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# The Effects of a Goal-Setting Intervention on Delinquent Adolescent Group Treatment Outcomes

## Abstract

Goals guide and motivate behavior. An extensive amount of research has linked specific goal characteristics with improved performance and wellbeing (Fujita & MacGregor, 2012; Locke & Latham, 2002). In group psychotherapy, goals are often established at the onset of treatment and commonly not reviewed again until the end of treatment. This model does not teach goal-setting skills or provide feedback to guide goal pursuit. This study utilized a quasi-experimental design to assess the effects of a goal-setting intervention on group treatment outcomes of adolescents with a history of delinquent behaviors. The eight-week (12-session) intervention provided support in establishing goals consistent with the SMARTGOALS model and subsequent feedback on goal progress. Treatment outcomes, measured as change in level of distress from pre- to post-test and goal attainment ratings, were compared to a CBT-based treatment-as-usual condition, in which participants set goals but did not receive support in establishing SMARTGOALS or goal feedback during the course of the study. The results of this study showed a decrease in level of distress reported by participants in both conditions, with the goal-setting intervention not associated with greater reductions than treatment-as-usual. The goal-setting intervention did assist in the development of more behavioral and specific goals consistent with the SMARTGOALS model. While goal attainment ratings were similar on one of the goals set by participants in the two conditions, participants in the goal-setting condition had higher goal attainment ratings on the second goal. These findings show a goal-setting intervention, facilitated by group leaders who received brief training in this model, has some added benefit over treatment-as-usual.

## Document Type

Dissertation

## Degree Name

Ph.D.

## Department

Counseling Psychology

## First Advisor

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## Keywords

Goal setting, Group therapy

## Subject Categories

Educational Psychology

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**Publication Statement**

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THE EFFECTS OF A GOAL-SETTING INTERVENTION ON DELINQUENT  
ADOLESCENT GROUP TREATMENT OUTCOMES

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A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

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In Partial Fulfillment

of the Requirement for the Degree

Doctor of Philosophy

---

by

Paul D. Grimsley, M.A.

August 2017

Advisor: Maria T. Riva, Ph.D.

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Treatment Outcomes  
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Degree Date: August 2017

### Abstract

Goals guide and motivate behavior. In group psychotherapy, goals are often established at the onset of treatment and commonly not reviewed again until the end of treatment. This model does not teach goal-setting skills or provide feedback to guide goal pursuit. This study utilized a quasi-experimental design to assess the effects of a goal-setting intervention on group treatment outcomes of adolescents with a history of delinquent behaviors. The eight-week (12-session) intervention provided support in establishing goals consistent with the SMARTGOALS model and subsequent feedback on goal progress. Treatment outcomes, measured as change in level of distress from pre- to post-test and goal attainment ratings, were compared to a CBT-based treatment-as-usual condition, in which participants set goals but did not receive support in establishing SMARTGOALS or goal feedback during the course of the study. The results of this study showed a decrease in level of distress reported by participants in both conditions, with the goal-setting intervention not associated with greater reductions than treatment-as-usual. The goal-setting intervention did assist in the development of more behavioral and specific goals consistent with the SMARTGOALS model. While goal attainment ratings were similar on one of the goals set by participants in the two conditions, participants in the goal-setting condition had higher goal attainment ratings on the second goal. These findings show a goal-setting intervention, facilitated by group leaders who received brief training in this model, has some added benefit over treatment-as-usual.

## Acknowledgements

The Morgridge College of Education has been a second home to me for the past six years and the faculty of the Counseling Psychology program have contributed not only to my professional development, but my personal growth as well. Their passion for training mental health providers and commitment to high standards have set me up for a rewarding career. I would like to thank my committee members for taking the time to provide their feedback and help guide me through this process. I would like to thank Dr. Kathy Green for her patience and enthusiasm in teaching statistics and lending her expertise to this project. I would also like to thank Dr. Andi Pusavat without whom I would not be where I am today. My experience working in the counseling clinic under her clinical supervision has remained one of the most influential training opportunities in my development as a therapist. Dr. Maria Riva has been an amazing mentor and advisor over the past four years. I cannot thank her enough for the countless hours she spent reading and providing feedback on this project as well as my internship essays and application. It is rare to have someone so invested in your growth, aware of your potential, and willing to challenge you to get there.

Finally, I would like to take this opportunity to thank my family for their never ending support. The perseverance shown by my brother, Will, has been inspiring and has provided perspective on the things that are important in life. My wife, Antonia, has sacrificed many weekends and tolerated my early morning writing sessions over the past two years. Her belief in me encouraged me to pursue a graduate degree, motivated me throughout the challenges of this pursuit, and remains a driving force in my life.

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## Chapter One: Introduction

Goal setting and goal pursuit are essential tasks that influence behavior and development across the life span. Goals provide a sense of meaning and control to life experiences (Fujita & MacGregor, 2012; Moskowitz & Grant, 2009). They impact our thoughts, feelings, and actions. Goals have been a topic of interest throughout the history of psychology (Pervin, 1989). Multiple theories have been developed to explain the relationship between goals and human behavior. While the mechanism of action in the goal-behavior relationship is a debated topic, there is consensus that goals play an essential role in guiding, motivating, and modifying human behavior (Locke & Latham, 2002). In fact, multiple theories contend that goals fundamentally influence all human behavior (Locke & Latham, 2002). Research has clearly established that there is a significant and positive relationship between goals and performance (Locke & Latham, 2002). In addition, a growing body of research has demonstrated a similar relationship between goals and wellbeing (Anthony, Ellison, Rogers, Mizock, & Lyass, 2014; Coote & MacLeod, 2012; Farquharson, MacLeod, & Holloway, 2014; MacLeod, Coates, & Hetherington, 2008). This research suggests that goals not only influence human behavior, but also play an important role in human emotion.

The human brain is uniquely fit to engage in goal formation and goal-directed behavior. Humans have the capacity for abstract, future-oriented thought (Satpute & Ochsner, 2012). Individuals can identify discrepancies between current and desired

states, and develop complex strategies to progress towards goals. Humans have the capacity to hold goals in working memory while allowing for feedback to influence goal modifications and monitor progress (Satpute & Ochsner, 2012). This complex series of tasks is believed to occur at both the conscious and unconscious level. It is seen as the essential cognitive ability accounting for the progression of the human species (Satpute & Ochsner, 2012). The development of effective goal-setting skills and goal-directed behaviors is an essential developmental task that impacts the social, psychological, and emotional functioning of the individual throughout life (Bandura, 1989). These skills are believed to be especially important as individuals begin to navigate the developmental tasks of adolescence (Massey, Gebhardt, & Gamefski, 2008)

Adolescence, a period of transition between childhood and adulthood, is marked by the onset of puberty and characterized by drastic physical, psychological, and social change (Malekoff, 2014). It is widely agreed that significant developmental tasks must be achieved during this crucial period in order for adolescents to successfully transition to becoming healthy and functional adults (Malekoff, 2014). Common developmental tasks include establishing mature peer relationships, developing a sense of one's sexuality, acquiring skills for emotional and financial independence from primary caregivers, and planning for future education and/or career (Nurmi, 1993). The transition from concrete operational to formal operational thinking makes it possible for individuals to navigate these complex developmental tasks.

Cognitive developments during adolescence include the ability to use hypo-deductive reasoning, abstraction, metacognition, and third-person perspective taking (Piaget, 1972). These capacities allow adolescents to begin engaging in higher-order,

goal-directed behaviors. However, during this stage of development adolescents are at risk for engaging in dangerous behaviors (e.g., drug use, unprotected sexual activity, and delinquent behavior) that can have detrimental effects on the rest of their lives. The adolescent brain has a strongly established reward center which increases susceptibility to social pressures despite potential negative consequences (Malekoff, 2014). The prefrontal cortex, responsible for executive functioning and consequential thinking, is still forming and is outmatched by the reward centers of the brain (Shaw et al., 2008). These drastic developmental changes combined with underdeveloped prefrontal cortexes contribute to the perplexities of adolescence. Erik Erikson (1966) described the psychosocial crisis of this developmental stage as identity versus role confusion. Dysfunctional behaviors that develop during this stage can lead to negative socialization and disrupt healthy development (Hoag & Burlingame, 1997).

Goal setting, pursuit, and achievement are believed to play an important role in guiding the trajectory of adolescents through these developmental tasks (Nurmi, 1993). As adolescents begin to learn how to set goals and identify strategies to achieve goals, self-evaluation of their progress influences the development of a self-concept (Massey et al., 2008). The effort devoted to achieving goals then influences the emotional experiences of adolescents and their overall wellbeing (Massey et al., 2008). In these ways goals play an influential role in the developing adolescent's sense of self and relationship with the external world.

The complexities of successfully navigating developmental tasks that put increased emphasis on social belongingness and the ability to engage in meaningful goal-directed behaviors makes adolescence a uniquely challenging period of life. Many mental

health disorders are believed to begin during this phase, but are not identified until later in life (Patel, Flisher, Hetrick, & McGorry, 2007). While the exact prevalence of mental health disorders in the adolescent population varies widely depending on the sample, it is known that adolescents engage in self-harm behaviors at a higher rate than any other stage of life and suicide is one of the leading causes of death for this population (Center for Disease Control and Prevention [CDC], 2015). Untreated mental health problems are related to a number of adverse outcomes including academic problems, substance abuse, risky sexual behaviors, and criminal conduct (CDC, 2015).

Adolescents from the age of 13 to 17 make up approximately 7% of the United States population, a proportion that has remained relatively stable over the past two decades (Zimring & Tanenhaus, 2014). However, according to statistics from 2007, individuals in this age range commit approximately 16% of violent crimes and 26% of property crimes (Puzzanchera, 2009). Juvenile offenders in 2002 were estimated to have committed 1,300 murders in the United States (Snyder & Sickmund, 2006). The rate of juvenile offenders that go on to commit crimes as adults varies, but it is generally reported between 40% and 60% (Loeber, Farrington, & Petechuk, 2013).

In 2011, 112,600 adolescents were ordered to residential placement and 260,300 were placed on probation for delinquent behavior (Sickmund & Puzzanchera, 2014). While the rate of juvenile placements such as these has decreased in the past two decades, the rate of mental health problems within this population has increased (Grisso, 2005). Juvenile offenders are two to three times more likely to have a diagnosable mental health disorder than those of the same age in the general population (Grisso, 2005).

Approximately two-thirds of juveniles in placement met the criteria for at least one mental health disorder and have elevated rates of comorbidity (Grisso, 2005).

While there are promising mental health interventions for adolescents, the mental health needs of adolescents often go unmet (Tolin & Dodge, 2005). Most adolescents do not independently seek treatment. Therefore, treatment is often not provided until significant behavioral symptoms have been observed. For adolescents at risk of engaging in delinquent behaviors, this often occurs through contact with the juvenile justice system. Once adolescents are in treatment, group therapies have historically been the modality of treatment used with this population (Shechtman, 2007). Group therapies have been shown to be an effective treatment approach in working with adolescents (Burlingame et al., 2014) and are frequently used in response to adolescent antisocial and aggressive behaviors (Ang & Hughes, 2002). Group therapies provide the opportunity for adolescents to learn new skills amongst peers. As primary attachment shifts from parental figures to friends, this setting can promote interpersonal learning and skill development (Shechtman, 2007). However, in the research literature group therapies with adolescents have received significantly less attention than with adults. In addition, there is still a substantial lag in the research on which group interventions are effective with at-risk and delinquent adolescents.

#### Purpose and Justification

The purpose of the current study is to examine the effectiveness of a goal-setting intervention with adolescents in group treatment. Despite research showing that delinquent adolescents have higher rates of mental health disorders and that maladaptive goal-setting skills are related to emotional distress, effective strategies for teaching goal-



setting skills to delinquent adolescents have not been identified. During this stage of life goal setting plays an important role in guiding adolescents' developmental trajectories and the formation of their self-concept (Bandura, 1989; Massey et al., 2008; Nurmi, 1993). Delinquent adolescents establish and emphasize different types of goals than their non-delinquent counterparts (Lopez-Romero & Romero, 2010). Although research has shown that goals with specific characteristics have a generally positive effect on human behavior, there are gaps in the literature on the application of goal-setting interventions with adolescents in group therapy. The overwhelming majority of research on goals has been conducted in organizational psychology and has examined the impact of goals on performance (Locke & Latham, 2002). The same level of rigor has not been applied to examining the impact of teaching adolescents how to set goals in group therapy. The following study intends to help fill this gap in the current body of research.

In addition to playing an important role in the achievement of developmental tasks, the establishment and pursuit of goals is generally accepted as an essential component of group therapy (Yalom, 1983). Irvin Yalom (1983) stated, "Without appropriate goals, both therapist and patient drift aimlessly and anxiously through the therapy session. The therapy group that purposes inappropriate goals is doomed to fail at the very outset" (p. 52). As peers play an increasingly important role during adolescence, group therapies allow for adolescents to get feedback and learn from those going through similar experiences. The increased importance of peer relationships and social belongingness is considered to be a foundational need only superseded by sustenance and safety (Maslow, 1943). Piaget (1972), Vygotsky (1978), and Erikson (1966) all acknowledged that there is a strong social basis for cognitive and psychological

development. In addition, adolescents predominantly engage in high-risk behaviors in response to social situations (e.g., the desire to fit in, peer pressure, or not wanting to be made fun of) (Ramo, Prince, Roesch, & Brown, 2012). Group therapies allow for adolescents to engage in treatment within a social context that is composed primarily of peers promoting therapeutic factors of interpersonal learning and universality.

A majority of the current research on group therapies with adolescents examines the efficacy of highly structured cognitive-behavioral curricula targeting specific psychiatric disorders (Malekoff, 2014). While this research has helped guide clinical application of adolescent treatment, group therapies with adolescents are often adapted from group therapies designed for children or adults. This method often neglects the unique developmental tasks associated with adolescence. Specifically, this method overlooks the benefits of teaching goal-setting skills during this period of increasing social, emotional, and psychological demand.

Research has demonstrated that specific goal characteristics are associated with improved performance and wellbeing among both adult and adolescent populations (Fujita & MacGregor, 2012; Locke & Latham, 2002). Studies have also shown that teaching goal-setting skills has a positive effect on adults' self-reported level of wellbeing (Anthony et al., 2014; Coote & MacLeod, 2012; Farquharson et al., 2014; MacLeod et al., 2008). However, the application of goal-setting interventions has not been examined with adolescents in need of such support due to behavioral and mental health problems that have resulted in delinquent behaviors. The purpose of this study is to examine the impact of a goal-setting intervention on adolescent group therapy outcomes and ability of adolescents to set and achieve adaptive goals.

