time frame. Participating students will receive outdoor wilderness skill instruction and discuss applications related to therapeutic change. In addition to normal attendance and participation in the POST recreation therapy intervention program, the study requests that each student provides feedback on their experience by participating in one audio recorded group discussion, two audio recorded individual interviews, and written journal entries during the 10-week study time frame. The study also requests two interviews with the primary therapist and two interviews with at least one parent/legal guardian. These interviews are required so as to gather additional perspectives concerning the attitude and approach to therapy as demonstrated by each student prior to and following participation in the POST program.

Participation in this study is completely voluntary. Students may refuse to participate or discontinue participation at any time without penalty. There are no anticipated risks of involvement in this study. Direct benefits from participating in this study are unknown, but it is anticipated that participating students will receive therapeutic benefits that result in improved functioning at PCS and in family interaction. Involvement in this group will not interfere with the student’s school responsibilities or therapy. All student information will be kept completely confidential throughout the study. Student names (or any other identifying information) will not be recorded or associated with interview and journal comments, data analyses and results, or research publication.

If you have any questions about this study, please contact me, Brian Malcarne (BYU graduate student researcher) at any time. I can be reached by cell phone: (801) 360-8738, or email: [bkmalcarne@gmail.com](mailto:bkmalcarne@gmail.com). If you have any questions concerning research participant rights, you may also contact Dr. Renea Beckstrand, Institutional Review Board (IRB) Chair, 422 SWKT, BYU, Provo, UT 84602; phone: (801) 422-3873; email: [renea\\_beckstrand@byu.edu](mailto:renea_beckstrand@byu.edu).

Parent/Legal Guardian: I have read, understand, and have received a copy of this permission form. By signing, I affirm that I have full legal guardianship of this student and I give permission for her to participate in this research study. By signing, I also give consent to participate in this study.

\_\_\_\_\_ has permission to participate in this study.  
Name of Student (Please Print)

\_\_\_\_\_ Signature of Parent \_\_\_\_\_ Date  
Parent/Legal Guardian Name (Please Print)

\_\_\_\_\_ Signature of Witness \_\_\_\_\_ Date  
Witness Name (Please Print)

Thank you for your time and consideration,

Brian Malcarne, BYU Graduate Student  
Phone: (801) 360-8738  
Email: [bkmalcarne@gmail.com](mailto:bkmalcarne@gmail.com)



### Therapist Consent Form

Dear Therapist,

As a Brigham Young University (BYU), Youth and Family Recreation graduate student, I am conducting a graduate thesis research project in cooperation with Provo Canyon School (PCS). This study is designed to evaluate the benefits of participation in an established PCS recreation therapy intervention combined with applied principles regarding therapeutic change. This recreation therapy intervention is known at PCS as the Primitive Outdoor Skills Training (POST) intervention program. The POST program will have about one activity a week over a 10-week time frame. Participating students will receive outdoor wilderness skill instruction and discuss applications related to therapeutic change. In addition to normal attendance and participation in the POST recreation therapy intervention program, the study requests that each student provides feedback on their experience by participating in one audio recorded group discussion, two audio recorded individual interviews, and written journal entries during the 10-week study time frame. The study also requests two interviews with the primary therapist and two interviews with at least one parent/legal guardian. These interviews are required so as to gather additional perspectives concerning the attitude and approach to therapy as demonstrated by each student prior to and following participation in the POST program.

Participation in this study is completely voluntary. Students may refuse to participate or discontinue participation at any time without penalty. There are no anticipated risks of involvement in this study. Direct benefits from participating in this study are unknown, but it is anticipated that participating students will receive therapeutic benefits that result in improved functioning at PCS and in family interaction. Involvement in this group will not interfere with the student's school responsibilities or therapy. All student information will be kept completely confidential throughout the study. Student names (or any other identifying information) will not be recorded or associated with interview and journal comments, data analyses and results, or research publication.

If you have any questions about this study, please contact me, Brian Malcarne (BYU graduate student researcher) at any time. I can be reached by cell phone: (801) 360-8738, or email: [bkmalcarne@gmail.com](mailto:bkmalcarne@gmail.com). If you have any questions concerning research participant rights, you may also contact Dr. Renea Beckstrand, Institutional Review Board (IRB) Chair, 422 SWKT, BYU, Provo, UT 84602; phone: (801) 422-3873; email: [renea\\_beckstrand@byu.edu](mailto:renea_beckstrand@byu.edu).