One of the most widely discussed and utilized approaches of goal setting is the SMART model (Clarke, Crowe, Oades, & Deane, 2009). This model was initially presented as a strategy to assist managers in developing goals that would improve employee productivity (Doran, 1981). The SMART model and slight variations of this model have also been used in vocational, education, athletic, and health care settings to improve the quality and, therefore, effectiveness of goal setting (Clarke et al., 2009). SMART goals are based on the principles of goal-setting theory which contends that in order for goals to be motivating they must be clearly defined, appropriately challenging, measurable, important to the individual, and time-bound (Locke & Latham, 2002). Portions of the SMART acronym have been reworded and modified based on context to promote the underlying assumptions of goal-setting theory. The model that most accurately fits with the current body of research and the development of therapy goals defines the SMART acronym as *specific, measurable, attainable, relevant, and time-bound* (Latham, 2003). In applying SMART goals to counseling and psychotherapy, additional components have been suggested. These include *gainful, optimistic, agreed-upon, legitimate, and simple* (SMARTGOALS; Parsons & Zhang, 2014; Tyron & Winograd, 2011).

Adolescents are a population that is in need of additional support due to the complexity of developmental tasks at this age and susceptibility to social influence. In this study, delinquent adolescents were taught how to set goals consistent with the SMARTGOALS model in group therapy. Group therapy outcomes and goal attainment of these adolescents were compared to adolescents who participated in group treatment-as-

usual that did not include instruction and support on setting SMARTGOALS. In the following section the hypotheses of this study are outlined.

### Research Hypotheses

The research hypotheses in this study were developed from the literature review of goal setting and adolescent group therapies that is presented in Chapter Two. The lack of overlap between these two topics in the literature leaves important questions unanswered about the utility of teaching adolescents how to set goals in group therapy. The extensive research on goals and goal setting suggests that there are specific goal characteristics that are associated with positive outcomes and that teaching goal-setting skills to adults is related to improved wellbeing. The current study examined the impact of teaching adolescents how to set goals that are consistent with these researched characteristics on group therapy outcomes. The following hypotheses were examined:

1. Adolescents who are taught goal-setting skills in group treatment will have a significantly greater reduction in reported level of distress over the course of eight weeks of group treatment than adolescents who participate in group treatment that does not teach these skills.
2. Adolescents who are taught goal-setting skills in group treatment will rate their progress towards goals established in group higher after eight weeks of group treatment than adolescents who participate in group treatment that does not teach these skills.
3. There will be no significant main effect of pre-treatment level of risk to re-offend for the goal-setting treatment group over the course of eight weeks of group treatment on:

- a. Pre- to post-test reduction in level of distress.
- b. Goal attainment ratings.

### Data Analysis

The following is a brief description of the methodology that was used to address the research hypotheses stated above (Chapter Three provides a thorough description). Participants in this study were male adolescents between the ages of 13 and 19 residing in an all-male residential facility. As part of the mandated treatment, adolescents participated in regular group treatment sessions. Treatment groups consisted of 10 to 12 adolescents. Sessions lasted 60 minutes and were held two times per week. One to two group leaders facilitated sessions focused on cognitive restructuring, social skills, and problem solving.

In this study, differences in group treatment outcomes and goal attainment were examined between two conditions: a goal-setting intervention and a treatment-as-usual or comparison condition. Group leaders in the goal-setting condition were provided training on how to guide and support adolescents in establishing adaptive, functional goals in group therapy. The training curriculum consisted of didactic instruction, modeling of how to teach these skills in group therapy, and supervised practice with feedback. Group leaders were taught how to assist group members in developing goals consistent with the SMARTGOALS model. Group leaders learned how to address barriers in the goal-setting process and facilitate interpersonal learning of goal-setting skills within the group. Group leaders in the comparison condition provided group treatment as usual. Group leaders were assigned to a condition based on the unit on which they worked and conducted groups. This quasi-experimental design compared group treatment outcomes of

adolescents on the goal-setting unit to adolescents on two other units who received treatment as usual.

The measures used in this study included: Positive Achievement Change Tool (PACT) (Early, Hand, & Blankenship, 2012), Youth Outcome Questionnaire Self-Report (Y-OQ-SR) (Wells, Burlingame, & Rose, 2003), and adolescent and group leader questionnaires on goal attainment. Pre-treatment risk factors were obtained from the PACT. Members of the facility's multidisciplinary team complete this measure for all adolescents at the beginning of their residential treatment. The PACT identifies criminogenic risk factors for reoffending across 12 domains and provides a classification for overall risk of reoffending. The PACT overall level of risk to reoffend is obtained for all adolescents at intake and was used in this study to account for pretreatment participant criminogenic factors. The Y-OQ-SR was used as a measure of treatment outcome and wellbeing. Participants completed this measure at the onset of the study (pre-test) and at the conclusion of the eight-week intervention (post-test). This measure provided an overall distress score as well as distress scores on six subscales that have moderately high temporal stability allowing for this measure to be used to track changes in symptom severity (Ridge, Warne, Burlingame, Wells, & Tumblin, 2009). During data analysis, change in overall distress score was used to evaluate treatment outcome.

In order to measure goal attainment, adolescents in both conditions recorded their goals at the onset of the intervention. In the goal-setting intervention, group members were provided support with establishing SMARTGOALS. During subsequent groups, group members in this condition reviewed goal progress and received goal-related feedback. At the end of the intervention, adolescents in both conditions reviewed their

initial goals, identified any changes that were made to goals throughout the intervention, and rated their level of goal attainment. Group leaders completed a questionnaire rating their perception of the adolescent's level of goal attainment.

Data collected during this study was compared across conditions to evaluate the effects of treatment (see Table 1 for a summary of hypotheses, variables, and statistical tests). In addition, pre-treatment level of risk to re-offend, group member demographics, and group leader factors were examined to determine if these impacted the outcomes measured.

### Study Limitations

This study is the first of its kind to examine the effectiveness of teaching delinquent adolescents to set adaptive goals. The study has multiple strengths including a relatively large sample size and use of multiple therapy groups. In addition, the study examines goal setting with delinquent adolescents in a setting in which treatment is typically provided to this population. This study also utilizes group leaders that have limited training. This reduces the potential for previous training to confound results and provides information on the benefits of training staff in adolescent residential treatment on specific group leader skills. Yet, there are several limitations that will be discussed in this section.

Table 1

*Hypotheses, Variables, and Statistical Procedures*

---

<u>Hypotheses</u>	<u>Variables</u>	<u>Statistics</u>
Hypothesis 1: Adolescents who are taught goal-setting skills in group treatment will have a significantly greater reduction in reported level of distress over the course of eight weeks of group treatment than adolescents who participate in group treatment that does not teach these skills.	Y-OQ-SR Total Distress Scores (pre- and post-test)	Two-way Mixed Design ANOVA (repeated measures)
Hypothesis 2: Adolescents who are taught goal-setting skills in group treatment will rate their progress towards goals established in group higher after eight weeks of group treatment than adolescents who participate in group treatment that does not teach these skills.	Post-Treatment Goal Questionnaire – Group Member Form (adolescent rating of goal attainment)	Mann-Whitney U Test
	Post-Treatment Goal Questionnaire– Group Leader Form (group leader rating of goal attainment)	Mann-Whitney U Test
Hypothesis 3: There will be no significant main effect of pre-treatment level of risk to re-offend for the goal-setting treatment group over the course of eight weeks of group treatment on: a. Pre-post reduction in level of distress. b. Goal attainment ratings.	Independent Variables: 1. Treatment condition 2. PACT Level of Risk to Reoffend  Dependent Variable: a. Y-OQ-SR Total Distress Scores (change from pre- to post-measures) b. Adolescent rating of goal attainment	ANOVA

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The purpose of this study was to examine the clinical application of a goal-setting intervention with delinquent adolescents. The sample selected to examine this topic consists of males in a residential treatment that have a documented history of delinquent behaviors. While it was hoped that outcomes from the study would provide meaningful clinical guidance for teaching goal setting, they are limited to the specific population used in this study, which did not include females or adolescents who were not in residential treatment. The current study was also limited in that it only examined the application of a goal-setting intervention in a group setting. As a result, information cannot be drawn about what model of treatment is best suited for teaching these skills.

Research on group treatments can be complicated due to multiple factors influencing group treatment outcomes. These influences include the characteristics of the group members and group leaders, group process, and structural factors (Burlingame, Strauss, & Joyce, 2014). The setting of the current study did not allow for group leaders and group members to be randomly assigned to each condition. The facility does attempt to maintain heterogeneity in the ethnicity, level offense severity, and level of emotional/psychological support needed across units. This procedure reduces the likelihood that one unit would be comprised of more serious offenders or adolescents with more mental health problems. These pre-treatment factors were examined prior to conducting the data analyses related to the hypotheses to determine if there were statistically significant differences between participants in the two conditions. The same steps were taken to examine preexisting differences between group leaders such as level of training and education, length of employment at the current facility, previous experience facilitating group therapy, and demographic characteristics.

In this study, group leaders implemented the goal-setting intervention with the participants. This approach provides a more accurate representation of how treatment is typically provided in clinical settings. However, there are two limitations associated with this design. Fidelity of the goal-setting intervention is one limitation. Group leaders may not have provided adequate guidance on developing SMARTGOALS or may have encountered barriers not addressed in training. To help reduce these potential concerns, group leaders in the goal-setting condition reviewed group member goals in weekly supervision to ensure they were consistent with the model and to address any barriers in facilitating the goal-setting process during group sessions.

Another limitation of this quasi-experimental design was the potential for crossover effects between group leaders. While group leaders who received the additional goal-setting training were on a different unit than the leaders in the comparison groups, they did interact with group leaders on other units in their other roles at the facilities (e.g., coaching a sport together or monitoring classrooms together). While group leaders were asked to not discuss the content of training with other staff members, crossover effects may still have occurred.

Groups provided in the facility are open-ended. This presents a challenge because group members across conditions may not have received the same amount of time in group. Therefore, the number of groups attended was assessed during the data analysis phase. The attrition of group members and addition of new group members required that pre- and post-measures be administered throughout the intervention to participants entering or leaving treatment. In addition to group member attrition, there was the risk of group leader attrition. While staff turnover is common in this setting, it presents a

challenge because new staff members to the goal-setting unit would require additional training in order to facilitate the goal-setting intervention. In order to prepare for and limit the potential impact of this limitation, the site trainer and human resources departments were utilized to best coordinate trainings of new staff members.

While there are limitations to this study due to the nature of the group treatment model and the clinical setting, the research design is intended to provide information on the clinical application of a goal-setting intervention. This endeavor created the potential for confounding factors described above. Steps were taken to reduce the effects of these prior to the implementation of the study. The effects of preexisting factors and treatment duration were also examined during the data analysis stage of the study.

### Definitions

Adolescence: Adolescence is the period of life defined as the transition between childhood and adulthood. Adolescence begins with the onset of puberty, which generally occurs around the age of 13. Individuals go through significant cognitive, psychological, and physical changes during this period of life. The end of adolescence is culturally defined and varies based on the criteria used to determine adulthood. While there is no established age range that defines adolescence, this period of development is believed to occur primarily during the second decade of life (Malekoff, 2014). For the purposes of this study, the term adolescence refers to individuals between the ages of 13 and 19 years old.

Direct Care Staff: These are individuals who work directly with adolescents in residential treatment facilities with primary tasks of ensuring safety, providing supervision, and supporting treatment goals by leading unit-based treatment groups.

Group Leader: Group leaders are providers who facilitate group treatments. Group sessions may be led by a single group leader or a co-leadership dyad. Group leaders are responsible for maintaining the structure of the group, building the group culture, and facilitating group process factors (Yalom & Leszcz, 2005). Group leaders in the current study were direct care and case management staff members.

Group Treatment: Group treatment refers to the use of therapeutic interventions by one or more group leaders with a small group of clients. The term group treatment is a broad term that encompasses group counseling, group therapy, and group psychotherapy. Group treatments may vary in structure (e.g., size, setting, length, duration), purpose (e.g., personal growth, support, anger management, etc.), and member composition (e.g., homogeneity or heterogeneity of members).

Goal Terms:

*Goal:* A goal is a cognitive representation of the discrepancy between one's current state and a desired end state (Mann, de Ridder, & Fujita, 2013). Goals provide criteria for the evaluation of one's current state and direction for future actions. They can be related to anything from the fulfillment of basic needs to leisure activities and material possessions. Goals can be intrinsically or extrinsically motivated, but are always future oriented. As cognitive representations, goals are the outcome of goal setting and the motivation behind goal-directed behaviors (Fujita & MacGregor, 2012).

*Goal Pursuit:* Goal pursuit is the process that individuals go through in order to achieve a goal (Mann et al., 2013). Goal pursuit includes goal setting and goal striving. While goal setting generally precedes goal striving, goal setting may occur during goal striving as individuals decide to modify or change goals based on goal progress.

*Goal Setting:* Goal setting is the stage of goal pursuit during which an individual identifies and establishes a goal or goals.

*Goal Striving:* Goal striving is the stage of goal pursuit during which an individual develops a strategy or plan to progress towards his/her goal and engages in goal-directed behaviors (Fujita & MacGregor, 2012).

*Goal-Directed Behavior:* This is any action that an individual engages in that is motivated, either consciously or unconsciously, by an established goal and functions to help an individual move closer towards achieving the goal (Fujita & MacGregor, 2012).

*Goal Attainment:* Goal attainment is the degree of progress that an individual has made towards achieving a goal. Goal attainment is considered to be an indication of progress in psychotherapy (Berking, Hootforth, Jacobi, & Kröner-Herwig, 2005).

*SMARTGOALS:* The SMARTGOALS acronym stands for *specific, measurable, attainable, relevant, time-bound, gainful, optimistic, agreed-upon, legitimate, and simple* (SMARTGOALS; Latham, 2003; Parsons & Zhang, 2014; Tyron & Winograd, 2011). The original SMART model is based on the principles of goal-setting theory which contends that in order for goals to be motivating they must be clearly defined, appropriately challenging, measurable, important to the individual, and time-bound (Locke & Latham, 2002). In applying SMART goals to counseling and therapy, additional GOALS components were suggested by Parsons and Zhang (2014) and Tyron and Winograd (2011).

*Therapy Goals:* Therapy goals are the goals that an individual hopes to achieve as a result of engaging in treatment. In this study, therapy goals refer to the goals that participants set as the objective for group treatment.

## Theories:

*Goal-Setting Theory:* Goal-setting theory states that the benefits of goals have a positive linear relationship with goal difficulty and goal specificity (Latham & Locke, 2006). Therefore, goals that are challenging, but are still achievable, and provide specific criteria for goal attainment improve performance more than goals that are easy or vague. Goal-setting theory contends that successfully reaching goals leads to a sense of achievement and results in greater life satisfaction and subjective wellbeing.

*Reputation Enhancing Goal Theory:* According to this theory, adolescents engage in goal pursuits that are aimed at building and maintaining a specific reputation consistent with a desired social and personal identity (Carroll, Houghton, Hattie, & Durkin, 2009). While most adolescents set goals that are consistent with cultural expectations for this stage of life, at-risk and delinquent adolescents may devalue culturally acceptable goals and establish alternative delinquent or antisocial goals (Carroll et al., 2009).

*Teleonomic Model:* The teleonomic model contends that in order for goals to positively influence wellbeing, individuals must have goals that they are committed to achieving and that are a good fit with their intrinsic motivations and values (Michalak & Holtforth, 2006).

## Summary

This chapter highlighted the unique challenges that adolescents face as they transition from childhood to adulthood. Goal setting and pursuit are skills that are believed to play an important role in sociocognitive development during this stage of life (Bandura, 1997). Goal setting influences developmental trajectory and aids in the

navigation of developmental tasks (Nurmi, 1993). Failure to meet culturally defined expectations during this transition into adulthood can have significant, adverse affective and behavioral consequences (Malekoff, 2014; Massey et al., 2008). Adolescents who have exhibited significant conduct problems and are in the juvenile justice system are at an increased risk of having mental health problems (Grisso, 2005) and there is a high prevalence of these adolescents who go on to commit adult criminal offenses (Loeber et al., 2013). The goals of adolescents in juvenile corrections are different from those of other adolescents, which suggests that goals play a role in the development and maintenance of delinquent behaviors (Carroll et al., 2013).

This chapter underscored the scarcity of and need for research on goal setting with delinquent adolescents. This study examined the effects of teaching adaptive goal-setting skills to adolescents in residential treatment on two group treatment outcomes, level of distress and goal attainment, using pre- and post-test measures. Based on a review of literature, it was hypothesized that adolescents who were taught these skills in group treatment would report significantly greater reduction in their level of distress and would make more progress towards their goals over the course of the eight-week intervention. While pre-treatment level of risk to reoffend is predictive of recidivism, it was hypothesized that participants in the goal-setting treatment condition would report significantly greater reductions in level of distress and make more progress towards goals than participants in the comparison condition regardless of their pre-treatment level of risk to reoffend.

The following chapter provides a review of the relevant literature beginning with a brief overview of the research on group treatments. Research on adolescent group

therapies specifically is discussed with an emphasis on the treatment of delinquency and mental health problems. Research also is presented on the relationship between goals, human behavior, and wellbeing. Finally, a review of research on specific goal characteristics associated with positive outcomes is provided.



## Chapter Two: Review of the Literature

During no other period of life are individuals more likely to engage in high-risk behaviors such as substance abuse and criminal behavior than during adolescence (Begle et al., 2011; Sickmund & Puzanchera, 2014; Sussman & Ames, 2008). Juvenile crime is a significant social problem that has widespread effects on education, health care, vocation, and judicial systems (Carroll et al., 2013). The high rates of juvenile offenders with mental health disorders and past victimization makes this a population that is in need of additional support and mental health services (Grisso, 2008). Group treatment is typically seen as the treatment of choice with adolescents (Shechtman, 2007). However, research on specific group treatment interventions that work with this population is almost nonexistent.

This chapter begins with a review of the literature on group therapies, which have been utilized in the treatment of both adults and adolescents since the early 1900s (Barlow, Fuhriman, & Burlingame, 2000). As a result, there is a large body of research on the overall effectiveness of this treatment modality as well as its effectiveness with specific sub-populations of adolescents. This chapter also provides a brief overview of the extensive body of research on goals including significant findings from organizational psychology and the application of these findings to psychotherapy and wellbeing. Next, this chapter reviews research on the unique characteristics of adolescent goal setting and

the differences between delinquent and non-delinquent adolescents' goals. Finally, research on the characteristics of effective goal setting is presented.

### Review of Group Treatment

Early descriptive and experimental studies examining group therapy in the 1950s and 1960s were fraught with methodical flaws that created skepticism about the effectiveness of group therapies (Barlow et al., 2000). In the late-1960s and 1970s, advances in research designs and statistical analyses allowed for a more thorough exploration of group psychotherapies (Burlingame, Kircher, & Taylor, 1994). As a result, a growing body of research began to emerge that demonstrated that group therapy was an effective treatment that produced results comparable to individual psychotherapy (Barlow et al., 2000). By the 1980s, group therapy was considered to be a well-established treatment modality (Bulter & Fuhriman, 1986). In a meta-analysis of 111 group studies from the 1980s to early-2000s, Burlingame, Fuhriman, and Mosier (2003), reported significant improvements were found for clients who received group therapies over wait-list control groups. Subsequent research consistently has shown that groups are not only effective, but they are at least as effective as individual therapies. In a meta-analysis of 23 outcome studies comparing individual and group therapies, McRoberts, Burlingame, and Hoag (1998) found no significant differences between the results of group and individual treatments. More recent research has continued to support these early finding.

Burlingame, Strauss and Joyce (2014) provided one of the most thorough reviews of group therapy research. Based on a review of over 250 studies with different client populations in different clinical settings, they concluded that the current body of research provides empirical support for the application of group therapies and that group therapies

provide equivalent results when compared to individual therapy for mood disorders, panic disorders, schizophrenia, eating disorders, and substance use disorders. Their review also highlighted consistent evidence that different group therapy models produced equivalent results (Burlingame, Strauss, & Joyce, 2014). While this research provided support for the application of group therapies, the scope was limited to adult treatments.

### Adolescent Group Therapies

Group therapies for adolescents emerged in the early 1900s around the same time as groups for adults (Shechtman, 2007). However, adolescents have received significantly less attention in the theoretical and research literature (Shechtman, 2007). Group therapies have historically been a common modality of treatment for a wide range of adolescent issues. The first groups were strongly rooted in play therapy and psychoanalytic approaches (Shechtman, 2007). Early models, and many modern approaches, were adaptations of either adult or child group therapies. These approaches were plagued with problems as adolescence is a distinct period of life with unique challenges. As discussed earlier, adolescence is a period of differentiation from one's parents and search for self-identity (Shechtman, 2007). Cognitive changes that allow for increased self-awareness and empathy facilitate the development of increasingly intimate peer relationships (Shechtman, 2007). Adolescents' primary source of support shifts from parents to peers, making groups a logical modality of treatment. Group therapies, when effectively facilitated, provide a social context for adolescents to navigate challenges unique to this stage of life. Society naturally places adolescents in group settings as part of the education system, making groups a common, but ever challenging environment for adolescents (Kaminer, Burleson, & Goldberger, 2002).

Group treatment modalities have the advantage of placing adolescents in a setting with peers experiencing similar struggles promoting universality and peer-supported problem solving (Shechtman, 2007). In one of the few studies that examined therapeutic factors in adolescent groups, Shechtman, Bar-El, and Hardar (1997), found that adolescents endorsed similar mechanisms of change as adults including cohesiveness and catharsis. However, the opportunities to develop socialization skills stood out as a unique therapeutic benefit reported by adolescents. Overall, research shows that the social aspects of group therapies often categorized as group cohesiveness are the main mechanism of change in adolescent groups (Shechtman, 2007).

Outcome research of adolescent group therapies has been riddled with methodological limitations (e.g., use of only one group with no comparison group or small samples). However, group research with adolescents has increasingly emphasized the importance of developmental factors in designing and evaluating treatments for this age group (Holmbeck, Friedman, Abad, & Jandeseck, 2006). The small body of research does support the use of group interventions with adolescents for a wide range of issues. Tillitski (1990) concluded from a meta-analysis of studies from 1955 to 1982 that groups were not equally effective for children, adolescents, and adult. Results suggested that groups were more effective than individual for adolescents, while they were equivalent to individual therapies for adults and less effective for children (Tillitski, 1990). Hoag and Burlingame (1997) examined narrative reviews of adolescent groups and 56 outcome studies from 1970 to 1997. Narrative reviews suggested that group therapies with adolescents were widely used and perceived as being effective. Meta-analysis of outcome studies found the effect size of adolescent group therapies to be significantly

greater than control groups (effect size = .61). While a majority (74%) of the studies reviewed were conducted in schools, groups held in clinical settings were found to be the most effective (Hoag & Burlingame, 1997). In meta-analysis, the largest effect sizes were found for groups treating depression and behavioral disorders. Group work with adolescents has also been shown to be effective in the treatment of substance use disorders (Battjes et al., 2004; Engle & Macgowan, 2009), mood disorders (Brunwasser, Gillham, & Kim, 2009; Hoag & Burlingame, 1997; O'Shea, Spence, & Donovan, 2015), and trauma (Aronson, 2005).

While a majority of the research on adolescent groups takes place in academic settings, groups are used frequently with adolescents in community mental health, behavioral health, residential treatment, and youth corrections. Research on groups specifically with delinquent adolescents was prominent in the 1980s and 1990s. These studies found that groups with juvenile delinquents improved self-esteem (Fashinger & Harris, 1987), problem solving (Hains, Herman, & Balker, 1986), empathy (Darden, Gazda, & Ginter, 1996), and reduced recidivism rates (Leeman, Gibbs, & Fuller, 1993). Group therapies with this population were found to be more effective than individual treatments (Tillitski, 1990). As a result, skill-based group treatments became a common modality of treatment for aggressive and antisocial behaviors (Ang & Hughes, 2002). However, research on group treatments with this population has not received as much attention in the past 15 years.

In the past decade, group therapy research with adolescents has focused predominately on the application of manualized group therapy curriculum with specific diagnostic groups. These models often have a cognitive-behavioral orientation, are highly

structured, and consist of teaching adolescents a wide range of skills associated with symptom reduction and healthy social functioning (Shechtman, 2007). While goal setting is often a part of these group treatment curricula, specific emphasis is not placed on teaching adaptive goal-setting skills. Instead goals are briefly discussed at the onset of treatment and either never reviewed or reviewed only at the conclusion of treatment.

There has not been research examining the impact of teaching goal-setting skills and regularly monitoring goal progress in group treatment. Group therapies offer a modality of treatment that is relevant to this stage of life, has been shown to have positive outcomes, and offers a cost-effective format for addressing the high prevalence of adolescents in need (Burlingame et al., 2014). However, there is a need for further exploration of which group interventions are effective with delinquent adolescents. The following section reviews the research on goals and provides insight into why this skill is hypothesized to play an important role in adolescent group treatment outcomes.

### Goals

One potential benefit of the use of group therapies with adolescents is the opportunity for skill development. The skill of goal setting, as discussed earlier, plays an important role in sociocognitive development (Bandura, 1997). While goal setting is believed to be an innate human tendency that begins to operate at an unconscious level immediately after birth, it is the cognitive developments that occur during adolescents that allow for the pursuit of higher-order goals. Multiple definitions and theories of goals have been proposed, each placing an emphasis on different aspects of how goals impact human behavior. A commonly used definition is that goals are a cognitive representation of the discrepancy between a current state and a desired end state (Mann et al., 2013).

The cognitive nature of this process makes goals amendable through intervention and feedback (MacLeod et al., 2008).

Countless studies have linked goals to human behavior. A vast majority of this research has been conducted by social and organizational psychologists examining the impact of goals on performance on a variety of tasks. Mace (1935) was the first to show that different types of goals impacted task performance in different and measurable ways. Since then, goal setting has become one of the most thoroughly researched constructs in organizational behavior (Miller & Weiss, 2015). Research has shown that in regards to task performance, goals both guide and motivate behavior (Locke & Latham, 2002). Goals also facilitate persistence and action through both direct and indirect methods (Locke & Latham, 2002). Multiple aspects of goals also have been examined in the field of organizational psychology including goal commitment, monitoring, difficulty, and specificity (Miller & Weiss, 2015). Research consistently has shown that both assigned and self-set goals effectively improve performance as long as the individual is committed to the goal and believes the goal is attainable (Miller & Weiss, 2015). Monitoring of goal progress also has been shown to be an important aspect of goal-directed behavior with feedback on goal progress being associated with improved performance on a variety of tasks (Miller & Weiss, 2015). The most significant and robust effects though have been found in regards to goal difficulty and specificity (Kieingeld, van Mierlo, & Arends, 2011; Latham & Locke, 2006). In a meta-analysis of 33 studies, goal difficulty was positively related to group task performance as long as the goals were perceived as being attainable (Kieingeld et al., 2011). Latham and Locke (2006) reported that in over 1,000 studies around the world, goals that were both specific and challenging significantly

increased performance on assigned tasks. The vast breadth of research on this topic has established goal setting with feedback as an effective method for increasing both individual and group productivity (Tammemagi, O'Hora, & Maglieri, 2013)

Goals also have been shown to play an important role in subjective wellbeing (MacLeod, 2012). From a theoretical perspective, goals provide a sense of direction and accomplishment. Planning for goal pursuit reflects engagement in one's life (MacLeod, 2012). However, not all goal-directed behaviors have a positive effect on wellbeing and psychosocial functioning. The teleonomic model of emotional wellbeing proposes that having goals and taking action to achieve goals is not enough (Michalak & Holtforth, 2006). According to this model, in order for goals to positively affect the individual's wellbeing, the individual must be committed to goals that are consistent with his/her values and interest (i.e., self-concordance), be related to what motivates the individual, and be attainable based on the available resources of the individual. Individuals unable to attain their goals either because of a lack of internal or external resources, incongruence between their goals and values, or conflicting goals are subject to the development and maintenance of psychological distress (Michalak & Holtforth, 2006). Individuals unable to abandon or modify unproductive and unattainable goals report a lower sense of wellbeing than individuals able to do so (Wrosch & Miller, 2009).

Individuals that enter psychotherapy (either mandated or voluntarily) often have poorly defined goals, contradicting goals, avoidant goals, unattainable goals, or no defined goals (Mackrill, 2011). Therefore, one of the primary tasks of psychotherapy is to establish therapy goals that model and encourage the pursuit of healthy and fulfilling life goals (Mackrill, 2011). Therapy goals provide a common focal point for both the



therapist and the client. They guide the development of a treatment plan, provide a context for evaluating treatment progress, and promote collaboration between therapist and client (Jansson, Tham, & Ramnerö, 2015; Michalak & Holtforth, 2006). The therapeutic benefits of goal setting begin as clients explore and define the changes they want in their lives (Michalak et al., 2004).

The task of goal setting is also important in group treatments. Yalom (1983) said, “One of an inpatient group therapist’s single most important acts is goal setting” (p. 52). Yalom (1983) went on to describe parallel processes of goal setting in groups in which the group leader must help each member set his or her own goals, while also attending to the overall goals of the group. The process of goal setting in group therapy is believed to promote the therapeutic factors of interpersonal learning, skill development, personal insight, and altruism (Yalom, 1983). Once goals are established the task of the group shifts to supporting progress towards goals. This is accomplished through the use of feedback.