Primary Therapist: I have read, understand, and have received a copy of this permission form. By signing, I give consent to participate in this study and therapeutic consent for my patient to participate in this research study.

\_\_\_\_\_ has permission to participate in this study.  
Name of Student (Please Print)

\_\_\_\_\_ Signature of Therapist \_\_\_\_\_ Date

\_\_\_\_\_ Signature of Witness \_\_\_\_\_ Date

Thank you for your time and consideration,

Brian Malcarne, BYU Graduate Student  
Phone: (801) 360-8738  
Email: [bkmalcarne@gmail.com](mailto:bkmalcarne@gmail.com)

Appendix A-1c

Interview Prompt Questions

### Participant Interview Prompt Questions

1. First round interview: How's it going? How has your day been? Do you have any questions for me about the POST group or about this interview?  
  
Second round interview: How was your experience in the POST program? What was your favorite part, if any? What things did you like/not like? Since you started the POST program (10 weeks ago), have you experienced any changes in your attitude toward therapy? Are any of those changes a result of your participation in the POST group?
2. (Precontemplation Stage) Why are you here at Provo Canyon School? What therapy goals do you have here at the school? What do you think about your therapy goals?
3. (Contemplation Stage) How would you describe your attitude toward therapy here at the school? Are there any life changes that you have thought about making while here at the school?
4. (Preparation Stage) What do you plan to accomplish in therapy?
5. (Action Stage) How would you describe your involvement in therapy? Describe your commitment to your therapy goals? What results have come from your effort in therapy? How would you describe the role of your therapist in your therapy? How would you describe the role of your parents in your therapy?
6. (Maintenance Stage) Do you feel like you are making progress in therapy? Explain. If so, how do you keep making progress? If not, what is keeping you from making progress? Have you had to make any life adjustments to help avoid old behaviors? How do you handle situations that might tempt you to resume old behaviors that might be harmful?

### Parent Interview Prompt Questions

1. First round interview: After an introduction and providing some background about the researcher, POST program, and research study, and Prochaska and DiClemente's Stages of Change Model, the interviewer will solicit and answer any additional questions that the parent may express. Do you have any questions for me?

Second round interview: From your perspective, how has your daughter's experience been in the POST program? What are your opinions about her experience? Since your daughter started the POST program (10 weeks ago), have you observed any changes in her approach to therapy? What have they been? Do you think that her participation in the POST group influenced any of these changes?

2. (Precontemplation Stage) What does your daughter think about her therapy goals? Does she agree with these goals?
3. (Contemplation Stage) What is her attitude toward therapy?
4. (Preparation Stage) What is her plan for engaging in therapy?
5. (Action Stage) What effort is she currently making in therapy? What role does she allow you as a parent to play in this change process?
6. (Maintenance Stage) Do you feel like she is making progress in therapy? Has she already made some critical changes in her life while at the school?
7. Which stage in the change model most accurately describes your daughter's attitude toward therapy? How long has she been in that stage?

### Therapist Interview Prompt Questions

1. First round interview: After an introduction and providing some background about the researcher, POST program, and research study, and Prochaska and DiClemente's Stages of Change Model, the interviewer will solicit and answer any additional questions that the therapist may express. Do you have any questions for me?

Second round interview: From your perspective, how was the patient's experience in the POST program? What is your opinion of her experience? Since the patient started the POST program (10 weeks ago), have you observed any changes in her approach to therapy? What have they been? Do you think that her participation in the POST group has influenced any of these changes?

2. (Precontemplation Stage) From your perspective: What does the patient think about her therapy goals? Does she agree with these goals?
3. (Contemplation Stage) What is her attitude toward therapy?
4. (Preparation Stage) How would you describe her involvement in therapy?
5. (Action Stage) What effort is she currently making in therapy? What role does she allow you as a therapist to play in this change process?
6. (Maintenance Stage) Do you feel like she is making progress in therapy? Has she already made some critical changes in her life while at the school?
7. Which stage in the change model most accurately describes the patient's attitude toward therapy? How long has she been in that stage?