Feedback is an essential component of successful goal pursuit (Fishbach & Finkelstein, 2012; Liberman & Dar, 2009; Locke & Latham, 2002). In a review of studies from the 1970s and 1980s, Locke and Latham (2002) concluded that goals alone were not as effective as goals with feedback. Feedback has been shown to be essential for learning (Hattie & Timperly, 2007) and feedback improves performance (Locke & Latham, 2002). Feedback is any form of information that is provided to an individual that draws attention to and allows for evaluation of goal-relevant activities (Hattie & Timperly, 2007). Feedback allows for the adjustment of efforts to disengage, persist, or change goal-directed pursuits (Fishbach & Finkelstein, 2012). Like other aspects of goals, feedback

can have either an activating or inhibiting influence based on the target and framing of the feedback. Positive feedback is strength-based. It is focused on accomplishments and promotes goal commitment by increasing self-efficacy (Fishbach & Finkelstein, 2012). Negative feedback focuses on the opposite. It lowers an individual's expectation of obtaining a successful outcome (Fishbach & Finkelstein, 2012) and can result in negative emotional experiences (Grant & Gelety, 2009).

Group therapy provides a unique opportunity for individuals to receive goal-related feedback from therapists as well as peers. Yalom (1983) observed this process while leading groups and stated, "Feedback begets feedback" (p. 192). Group leaders are able to model and teach individuals how to constructively seek, give, receive, and integrate feedback. While goal setting in group therapy appears to be a logical and meaningful intervention, there has been a significant gap in the research on this topic.

#### Goal-Setting Interventions

Research on goal-setting interventions in mental health treatment has been sparse. Goal research in mental health has focused more on the taxonomy of goals established by different patient populations. In the following section, the limited body of research on goal-setting interventions with different client populations is reviewed.

Goal-setting and planning (GAP), a training that promotes the establishment of goals that are specific and self-concordant, has been examined in a number of studies (Coote & MacLeod, 2012; Farquharson et al., 2014; MacLeod et al., 2008). MacLeod et al. (2008) administered GAP in three one-hour group sessions to a sample of 64 college students and adults from the community. Results indicated that GAP training was related to increased levels of subjective wellbeing and life satisfaction. While this study suggests

that goal-setting skills can be taught in a group setting, in a follow-up study, participants that received an independent GAP intervention (as opposed to those who received it in a group setting) demonstrated similar improvements. Coote and MacLeod (2012) found similar results with 55 participants with depression in the United Kingdom. In this study, participants were provided a GAP manual to work through independently over a five-week period. Participants in the GAP condition, compared to participants in a control condition, reported significantly more improvement in positive affect and life satisfaction. In addition, these participants reported significant decreases in their depressive symptoms after completing the GAP intervention and at a five-week follow-up. Farquharson et al. (2014) examined GAP with 56 adults with psychiatric disorders in the United Kingdom. In this study, the GAP intervention included four two-hour group sessions. Results from the study showed that participants who received the GAP intervention reported greater improvement in their wellbeing when compared to a waitlist condition.

Anthony et al. (2014) conducted a study that examined the effects of a systematic goal-setting intervention with 238 participants in a statewide psychiatric rehabilitation program. The goal-setting intervention was based on the Choose-Get-Keep (CGK) model of psychiatric rehabilitation that supports individuals in developing meaningful rehabilitation and employment goals. Participants who set residential treatment goals demonstrated significant improvements as measured by achievement of goals. Participants in the study that set employment goals showed significant improvements in employment functioning after graduating the 18-month program.

The limited body of research on goal-setting interventions suggests that these interventions have a positive effect on wellbeing and goal attainment. These results have been reported for adults with psychiatric disorders (Anthony et al., 2014; Coote & MacLeod, 2012; Farquharson et al., 2014) and adults with no diagnosed psychiatric disorders (MacLeod et al., 2008). However, no studies were found that examined the effects of such a program with adolescents.

### Adolescent Goals

Goals play an important role in the achievement of developmental tasks during adolescence. Research suggests that adolescents set goals that are distinct from those set by adults and are unique to their stage of life (Massey et al., 2008). Adolescents' goals tend to be related to social and personal identity, education, career, leisure activities, material possessions, physical appearance, and self-expression (Carroll et al., 2013; Lopez-Romero & Romero, 2010). The types of goals set by adolescents guide them towards either prosocial or antisocial behavior (Massey et al., 2008). The process of goal pursuit impacts adolescents' self-identity and self-concept which influences subsequent outcome expectations, goal selection, and goal pursuits (Massey et al., 2008).

There has been extensive research with adolescents around the world examining the relationships between adolescents' goals and demographic characteristics, familial factors, occupational aspirations, academic achievement, self-esteem, and delinquent behavior (Massey et al., 2008). This body of research has identified some differences in the targeted outcomes of goals set by different subsets of adolescents. Most relevant to the current topic are the differences in goals set by delinquent, at-risk, and not at-risk adolescents.

According to reputational enhancement goal theory, a primary task during adolescence is to establish and maintain a reputation or social identity (Carroll et al., 2009). Adolescents set goals that are related to their desired reputation regardless of associated difficulty or risk. A majority of adolescents set goals that are consistent with cultural norms for this age such as academic and athletic goals (Carroll et al., 2009). However, some adolescents reject or devalue these goals and instead set goals in opposition to cultural expectations. These adolescents are at risk of engaging in delinquent behaviors. Carroll et al. (2009) compared the importance of different types of goals set by delinquent, at-risk, and not at-risk adolescents. In this series of studies, adolescents in the three groups placed the same amount of importance on self-presentation, reputation, and career goals. However, there were differences between these groups in other goal domains. First, not at-risk adolescents placed more importance on education and interpersonal goals than adolescents in the other groups. At-risk adolescents placed more importance on physical goals than the other two groups. Finally, delinquent adolescents placed more importance on goals related to their freedom and autonomy than adolescents in either of the other two groups (Carroll et al., 2009).

In a subsequent study with 88 delinquent, 97 at-risk, and 95 not at-risk adolescents in Australia, Carroll et al. (2013) found that academic, delinquent, and interpersonal goals were the best predictors of membership to these groups. In addition, this study reported that delinquent adolescents reported the lowest belief in their ability to achieve education and self-regulatory goals (Carroll et al., 2013). Not at-risk adolescents in this study set more academic goals than the other groups, while delinquent adolescents set more goals related to their social image or reputation.

Similar results were reported from a study with 488 high school adolescents in Spain. Lopez-Romero and Romero (2010) examined the relationship between adolescent goals and antisocial behaviors. They found that adolescents who valued social, physical, or athletic goals were more likely to engage in antisocial behaviors. In contrast, educational, interpersonal, and familial goals were inversely correlated with antisocial behavior.

These studies, in combination with the literature presented on adolescent development, highlight the importance of expanding our understanding of adolescent goal setting. Delinquent goals not only contribute to engagement in delinquent behaviors, but also decrease the likelihood of adolescents setting prosocial goals (Massey et al., 2008). Unimpeded, this process can lead to the development of an antisocial self-concept and lower outcome expectations for prosocial goal pursuits (Massey et al., 2008). In order to develop strategies to provide adolescents with support, it is essential to be aware of the influence of goals on their behavior and the potential for this cyclical effect.

While the research reviewed in this section provides important information on the types of goals that are likely to promote prosocial behaviors, guidance on how to intervene and support adolescents in goal-setting process is not present in the current body of literature. This is likely due to methodological limitations of conducting such research. However, without this information it is difficult to formulate recommendations for the clinical implementation of goal-setting interventions with adolescents. One source of such guidance is research on goal characteristics. This research is drawn primarily from organizational psychology and adult studies examining the relationship between

goals and performance. The following section will review this research and the implications this research has had on the development of the SMARTGOALS model.

### Goal Characteristics

Edwin Locke and Gary Latham have been leading researchers in the field of organization psychology and human performance for almost three decades. The majority of their research has examined the relationship between different goal features and human performance. From this research, Locke and Latham have developed goal-setting theory, which states that goals motivate human behaviors and improve performance as long as the goals meet specific criteria (Locke & Latham, 2006). The SMARTGOALS model of goal setting discussed in the previous chapter is based on goal-setting theory. The SMARTGOALS acronym is used to represent the goal characteristics that have been shown through research to have a positive relationship with outcomes such as performance and wellbeing. These characteristics are *specific, measurable, attainable, relevant, time-bound, gainful, optimistic, agreed-upon, legitimate, and simple*. In the following sections, the research behind each of the goal characteristics will be reviewed.

#### *Specificity*

As discussed earlier, research has shown that specific goals are related to improved task performance (Latham & Locke, 2006). Specific goals clearly identify the desired outcome and concrete steps that are needed for the goal to be achieved. Locke and Latham (2002) noted that specific, concrete goals produce less variation in performance because individuals know what is expected. In this fashion, specific goals are also believed to improve future outlook and promote hope (Clarke et al., 2009).

Multiple studies have shown that when individuals are provided specific performance criteria their performance is significantly better than individuals told to do their best (Kieingeld, et al., 2011; Miller & Weiss, 2015). This positive relationship between specificity and performance has been observed with diverse samples such as loggers, engineers, scientists, professors, and students (Latham & Locke, 2006). In a study with 130 college students, goal specificity was found to be predictive of students' academic achievement, where students who set more specific goals at the beginning of the semester were more likely to achieve higher academic success by the end of the semester (Acee, Cho, Kim, & Weinstein, 2012).

Goal specificity is also related to mental health and subjective wellbeing. One early study on this topic found that college students who had more abstract goal pursuits reported more depressive symptoms (Emmons, 1992). In a study that examined personal goals, depressed adolescents set less specific goals than non-depressed adolescents (Dickson & MacLeod, 2004b). Similar results were found with adult clinical populations with severe-mood disturbances where individuals who engaged in parasuicide behaviors set less specific goals than a matched sample of control participants (Vincent, Boddana, & MacLeod, 2004). Goal specificity also varies between delinquent and non-delinquent adolescents. Carroll et al. (2013) compared the goals set by delinquent, at-risk and not at-risk adolescents. In this study, not at-risk adolescents set the most specific goals out of the three groups and at-risk adolescents set more specific goals than delinquent adolescents.

Specificity also plays an important role in therapy goals. Mackrill (2011) suggested that helping clients transform non-specific life goals into specific therapeutic



goals is one of the essential roles of therapists. Goals in this context provide structure and guidance for therapy (Parsons & Zhang, 2014). They help define the roles and expectations for the therapist and client in the therapeutic relationship. Goals that are abstract or vague leave room for discrepancies between therapist and client, making it more difficult to engage in a collaborative therapeutic relationship.

### *Measurable*

Goals not only guide human behavior towards achieving a desired outcome, goals also motivate such pursuit. While a goal may initially motivate goal-directed behavior, it is feedback that promotes sustained goal persistence and subsequent goal attainment (Fishbach & Finkelstein, 2012). Feedback provides individuals with information necessary to determine how close they are to achieving their goal. Without this information, individuals would aimlessly wander with no sense of their proximity to their desired end state. Different types of feedback can be provided, each having a different impact on goal-directed behaviors (Hattie & Timperly, 2007).

Goals that are not measurable do not allow for goals progress to be monitored and for feedback to be provided to the individual. Goals and goal pursuits without feedback are ineffective (Fishbach & Finkelstein, 2012; Locke & Latham, 2002). Individuals are unable to compare their current state to desired end states without information on where they stand in the change process. Lack of feedback on goal progress then stands in the way of goal attainment. Goal attainment and progress provide a sense of self-efficacy and positive affect that reinforces continued goal pursuit and establishment of new goals (Fujita & MacGregor, 2012). Therefore, without goal-related feedback there are not opportunities for goals to motivate behavior.

In psychotherapy and counseling, goals that are not measurable leave both the client and therapist without means by which to compare current performance to the desired end state of therapy. Without the ability to monitor progress, mental health providers are unable to fulfill their ethical obligation to provide services that are beneficial to clients (ACA, 2005; APA, 2010). Establishing goals that are measurable is an essential aspect of ethical counseling and psychotherapy and research suggests that it is a necessary task for individuals to engage in change.

Measurable goals clearly identify standards for goal achievement. They establish specific behavioral objectives that can be observed by the goal setter and others. For example, the goal of feeling happier does not identify how happiness will be measured. A measurable goal related to happiness would be to participate in seven enjoyable activities. Progress towards this goal can be measured by simply counting the number of enjoyable activities the individual has completed. Feedback can then be directed at goal attainment and potential barriers towards progress.

### *Attainable*

As discussed earlier, research in organizational psychology has strongly supported the notion that goals must be sufficiently challenging to motivate improved performance (Kieingeld et al., 2011; Latham & Locke, 2006). However, if an individual does not see the goal as achievable, this effect is negated. In relationship to wellbeing and therapy, goal difficulty should be set at a level that challenges individuals to engage in the change process, while not setting standards that are unachievable or contradict other goals. Irvin Yalom (1983) stated, “Overly ambitious goals are not only ineffective but often anti-therapeutic” (p. 52). Therapy goals should be achievable based on the emotional,

psychological, cognitive, and social resources available to the client. While the goal of getting straight A's in school is specific and measurable, it is likely unattainable for a student who has a history of academic struggles. Instead a more attainable goal would be to improve homework completion or demonstrate good study habits.

A second component of attainable goals is that goal achievement should be within the goal setter's control. Adolescents, especially those in residential treatment, are not in control of some aspects of their lives. Goals that are dependent on others do not motivate goal-directed behaviors. For example, the goal of having one's parents be more affectionate does not empower the goal setter to engage actively in goal pursuit, as he/she is dependent on the behavior of his/her parents to achieve this goal. Attainable goals may incorporate others, but are based on the behaviors of the goal setter.

#### *Relevant*

The relevance of a goal refers to whether the goal is consistent with the individual's current circumstances and capacities such as the individual's developmental level, social competence, communication skills, cultural experience, and environment (Parsons & Zhang, 2014). While a goal may be achievable, it may not be appropriate as a goal to work on in group therapy due to the nature of the goal or purpose of the group. While individuals may enter treatment with specific life goals, one role of group leaders is to assist clients in adjusting goals so they are appropriate and relevant for the form of therapy being provided (Mackrill, 2011). A client may enter group therapy with the goal of becoming a professional athlete. While this is specific and measurable, and may be attainable, it is unlikely relevant to the group. Instead, a relevant goal may be to improve

interpersonal relationships by demonstrating five acts of good sportsmanship or improving one's work ethic during practices by showing up on time.

### *Time-Bound*

Effective goals include specific time constraints such as the date of projected completion or duration of the goal pursuit (Fried & Slowik, 2004). Research has shown that goals that are time-bound increase motivation (Fried & Slowik, 2004). However, time constraints must not violate the previously mentioned characteristic of being attainable. Time constraints that are too strict can stifle efforts, while time limits that are overly distal decrease the frequency of goal-achievement reinforcements (Fried & Slowik, 2004). Proximal time frames that allow sufficient time for goal achievement allow for individuals to gain a sense of self-efficacy through accomplishment and motivate continued goal-directed behaviors (Manderlink & Harackiewicz, 1984).

### *Gainful*

Goals that are gainful promote the attainment of benefits that are in line with the individual's values. These goals therefore promote self-concordant gains. Goals that are consistent with the individual's interests and values are intrinsically motivating and have a high self-concordance. In contrast, extrinsically motivated behaviors are those that an individual engages in for secondary gain or feels compelled to pursue by either internal or external pressures (Fujita & MacGregor, 2012). Goals that are based on intrinsic motivation (i.e., goals that an individual pursues because of a desire to achieve the goal) are related to greater enjoyment, increased persistence, and better wellbeing (Fujita & MacGregor, 2012). The more value an individual places in his/her goal, the more likely he/she is to be committed to achieving the goal even in the face of obstacles (Parsons &

Zhang, 2014). In a meta-analysis, self-concordance was related to improved goal progress (Koestner, Lekes, Powers, & Chicoine, 2002). Therefore, an important step of effective goal setting is for the individual to select a goal that is intrinsically motivating and promotes gains that are in line with one's values.

### *Optimistic*

Goals can be classified based on the target of the goal pursuit as either approach or avoidance goals. Approach goals aim to reduce the discrepancy between one's current state and a desired end state. On the other hand, avoidance goals aim to increase the discrepancy between one's current state and an undesired end state (Fujita & MacGregor, 2012). According to consistency theory, tendency to engage in approach versus avoidance behaviors is related to early childhood experiences where approach tendencies are related to healthy attachment (Grawe, 2007). Approach behaviors promote congruence and healthy psychological functioning, while avoidance behaviors result in incongruence and psychological distress (Grawe, 2007). Approach goals are optimistic. They provide specific criteria for goal pursuit and a definitive end point (Mann et al., 2013). In contrast, avoidance goals do not provide a clear end point and require constant effort. They focus on negative outcomes. A significant amount of research has examined the impact of approach versus avoidance goals on human behavior and wellbeing.

Studies have shown that approach goals are positively related to subjective wellbeing (Elliot & Friedman, 2007; Wiese, 2007). In contrast adolescents with anxiety tend to set more avoidance goals (Dickson & MacLeod, 2004b, 2006) and adolescents with dysphoria or depression set both more avoidance goals and less approach goals than other adolescents (Dickson & MacLeod, 2004a, 2004b, 2006). In addition, avoidance

goals are positively correlated with severity of psychopathology (Michalak & Holtforth, 2006). Studies have also shown that clients with more avoidance goals perceive therapy to be less effective (Elliot & Church, 2002), are less satisfied with their therapists (Elliot & Friedman, 2007), and report less improvement in subjective wellbeing over the course of treatment (Elliot & Friedman, 2007; Elliot & Church, 2002; Wollburg & Braukhaus, 2010). This body of research suggests, that goals should focus on what an individual wishes to achieve instead of what they wish to avoid. This optimistic approach promotes active goal striving in a positive, hopeful direction. Approach goals then promote the engagement in behaviors that are intended to improve upon one's current condition, as opposed to avoiding some negative future outcome.

#### *Agreed-Upon*

While research has shown that it does not matter if goals are assigned or self-set, for goals to be motivating, they must be agreed upon (Latham & Locke, 2006; Tyron & Winograd, 2011). Goal consensus is the collaborative establishment of therapy goals and determination of how to achieve these goals in the context of therapy by the therapist and client (Bohart & Wade, 2013). This process lays the foundation for the therapeutic alliance through which treatment can promote goal progress and achievement. Achieving goal consensus can be challenging with adolescents, since this population rarely seeks treatment on their own accord. Adolescents and adults (i.e., parents, guardians, etc.) often do not agree on the therapy goals (Brookman-Frazer, Haine, Gabayan, & Garland, 2008). This can prevent the development of a collaborative, therapeutic relationship and presents a challenge for engaging youth in treatment. As a result, initial therapy goals for this population may be to increase engagement and build motivation to change (Parsons &

Zhang, 2014). Brookman-Frazee et al. (2008) found that when caregivers and adolescents agreed on treatment goals, adolescents attended a greater number of sessions. In a recent meta-analysis examining the impact of goal consensus and collaboration with adult clients, Tyron and Winograd (2011) found significantly better treatment outcomes when therapists and clients set goals collaboratively and goal consensus was achieved.

### *Legitimate*

In a similar manner, therapy goals should promote improved wellbeing and overall functioning. Legitimate goals are those that encourage and motivate healthy development (Parsons & Zhang, 2014). Individuals entering therapy often have developed maladaptive life goals (Mackrill, 2011). As discussed earlier, Lopez-Romero and Romero (2010) looked at the goals of 488 adolescents and the correlations between types of goals and antisocial behaviors. They found that adolescent goals that were related to social recognition were positively correlated with antisocial behaviors, while education and familial goals were negatively correlated with antisocial behaviors (Lopez-Romero & Romero, 2010). Legitimate goals with at-risk and delinquent adolescents should therefore focus on engagement in prosocial behaviors. These goals could target improved behavior regulation, interpersonal relationships or social skills, family relationships, education, or treatment engagement.

### *Simple*

Finally, goals should be presented in as simplified manner as possible. Intricate and complex goals are difficult to define, measure, and achieve (Parsons & Zhang, 2014). Simple therapy goals help divide more complex life goals into incremental steps that allow for successive approximation and translation of goals to action (Michalak &

Holtforth, 2006). Simple goals promote other goal characteristics such as being specific, attainable, and time-bound. However, therapists must avoid confusing goal difficulty with simplicity. Simplicity refers to the division of behavioral components of a goal into well-defined steps, while difficulty refers to the level of challenge each behavioral step presents (Michalak & Holtforth, 2006).

### Summary

There is a strong body of research that supports the efficacy of group therapies and the use of these treatment modalities with diverse subsets of adolescents. Goal setting has traditionally been accepted as an essential part of both individual and group therapies. There is a significant body of research that has provided strong guidelines for the development of effective goals based on the goal content and structure (Locke & Latham, 2002). Goal setting is an important task during adolescence and plays a role in identity formation. The increasing importance of peers and desire for belongingness during this stage of life influences the motivations that underlie adolescents' goals. Specific types of goals are related to increased risk of and engagement in delinquent behaviors (Lopez-Romero & Romero, 2010). The cyclical effect that these types of behaviors can have on subsequent goals and self-concept can lead to continued problems as adolescents move into adulthood (Massey et al., 2008). While research has identified that at-risk and delinquent adolescents set different goals than not at-risk adolescents, there has not been research on how to help at-risk and delinquent adolescents develop better goal-setting strategies. Research from other fields of psychology and with different populations suggests that there are distinct goal characteristics associated with improved outcomes, but little effort has been put towards applying these concepts to delinquent adolescent



treatment. The current study explores the effects of teaching these adolescents how to set adaptive, functional goals in group therapy, and measures the impact of this intervention on treatment outcomes and goal attainment.

The next chapter, Chapter Three, describes the methodology of the study. A detailed description of the procedures that were used in training group leaders to facilitate goal setting with adolescents in group therapy is provided. In addition, the next chapter provides information on the instruments used to assess the effectiveness of the group treatment intervention. Finally, the next chapter discusses the statistical procedures that were utilized in analyzing the data from the measures used during this study.

## Chapter Three: Method

This chapter describes the research design, sample characteristics, procedures, measures, and statistical analyses for the study. The purpose of the study was to examine the effects of a goal-setting intervention on group treatment outcomes with delinquent adolescents. The methodology helped address the research hypotheses discussed in Chapter One.

### Design and Rationale

The purpose of the study was to examine the impact of teaching delinquent adolescents goal-setting skills on group treatment outcomes. In order to examine this topic, a quasi-experimental design was used to compare group treatment outcomes of participants receiving a goal-setting intervention in a group format with participants receiving group treatment-as-usual. The study was conducted in a youth residential treatment facility with established treatment groups. Established treatment groups were composed of 10 to 12 adolescents per group; however, data were only collected from adolescents with parental permission. One living unit, which housed six separate treatment groups, was the goal-setting condition. The two other units, which housed 11 separate treatment groups, made up the comparison condition. Participants completed pre- and post-test measures to assess change in level of distress and goal attainment over the course of the study. In addition, pre-treatment risk to reoffend was examined to

determine if there was a main effect of this characteristic on group outcomes of the goal-setting intervention.

An advantage of using a field study is that it allows for the proposed goal-setting intervention to be applied and examined in the clinical setting where services are typically provided to this population. Group treatments are a common modality used with delinquent adolescents and a cost-effective modality in residential treatment (Shechtman, 2007). While research has shown that delinquent adolescents set maladaptive and delinquent goals, specific interventions to support the development of functional, adaptive goals have not been identified (Carroll et al., 2013). In this study, group leaders that currently work with this population implemented the goal-setting intervention within the current group model of treatment.

While the field study design reduces threats to external validity, the clinical setting did not allow for random assignment. The group treatments examined in this study were existing, open-ended groups. Therefore, participants could not be randomly assigned to groups. Group sessions were conducted in the participants' living units, which hold six simultaneous, independent groups. Due to the proximity of groups in each unit, the goal-setting condition could not be randomized at the therapy group level without creating a significant risk of crossover effects. Therefore, assignment to condition occurred at the living unit level based on number of participants allowing for the six groups on one unit to be compared to the 11 groups on two other units. The disadvantage of a quasi-experimental design is the potential for baseline differences between groups to have an impact on the dependent variables in the study. Pre-treatment differences were assessed at the beginning of the data analysis stage.

## Sample

Participants were recruited from the residential population at Ridgeview Youth Services Center (RVYSC). The primary investigator provided adolescents on each unit with a brief overview of the study and requirements for participation. The appropriate assent and consent forms were reviewed with adolescents who expressed interest in participation. For adolescents under the age of 18 who signed an assent form to participate, parental consent forms were mailed home with prepaid return envelopes. Consent forms were also provided to parents who attended weekly in-person visits. Parental consent forms were available in both English and Spanish (See Appendix G and H); however, no Spanish copies were requested. While 98 adolescents under the age of 18 assented to participate, parental consent was obtained for only 45 of these adolescents. One parent directly declined participation, while the remaining did not return the consent forms and did not attend on-site visits during the three weeks prior to the initiation of the study intervention. Adolescents at least 18 years of age ( $n = 28$ ) were able to provide their own consent to participate in the study (See Appendix I).

The initial sample in this study consisted of 73 adolescents receiving treatment at RVYSC. Two adolescents were removed from the initial sample due to not attending the first four group treatment sessions (one from each condition). An additional seven participants did not complete post-treatment measures due to unexpected withdrawal from the facility (three from the goal-setting condition and four from the comparison condition). Reasons for unexpected withdrawal included being detained on additional charges ( $n = 1$ ), escape from the facility ( $n = 3$ ), medical discharge due to suicide attempt

( $n = 1$ ), and program completion ( $n = 2$ ). Data collected from the final sample of 64 participants was used in data analysis.

RVYSC is an all-male, state owned and privately operated facility that provides services to delinquent adolescents based on a positive peer culture model. Adolescents that are placed at RVYSC are under the supervision of either the Department of Human Services (DHS) or the Department of Youth Corrections (DYC). Placement at RVYSC is based on the adolescent's need for a safe environment to receive treatment addressing criminogenic risk factors. All adolescents at RVYSC have been adjudicated for a least one criminal offense. Offenses range from violation of court orders and status offenses to weapon, drug, and violent offenses.

The sample demographics, and demographics of the goal-setting and comparison conditions individually, are presented in Table 2. The mean age of the sample was 16.59 with a range of 13 to 19 years of age. The race of participants was 21.9% African American, 34.4% Hispanic or Latino, and 54.8% white. The average length of time at RVYSC at the onset of the study was 138.58 days with a range of three to 381 days.

Offense specific data were not collected for participants in this study. Based on the 2013 Colorado Department of Human Services (CDHS), Division of Youth Corrections (DYC) recidivism report (CDHS, DYC, 2013), a majority of adolescents were committed for property offenses (51.5%), with offenses against persons as the second most common type (33.3%). The remaining offenses included drug (7%), weapon (3%), and other (5%). Substance abuse is one of the most prominent criminogenic risk factors with 73.7% of the adolescents in placement at RVYSC being identified as in need of the highest level of substance abuse treatment. Additionally, 32% of adolescents were

Table 2

*Demographic Information and Risk by Condition*

Demographic	Goal-Setting <i>n</i> = 31 (within group %)	Comparison <i>n</i> = 33 (within group %)	Sample Total <i>n</i> = 64 (sample %)
Age	<i>M</i> = 16.87 <i>SD</i> = 1.59 <i>Mdn</i> = 17 Range = 14-19	<i>M</i> = 16.33 <i>SD</i> = 1.59 <i>Mdn</i> = 17 Range = 13-19	<i>M</i> = 16.59 <i>SD</i> = 1.60 <i>Mdn</i> = 17 Range = 13-19
Race			
African American	<i>n</i> = 8 (25.8)	<i>n</i> = 6 (18.2)	<i>n</i> = 14 (21.9)
Hispanic or Latino	<i>n</i> = 6 (19.4)	<i>n</i> = 16 (48.5)	<i>n</i> = 22 (34.4)
White	<i>n</i> = 17 (54.8)	<i>n</i> = 11 (33.3)	<i>n</i> = 28 (43.8)
Days in Treatment at RVYSC	<i>M</i> = 143.58 <i>SD</i> = 117.46 <i>Mdn</i> = 97 Range = 3-381	<i>M</i> = 133.88 <i>SD</i> = 118.37 <i>Mdn</i> = 110 Range = 3-374	<i>M</i> = 138.58 <i>SD</i> = 117.09 <i>Mdn</i> = 103.5 Range = 3-381
Level of Risk to Reoffend	<i>n</i> = 2 (6.5)	<i>n</i> = 2 (6.1)	
Moderate	<i>n</i> = 4 (12.9)	<i>n</i> = 2 (6.1)	<i>n</i> = 4 (6.3)
Moderate-High	<i>n</i> = 25 (80.6)	<i>n</i> = 29 (87.9)	<i>n</i> = 6 (9.4)
High			<i>n</i> = 54 (84.4)

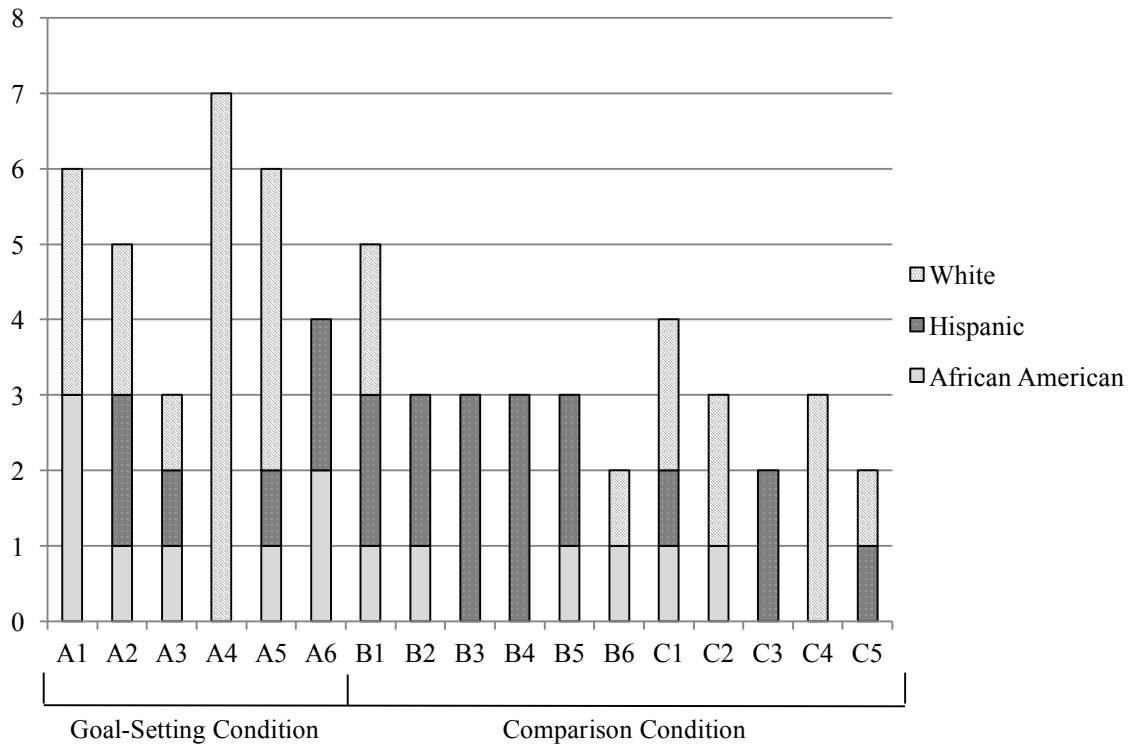
identified as needing additional mental health services due to diagnosable mental health disorders. While the population at RYVSC has changed since 2013, the offense specific demographic composition is believed to have remained stable.

### Structured Group Sessions

Mental health treatment services provided at RYVSC include individual and group therapies, psychiatry, and family therapy. Adolescents receive services that are specific to their individualized needs, but all adolescents are required to participate in group treatment sessions on their living unit. Group treatment sessions are supervised by a Master's-level licensed mental health clinician who provides support to group leaders through co-facilitation and informal weekly group supervision. The site's clinical director, a licensed clinical social worker, establishes curriculum for group treatment sessions and provides necessary materials. Group sessions cover a wide range of topics including anger management, social skills, cognitive restructuring, relapse prevention, problem solving, and consequential thinking. Adolescent problematic behaviors and interpersonal conflict are also addressed during these groups. Groups are conducted on the adolescents' living units.

The 64 participants were spread across 17 groups on three living groups at RYVSC. Groups consisted of 10 to 12 adolescents; however, data were only collected from participants with appropriate consent. Therefore, the number of participants from each group ranged from two to seven. The number of participants from each group and racial composition of groups is illustrated in Figure 1. Group sessions were typically held twice a week, on Mondays and Thursdays. Over the duration of the eight-week

Figure 1. Treatment Group Composition.





intervention, 12 group sessions were conducted (four sessions were cancelled due to holidays and alternative site-wide activities).

### Demographics of Therapy Groups

Each of the 17 groups was assigned a code to assist with the presentation of data and results. The three units are referred to as Unit A, B, and C. Group A1 through A6 were held on Unit A and were the goal-setting condition in the study. Group B1 through B6 and Group C1 through C5 were held on the two units that were included as the comparison condition. The number of participants in each group represents the number of group members participating in the study, not the total number of group members.

### Group Leaders' Demographics

Group sessions were facilitated by staff members who also serve as case managers and direct-care staff. Case managers serve as liaisons between the referring agency, the adolescents, and families. Case managers have at minimum a bachelor's degree in a human service related field and three years of experience working with adolescents. Direct-care staff are responsible for mentoring adolescents while ensuring that the site provides a safe and healthy environment for all residents. Direct-care staff have completed at least 60-hours of college or have one year of experience working with adolescents. Case managers and direct-care staff receive initial pre-service training on group dynamics and in-service training on group facilitation. At least one group leader facilitated each group session; occasionally a co-leader was present. Group leaders alternate in the facilitation of group sessions. While this is not consistent with traditional models of group therapy, RVYSC uses this approach based on the work schedules of group leaders.

The demographics of the 35 group leaders are presented in Table 3. The mean age of group leaders was 30.11 with a range of 22 to 40 years of age. Eighty-nine percent of group leaders identified as male ( $n = 31$ ) and 11% identified as female ( $n = 4$ ). Thirty-four percent of group leaders identified as African American or black ( $n = 12$ ), 49% as white ( $n = 17$ ), 12% as Hispanic, Latino/a, or Chicano/a ( $n = 4$ ), and 6% as multiracial ( $n = 2$ ). A majority of staff members reported that their highest level of education was a Bachelor's Degree (51%), while 20% reported obtaining an Associate's Degree, 11% a Master's Degree, 9% were currently enrolled in post-secondary education, and 9% reported obtaining a high school diploma. Experience facilitating groups at RVYSC was based on number of months leading groups. There was a wide range from one to 242 months of experience, with a median of 10 months. One group leader reported greater than 240 months (20 years) of experience facilitating groups and four reported at least 10 years of experience. Sixty-three percent of group leaders reported one year or less experience facilitating groups. In regards to training, 71% reported receiving on-the-job training in group facilitation, 49% reported receiving training as part of previous employment, 46% reported receiving pre-service training at RVYSC, 43% received training as part of an education program, and 9% reported receiving no training in group facilitation.

### Instruments

*Adolescent Demographic Information:* Demographic information for each participant was collected prior to the implementation of the treatment intervention. Information was obtained through review of adolescents' intake files. Demographic information obtained included age and race. To help maintain participant confidentiality,

Table 3

*Demographic Information of Group Leaders*

	Goal-Setting Condition <i>n</i> = 15 (within group %)	Comparison Condition <i>n</i> = 20 (within group %)	Total <i>n</i> = 35 (total %)
Age	<i>M</i> = 30.93 <i>SD</i> = 5.95 Range = 23-40	<i>M</i> = 29.5 <i>SD</i> = 4.96 Range = 22-39	<i>M</i> = 30.11 <i>SD</i> = 5.37 Range = 22-40
Gender			
Male	<i>n</i> = 14 (93.3)	<i>n</i> = 17 (85)	<i>n</i> = 31 (88.6)
Female	<i>n</i> = 1 (6.7)	<i>n</i> = 3 (15)	<i>n</i> = 4 (11.4)
Race			
African American	<i>n</i> = 6 (40)	<i>n</i> = 6 (30)	<i>n</i> = 12 (34.3)
Hispanic or Latino	<i>n</i> = 2 (13.3)	<i>n</i> = 2 (10)	<i>n</i> = 4 (11.5)
Multi-racial	<i>n</i> = 0 (0)	<i>n</i> = 2 (10)	<i>n</i> = 2 (5.7)
White	<i>n</i> = 7 (46.7)	<i>n</i> = 10 (50)	<i>n</i> = 17 (48.6)
Level of Education			
High School Diploma	<i>n</i> = 1 (6.7)	<i>n</i> = 0 (0)	<i>n</i> = 3 (8.6)
College – Enrolled	<i>n</i> = 1 (6.7)	<i>n</i> = 2 (10)	<i>n</i> = 3 (8.6)
Associates Degree	<i>n</i> = 3 (20)	<i>n</i> = 4 (20)	<i>n</i> = 7 (20)
Bachelor’s Degree	<i>n</i> = 8 (53.3)	<i>n</i> = 10 (50)	<i>n</i> = 18 (51.4)
Master’s Degree	<i>n</i> = 2 (13.3)	<i>n</i> = 2 (10)	<i>n</i> = 4 (11.4)
Training in Group Facilitation			
None	<i>n</i> = 3 (20)	<i>n</i> = 0 (0)	<i>n</i> = 3 (8.6)
Coursework	<i>n</i> = 6 (40)	<i>n</i> = 9 (45)	<i>n</i> = 15 (42.9)
Previous Employ	<i>n</i> = 6 (40)	<i>n</i> = 11 (55)	<i>n</i> = 17 (48.6)
Pre-service Train	<i>n</i> = 6 (40)	<i>n</i> = 10 (50)	<i>n</i> = 16 (45.7)
On-the-Job Train	<i>n</i> = 8 (53.3)	<i>n</i> = 17 (85)	<i>n</i> = 25 (71.4)
Experience Facilitating at RVYSC (months)	<i>Mdn</i> = 12 Range = 1-242	<i>Mdn</i> = 9 Range = 1-145	<i>Mdn</i> = 10 Range = 1-242

participants were assigned unique identifying numbers that were used throughout the duration of the study.

*Group Leader Demographic Questionnaire:* Group leaders were asked to complete a short demographic questionnaire prior to the implementation of the goal-setting intervention. However, due to a low rate of return, this questionnaire was re-administered at the conclusion of the study with a 100% return rate. The questionnaire consisted of nine questions about group leader characteristics such as age, gender, ethnicity, education, group leadership training, and experience. Six items on the questionnaire were forced-choice questions with an option to expand on responses. The questionnaire took between five and ten minutes to complete (See Appendix A).

*The Positive Achievement Change Tool (PACT):* The PACT is a youth risk assessment that was developed by the Florida Department of Juvenile Justice in 2005 (Early et al., 2012). The Department sought to reduce juvenile recidivism rates by identifying offender needs and level of risk to reoffend (Early et al., 2012). This measure is completed by facility staff for all adolescents at time of entry. The PACT is a 126-item, multiple-choice measure that can be completed by non-clinical staff members with two days of training on risk assessment. Information used to complete the measure is obtained through a semi-structured clinical interview using motivational interviewing techniques and file review. Items on the PACT address both static and dynamic characteristics across 12 domains: criminal history, demographics, school, use of free time, employment, relationships, family/living arrangements, alcohol and drug use, mental health, attitudes and behaviors, aggression, and skills. Staff members answer questions based on the information obtained from the interview and file review on a web-based computer

application. The PACT software automatically scores the assessment and provides an overall risk to reoffend level and rank order of criminogenic needs. Risk to reoffend is provided in ordinal categories from low, moderate, moderate-high, to high.

The PACT risk to reoffend level has been shown to be a significant predictor of adolescent recidivism even when gender, race, ethnicity, and age are accounted for (Baglivio, 2009; Early et al., 2012). In addition, the PACT has been shown to have strong internal consistency across domains and high inter-rater reliability (Early et al., 2012). While the PACT can also be used to assess and re-assess treatment progress, there has not been research on using the measure for this purpose. In the current study, the PACT was used to measure pre-treatment characteristics of participants. The PACT risk to reoffend level is based on two factors: criminal history and social history. Scores on these two factors are associated in a matrix where increasing scores on each are associated with increased level of risk. Criminal history items are related to age of first offense, type of previous offenses, and previous placements. An example item is, “Total number of referrals for which the most serious offense was a firearm/weapon charge or a weapon enhancement finding” with response options of none, or one or more. Social history items are related to school conduct, performance, and attendance, history of substance use, history of abuse, mental health, and relationships. An example item is, “History of anti-social friends/companions” with response options of never had consistent friends or companions, pro-social friends, anti-social friends, or gang member/associate. (See Appendix B for an example PACT report output.)

*Youth Outcome Questionnaire Self-Report 2.0 (Y-OQ-SR)*: While many measures of youth treatment outcomes rely on parent or caregiver ratings of progress, the Y-OQ-

SR is a self-report measure that assesses treatment progress from the adolescent's perspective (Wells et al., 2003). The Y-OQ-SR was designed as a means of monitoring treatment progress by measuring change in psychosocial distress from session to session. The Y-OQ-SR is a 64-item measure that asks adolescents to identify behavioral difficulties across six domains: intrapersonal distress (18 items); somatic symptoms (8 items); interpersonal problems (10 items); social problems including delinquent behaviors (8 items); behavioral dysfunction (11 items); and critical items indicating significant psychological distress (9 items). Adolescents respond to items on a 5-point scale with never, rarely, sometimes, frequently, and almost always as options. The measure is completed by adolescents in paper-and-pencil form and takes approximately seven minutes to complete. Scoring of the Y-OQ-SR provides a total distress score and subscale scores for each domain. Scores can be compared to community and clinical norms provided by the authors (Wells et al., 2003).

Y-OQ-SR norms were established with adolescent community and clinical samples. The Y-OQ-SR has been shown to have a high internal consistency with both clinical and community samples for the total distress score and the subscales (Wells et al., 2003). In addition, test-retest coefficients for the Y-OQ-SR total distress score and subscales demonstrate moderately high temporal stability indicating the adolescents can be reliable reporters and that changes in scores are likely to reflect changes in symptoms (Ridge et al., 2009). The Y-OQ-SR also has strong concurrent validity with other measures of adolescent behavioral dysfunction and distress such as the Behavior Assessment System for Children 2 Self-Report of Personality (BASC-2 SRP-A) and

Child Behavior Checklist Youth Self Report (CBCL YSR) (Ridge et al., 2009) (See Appendix C).

*Goal Questionnaire – Group Member Form:* In order to obtain information about the goals set by group members and level of goal attainment, participants completed a goal questionnaire developed for this study at the onset of the intervention and at the conclusion of the eight-week intervention. The pre-treatment goal questionnaire asked participants in both conditions to record two goals they wanted to work on in group treatment and to rate their degree of commitment towards achieving the goal from 0 (not committed at all) to 10 (very committed) (See Appendix D). The second goal questionnaire, completed at the conclusion of the intervention, asked participants in both conditions to rate their level of progress towards attaining the initial goals on a scale from 0 (no progress made) to 10 (goal completely achieved) (See Appendix E).

*Goal Questionnaire – Group Leader Form:* Group leaders completed a goal questionnaire at the conclusion of the intervention. Group leaders were asked to rate their perception of each group member's goal progress on a scale from 0 (no progress made) to 10 (goal completely achieved) independent of group members (See Appendix F).

### Procedure

The implementation of the study occurred in four stages. The first stage was an initial training stage during which group leaders in the goal-setting condition received training on how to facilitate the goal-setting intervention in group sessions. The second stage consisted of collecting pre-treatment measures from participants on self-reported level of distress and pre-treatment risk levels from participants' electronic file. The third

stage was the implementation of the goal-setting intervention. Finally, in the fourth stage post-treatment measures were obtained from participants and group leaders. Each of these phases is described here in more detail.

*Initial Training Stage:* Group leaders assigned to the goal-setting condition participated in two, one-hour training sessions on how to assist group members in developing goals consistent with the SMARTGOALS model. The training curriculum consisted of didactic instruction, modeling, and supervised practice with feedback. These components have been shown to be effective for teaching helping skills in group psychotherapy training and provide the most benefit when used in combination (Hill & Knox, 2014). Multiple skill-based models of training have been developed with the goal of teaching specific group therapy skills to leaders based on learning theory (Brown, 2011). These models have the advantage of providing leaders with concrete interventions and responses to events that occur in group sessions. Skill-based training also provides opportunities to practice interventions in small groups, receive immediate feedback, and for trainers to assess acquisition of skills being taught (Brown, 2011).

The principle investigator of this study led trainings with assistance from the RYVSC training director. During the first one-hour training, group leaders were introduced to the SMARTGOALS model and were provided information on each of the components in this model through didactic instruction and group discussion. Specific examples of goals consistent with the model were presented. In addition, group leaders participated in exercises that provided practice with adjusting goals inconsistent with this model to meet each of the criteria of the model. During the second training, group leaders observed a role-play demonstrating how to implement the goal-setting



intervention in a group setting including how to navigate potential barriers and facilitate group member feedback during this process. Role-plays were followed by discussions of observations and perceived barriers to implementing the intervention.

*Pre-Treatment Data Collection Stage:* Pre-treatment participant characteristics were obtained through file review. Data collected included demographic information and PACT risk to reoffend. Adolescent participants completed the Y-OQ-SR, which was given via group administration with participants on their living unit. Participants submitted their completed Y-OQ-SR directly to the primary investigator.

*Goal-Setting Intervention Implementation Stage:* At the onset of the goal-setting intervention, group leaders in the goal-setting condition introduced the SMARTGOALS model. Group leaders were provided an outline with prompts and examples to use in introducing this model (see Appendix J) and handouts were provided to group members (see Appendix K). Group leaders subsequently assisted adolescents with adjusting, modifying, or changing goals using group member feedback and support to promote establishment of goals that were consistent with the model. Group facilitation skills used in this process were taught in the training phase of the study. In the comparison condition, group members completed the goal questionnaire individually and shared their goals with the group. No specific intervention was provided to promote group members in adjusting or changing goals. Group members in both conditions completed the goal questionnaire during the second group session. Group members recorded their goals on the goal questionnaire and individually rated their level of commitment to the goal. Participants turned in their goal questionnaires in to the researcher. Copies were made and returned to the group leader and participants as a reference of their goals.

In the goal-setting condition, the topic of each session during the eight-week intervention revolved around goal progress and goal pursuits. Group leaders reviewed group members' goals during each group session. Group leaders facilitated group member feedback and promoted interpersonal learning by encouraging group members to discuss both progress and barriers in their goal pursuits. The group process focused on providing support to group members in the achievement of their goals. Group leaders in the goal-setting condition discussed implementation of the intervention and barriers during weekly supervision with the primary investigator. The primary barriers identified by group leaders included; resistance to modifying goals and struggles with making goals specific. During these meetings, group leaders reviewed goals set by group members and got feedback promoting the establishment of goals that were consistent with the SMARTGOALS model.

In the comparison condition, group treatment was conducted as usual. Group leaders facilitated groups focused on cognitive restructuring, social skills, and problem solving. Group sessions did not explicitly address the goals reported by group members, but group members were not prohibited from discussing goals. Group leaders in the comparison condition received weekly supervision as usual with no specific focus on facilitating goal setting in group sessions.

*Post-Treatment Data Collection:* At the end of the eight-week goal-setting intervention, group members and group leaders in both conditions completed the goal questionnaire. Participants recorded progress made towards their original goals and any adjustments or changes made to these goals. Group leaders recorded their perception of

group member goal progress on a separate form. Adolescent participants also completed the Y-OQ-SR again administered in the same way as the pre-treatment Y-OQ-SR.

### Data Analyses

Preliminary data analyses examined participant and group leader differences at the onset of the study. Baseline variables included participant and group leader demographics, participant PACT level of risk to reoffend, and participant Y-OQ-SR Total Distress score. Next, separate statistical procedures were then used to examine each of the proposed hypotheses with all alpha levels set at 0.05 (a summary of these procedures is provided below). Finally, data analysis was done to ensure that results obtained were due to the treatment intervention and not due to differences between group leaders within each condition (e.g., one group leader being significantly more or less effective than others).

*Hypothesis 1:* Data collected from the Y-OQ-SR were utilized to examine the hypothesis that adolescents who were taught goal-setting skills in group treatment would have significantly greater reduction in reported level of distress at the end of eight weeks of group treatment than adolescents not taught these skills. The total distress score provided by the Y-OQ-SR has been shown to be a valid and reliable measure of adolescent psychosocial distress (Ridge et al., 2009). Preliminary data analysis examined differences in pre-test Y-OQ-SR Total Distress scores between conditions. A repeated measures ANOVA (mixed design) was then used to examine differences in distress scores from pre- to post-test. This data analysis provided information on the impact of treatment condition, time, and the interaction of these two variables on level of distress. Additional analysis utilized the clinical cut off scores established by the authors of the

measure. Scores exceeding the cut off indicate clinically significant distress. Proportions of participants reporting clinically significant distress were analyzed using chi-squared analyses.

*Hypothesis 2:* Data from the goal questionnaires were used to assess whether participants in the goal-setting condition rated their progress towards their goals higher than participants in the comparison condition at the end of the eight-week treatment intervention. First, data analysis examined the linear association of participant self-reported goal attainment and group leader ratings. Subsequently, the attainment ratings for both goals were compared using Mann-Whitney U Tests. The same procedures were used to examine the goal attainment ratings of group leaders on the two goals in the two conditions.

*Hypothesis 3:* While level of risk to reoffend on the PACT has been shown to be a significant predictor of recidivism, the goal-setting intervention was hypothesized to have a significant effect on pre-post difference in total distress score and goal attainment regardless of level of risk to reoffend. While data analysis was planned to examine this hypothesis, there was a disproportionate distribution of risk levels (with the vast majority of the sample in the high risk level) that prevented subsequent data analysis. Instead, trends in the data were presented to guide future research.

### Summary

This chapter provides a description of the research design, sample, instruments, procedures, and statistical analyses that were used in this study to investigate the research hypotheses. The study's field design has the advantage of examining the effects of a goal-setting intervention with delinquent adolescents in a residential treatment setting where

services are often provided to this population. The study used established treatment groups, a commonly utilized treatment modality with adolescents (Shechtman, 2007). The study compared differences in group treatment outcomes and goal attainment of adolescents taught goal-setting skills in group treatment compared to adolescents who received group treatment-as-usual without instructions or support on specific goal-setting skills. The instruments used provided data on pre-treatment and demographic characteristics of both adolescent group members and group leaders. Instruments were also used to assess group treatment outcomes measured as change in pre- to post-test level of distress reported by adolescents on the Y-OQ-SR, and goal attainment rating provided by participants and group leaders. Statistical analyses compared treatment outcomes on these two variables, distress and goal attainment, between the two conditions.

## Chapter Four: Results

Data collected during this study were utilized to assess the effects of a goal-setting intervention with delinquent adolescents on group treatment outcomes. It was hypothesized that the goal-setting intervention would contribute to better treatment outcomes, measured as level of distress and goal attainment, than group treatment-as-usual. The final data set was composed of data collected from participant chart review and self-report measures, and the group leader rating form. There was no missing data for the 64 participants. Data analyses began with comparisons of group leader and participant variables at pre-test to assess for baseline differences between conditions. Subsequent data analyses examined the three study hypotheses related to the impact of the goal-setting intervention on group treatment outcome. Finally, data were reviewed to assess the impact of group assignment, length of stay, and number of groups attended on the outcome variables.

### Preliminary Data Analyses

#### *Group Leader Variables*

Thirty-five group leaders facilitated 17 unique and separate treatment groups throughout the duration of the study. The goal-setting condition included 15 group leaders and the comparison condition included 20 group leaders (refer to Table 3 in Chapter Three for a summary of group leader demographics). A chi-square test of association showed no statistically significant association between condition (goal-

setting/comparison) and group leader gender ( $\chi^2 (1, N = 35) = 0.05, p = 0.818$ ), race ( $\chi^2 (3, N = 35) = 1.85, p = 0.603$ ), level of education ( $\chi^2 (5, N = 35) = 3.05, p = 0.693$ ) or proportion of group leaders who reported no training in group facilitation ( $\chi^2 (1, N = 35) = 2.20, p = 0.138$ ). Yate's continuity correction was utilized in two by two chi-square analyses on gender and training variables. Group leader age was normally distributed, as assessed by the Shapiro-Wilk's test ( $p > .05$ ), and boxplot inspection indicated there were no significant outliers. There was homogeneity of variance for age in both conditions, as assessed by Levene's test for equality of variance ( $p = 0.41$ ). There was no statistically significant difference in mean age of group leaders in the goal-setting ( $M = 30.93, SD = 5.95$ ) and comparison conditions ( $M = 29.50, SD = 4.96$ ),  $t(33) = -0.78, p = 0.44$ . A Mann-Whitney U test was run to determine if there were differences in group leadership experience between the two conditions due to non-normality of the distribution. Distributions of experience in the two conditions were similar, as assessed by visual inspection. Group leadership experience (in months) was not statistically significant between those in the goal-setting condition ( $Mdn = 12$ ) and the comparison condition ( $Mdn = 9$ ),  $U = 124.5, z = -0.85, p = 0.40$ . Overall, pre-treatment and baseline data analyses indicated that group leaders were similar between conditions. No statistically significant differences were found for demographic, education, or training variables.

#### *Pre-Treatment Participant Variables*

The following subsection reviews statistical analyses examining demographic and baseline differences between participants in the two conditions including age, number of days in treatment, PACT risk to reoffend level, and race. There were no significant outliers in race or number of days in treatment, as assessed by inspection of boxplots.

However, the distribution of these variables failed to meet the assumption of normality based on the Shapiro-Wilk's test. Distributions of age and number of days in treatment were similar based on visual inspection. A Mann-Whitney U test did not indicate a statistically significant difference in the age of participants in the goal-setting condition ( $Mdn = 17$ ) and the comparison condition ( $Mdn = 17$ ),  $U = 603$ ,  $z = 1.25$ ,  $p = 0.21$ . A Mann-Whitney U test also did not indicate a statistically significant difference in the number of days in treatment for participants in the goal-setting condition ( $Mdn = 97$ ) and the comparison condition ( $Mdn = 110$ ),  $U = 550$ ,  $z = 0.52$ ,  $p = 0.61$ . Chi-square analyses showed there was no significant association between PACT Risk to Reoffend and Condition,  $\chi^2 (2, N = 64) = 0.64$ ,  $p = 0.637$ .

Chi-square analysis did indicate a significant association between participants' race and Condition,  $\chi^2 (2, N = 64) = 6.06$ ,  $p = 0.048$ , with a significantly higher proportion of Hispanic participants in the comparison condition (48.5%) than in the goal-setting condition (19.4%),  $z = 2.5$ . An examination of age based on race as a fixed factor showed there were no significant outliers based on inspection of boxplots, the distributions met the assumption of normality, as assessed by Shapiro Wilk's test, and there was homogeneity of variance based on Levene's test ( $p = .68$ ). A one-way ANOVA showed there were no statistically significant differences in age between Hispanic ( $M = 16.18$ ,  $SD = 1.79$ ), African American ( $M = 16.64$ ,  $SD = 1.59$ ), and white ( $M = 16.89$ ,  $SD = 1.45$ ) participants,  $F(2, 61) = 1.23$ ,  $p = 0.30$ . Examination of number of days in treatment with race as a fixed factor, showed there were no significant outliers; however, the assumption of normality was not met for the distributions. Visual inspection of a boxplot indicated that distributions of days in treatment were not similar for all groups



and required distribution comparisons. A Kruskal-Wallis H test showed that number of days in treatment were significantly different between African American (mean rank = 45.18), Hispanic (mean rank = 27.52), and white participants (mean rank = 30.07),  $\chi^2(2) = 8.54, p = 0.01$ . Pairwise comparisons were performed using Dunn's (1964) procedure with Bonferroni correction for multiple comparisons and an adjusted alpha level of 0.017 was used for the three pairwise comparisons. This post hoc analysis showed statistically significant differences in number of days in treatment between African American and Hispanic participants ( $p = 0.006$ ), and between African American and white participants (0.013), but not between Hispanic and white participants ( $p = 0.63$ ).

In summary, participants in the two conditions did not differ significantly on age, number of days in treatment, or PACT level of risk to reoffend. However, the distribution of Hispanic participants was statistically significantly different by condition, with a higher proportion of Hispanic participants in the comparison condition. When demographic variables were compared with race as a fixed factor, it was determined that the number of days in treatment for African American participants was statistically significantly greater than the number of days in treatment for Hispanic and white participants. These differences were considered during subsequent data analyses and interpretation of results.

### Level of Distress

The first hypothesis expected that adolescents who were taught goal-setting skills in group treatment would have a significantly greater reduction in reported level of distress over the course of eight weeks of group treatment than adolescents who participated in group treatment that does not teach these skills. The Y-OQ-SR was

utilized to measure level of distress at two time points; at baseline (pre-test) and after eight weeks of group treatment (post-test). Raw scores on the Y-OQ-SR represent current level of distress with lower scores indicating less distress and higher scores indicating elevated distress. Cutoff scores between normal levels of distress and clinically significant distress on the Y-OQ-SR were developed using the formula devised by Jacobsen and Truax (1991). Raw scores exceeding 47 represent clinically significant distress.

Pre-test total distress scores are presented in Table 4. At pre-test there were no outliers in total distress scores based on boxplot inspection. Shapiro-Wilk's test indicated that total distress was normally distributed in both conditions and there was homogeneity of variance as assessed by Levene's test ( $p = 0.71$ ). There was no statistically significant difference on the pre-test total distress score between participants in the goal-setting ( $M = 46.03$ ,  $SD = 26.04$ ) and comparison condition ( $M = 48.30$ ,  $SD = 27.15$ ),  $t(62) = 0.34$ ,  $p = 0.73$ . In addition, there was no statistically significant difference between conditions in the proportion of participants whose total distress score reached the cutoff value for clinically significant distress,  $\chi^2(1, N = 64) = 0.56$ ,  $p = 0.45$ , with 45.5% of participants in the comparison condition reporting clinically significant distress and 54.8% of participants in the goal-setting condition.

The Y-OQ-SR was administered again at the conclusion of the eight-week intervention. A two-way mixed repeated measures analysis of variance was conducted to assess for interaction between condition and time on this measure. There were no outliers, as assessed by examination of studentized residuals for values greater than  $\pm 3$ . Y-OQ-SR total distress score was normally distributed, as assessed by Shapiro-Wilk's

test ( $p > .05$ ). There was homogeneity of variance and covariance, as assessed by Levene's test of homogeneity of variance ( $p > .05$ ) and Box's test of equality of covariance matrices ( $p = 0.50$ ). There was no statistically significant interaction between treatment intervention and time on level of distress,  $F(1, 62) = 0.22, p = 0.64, \eta^2 = 0.04$ . The main effect of condition did not show a statistically significant difference in mean total distress score,  $F(1, 62) = 0.27, p = 0.61, \eta^2 = 0.04$ . However, there was a statistically significant main effect of time on mean total distress score from pre- to post-test for the sample as a whole,  $F(1, 62) = 4.17, p = 0.046, \eta^2 = 0.06$ , with lower mean total distress score at post-test ( $M = 43.14, SD = 25.49$ ) compared to pre-test ( $M = 47.2, SD = 26.43$ ).

A post hoc power analysis with G\*Power was conducted to determine the sample size needed to detect an interaction between treatment intervention and time on level of distress. Based on SPSS-calculated effect size of the interaction ( $\eta^2 = 0.04$ ), the current study did not have sufficient power to detect an interaction between these variables. With power set to .70, a sample of 150 to 160 would be needed to detect a significant interaction.

At post-test, 39.4% of the comparison condition participants remained above the clinical cut-off score, compared to 51.6% in the goal-setting condition, which was not statistically significantly different,  $\chi^2(1, N = 64) = 0.96, p = 0.33$ . The mean reliable change index score (RCI) for the comparison condition was -3.15 ( $SD = 17.48$ ) and -5.03 ( $SD = 14.33$ ) for the goal-setting condition; indicating decreased mean total distress scores for both conditions. However, neither of these scores reached the RCI cutoff score of 18 for clinically significant change. Positive RCI scores indicate increased level of

distress. In the comparison condition, 12.1% of participants reported increased total distress scores that exceeded the cutoff for clinically significant change, compared to 6.5% in the goal-setting condition. In contrast, negative RCI scores indicate decreased level of distress. In the comparison condition, 15.2% of participants reported clinically significant decrease in total distress, compared to 19.4% in the goal-setting condition (see Table 4 for Y-OQ-SR scores and Figure 2 for illustration clinically significant change).

#### *Race and Distress*

Due to the disproportionate distribution of Hispanic participants, additional analyses were conducted examining Y-OQ-SR scores by participant race. There were no outliers in total distress for African American, Hispanic, or white participants at pre- or post-test based on inspection of boxplots. Shapiro-Wilk's test indicated normality across level and group ( $p > .05$ ).

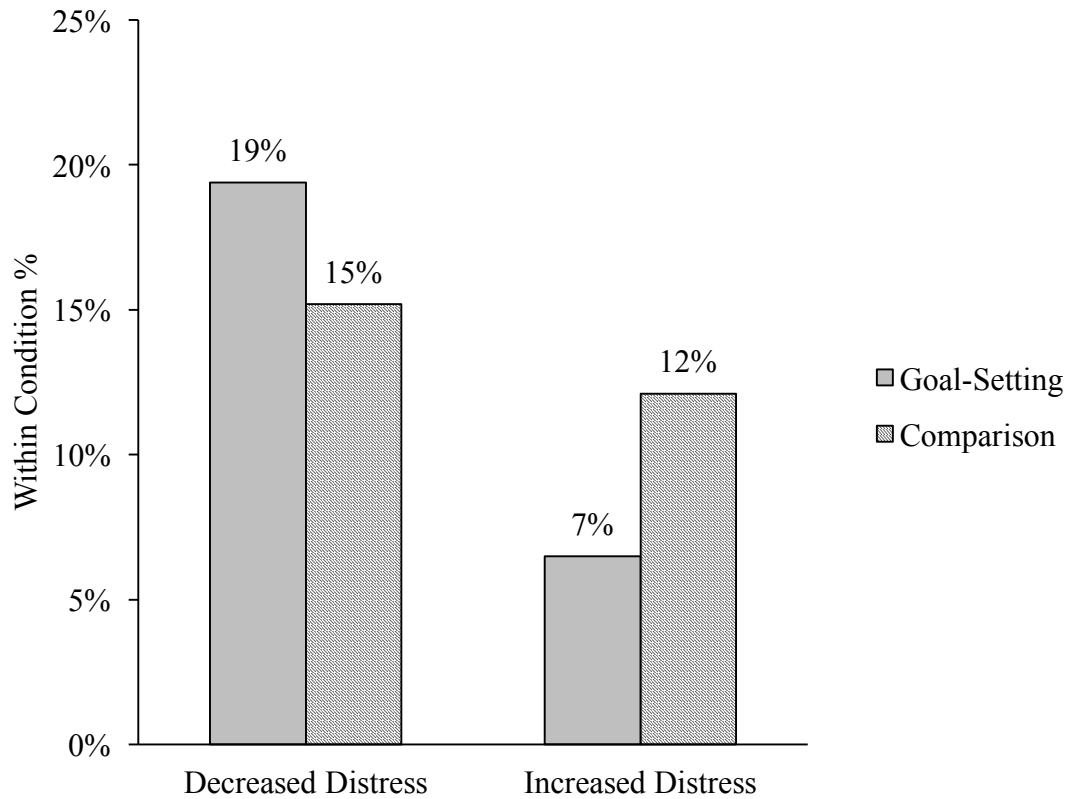
Levene's test indicated homogeneity of variance ( $p > .05$ ) and Box's test indicated homogeneity of covariance matrices ( $p = 0.93$ ). An ANOVA showed that, at pre-test, there was no statistically significant difference between racial groups' total distress scores,  $F(2, 61) = 0.96, p = 0.39, \eta^2 = 0.01$ . A two-way mixed ANOVA was conducted to assess for interaction between race and time on distress score. There was no statistically significant interaction between race and time on level of distress,  $F(2, 61) = 0.36, p = 0.70, \eta^2 = 0.01$ . The main effect of race did not show a statistically significant difference in mean total distress score,  $F(2, 61) = 1.00, p = 0.37, \eta^2 = 0.03$ . In addition, there was no statistically significant main effect of time on mean total distress score from pre- to post-test,  $F(1, 61) = 3.01, p = 0.09, \eta^2 = 0.05$ .

Table 4

*Y-OQ-SR Total Distress at Pre-Test, Post-Test, and Reliable Change Index*

Condition	Pre-Test			Post-Test			RCI	
	<i>M</i>	<i>SD</i>	Clinic. Sign. Dist.	<i>M</i>	<i>SD</i>	Clinic. Sign. Dist.	<i>M</i>	<i>SD</i>
Goal- Setting	46.03	36.04	54.8%	41.00	23.27	51.6%	-5.03	14.33
Comparison	48.30	27.15	45.5%	45.15	27.62	39.4%	-3.15	17.48

Figure 2. Clinically Significant Increases and Decreases in Distress Score. This graph illustrates the percentages of participants in each condition that reported clinically significant increase or decrease in distress from pre-test to post-test.



### *Hypothesis One Conclusion*

Results from data analyses of level of distress indicated that there was no statistically significant difference in the level of distress at pre-test between the two conditions. Participants in both conditions showed statistically significant decrease in level of distress from pre-test to post-test; however, these improvements did not exceed the cut off for clinically significant change in either condition. The results of data analysis of change in level of distress did not support the first hypothesis of this study; participants in the goal-setting condition did not show statistically significantly greater reduction in level of distress over the course of the eight-week intervention compared to participants who received treatment-as-usual. However, a post hoc power analysis based on the effect size of the interaction, indicated the sample size was insufficient to detect an interactions between these variables. The disproportionate distribution of race did not appear to impact these results as there was no statistically significant relationship between race and pre-test distress or interaction between race and time on distress.

### Goals

At the onset of the study, participants in both conditions recorded two goals they wanted to work on in their treatment group over the following eight weeks. In the goal-setting condition, additional support and guidance were given in establishing these goals. Goal categories and goal characteristics were examined to assess for fidelity to the SMARTGOALS model used in the goal-setting intervention. Goal attainment was measured through self-report and group leader ratings, which were used to analyze the effects of the goal-setting intervention on goal progress.

### *Goal Categories*

Goals were categorized based on the following target outcomes; athletic, behavioral, education, employment, exit, interpersonal, intrapersonal, status, or program completion. Athletic goals focused on improvements in a participant's performance in organized sports or physical fitness. Behavioral goals identified specific behavior/s to change. Education goals targeted academic performance. Employment goals focused on earning money or finding employment. Exit goals explicitly identified exiting the program or completing court ordered parole as the target of the goal. Intrapersonal goals focused on internal changes in attitude, motivation, mood, or emotion regulation. Interpersonal goals identified changes in relationships or communication as targets. Status goals explicitly identified earning or maintaining one's status in the program's behavioral management system. Finally, program completion goals focused on participants' completion of program elements. Table 5 provides examples of goals set by participants in both conditions.

In the goal-setting condition, the most common goal types were behavioral (22.6%), status (19.4%), and interpersonal (16.1%); the most common goal types in the comparison condition were status (25.8%), program completion (25.8%), and exit (22.7%). The proportions of participants who set goals in each category were compared using chi-square test of homogeneity. Behavioral, exit, and program completion goal categories were not independent of treatment condition. In the goal-setting condition, 22.6% of participants' goals were behavioral, compared to 4.5% in the comparison condition,  $\chi^2(1, N = 128) = 9.03, p = 0.003$ . In the exit category, 22.7% of goals set by participants in the comparison condition were related to exit, while 4.8% in the goal-



Table 5

*Examples of Goals Set by Participants*

Condition	Examples	Category
Comparison	<i>Get greens for my Intern Status</i>	Status
	<i>To get green weeks to get out of RVYSC</i>	Exit
	<i>Finish my treatment groups to finish the program early</i>	Program completion
	<i>Follow all staff directives</i>	Behavioral
	<i>Associate with positive people</i>	Interpersonal
Goal-Setting	<i>Do one extra chore in dining hall or showers 5 times in the week to get greens and my Intern</i>	Behavioral
	<i>I will talk to staff when I feel like running or fighting</i>	Interpersonal
	<i>I will uphold my RAM status by role modeling how to follow norms on the unit at least 1 time a day</i>	Status
	<i>Taking time to look back on my day. Write one thing I could improve in my journal at night.</i>	Intrapersonal
	<i>Do my homework during shower program at least 3 days in the week</i>	Education

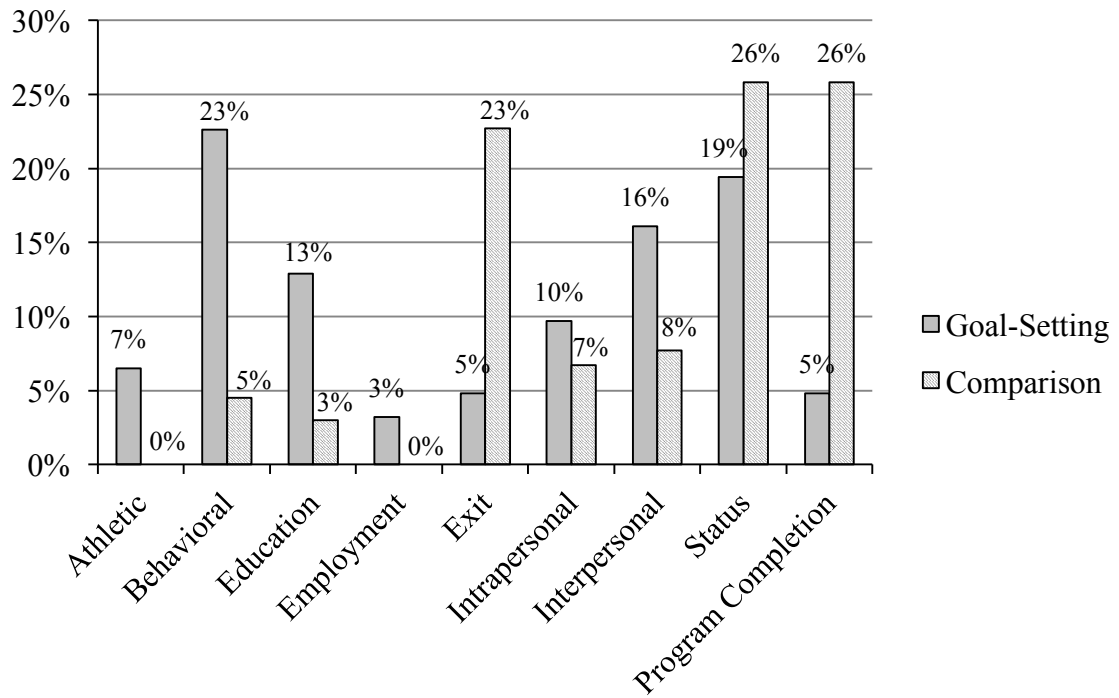
setting condition  $\chi^2 (1, N = 128) = 8.47, p = 0.004$ . A significantly higher proportion of goals set by participants in the comparison group were related to program completion (25.8%), compared to those in the goal-setting condition (4.8%),  $\chi^2 (1, N = 128) = 10.61, p = 0.001$ . Figure 3 presents goal category percentages by condition.

### *Goal Characteristics*

It was expected that participants in the goal-setting condition would establish goals that were consistent with the SMARTGOALS model. Group leaders in the goal-setting condition received training to assist participants in setting SMARTGOALS. While not all aspects of the SMARTGOALS model could be assessed due to individual context, specific, measurable, time-bound, and optimistic features were examined.

Goals were coded as meeting the specific criteria if an explicit outcome was included in the goal. As expected, a statistically significantly greater proportion of participants in the goal-setting condition established at least one specific goal (90.3%), compared to 66.7% of participants in the comparison condition,  $\chi^2 (1, N = 64) = 5.23, p = 0.02$ . Goals were coded as measurable if observable behavioral steps were identified in the goal. No statistically significant difference was found in the proportion of participants who set measurable goals,  $\chi^2 (1, N = 64) = 1.96, p = 0.16$ , with 57.6% of the comparison condition and 74.2% in the goal-setting condition. Goals were coded as time-bound if frequency or duration were explicitly stated in the goal. No statistically significant difference was found in the proportion of participants in the two conditions that set goals that were time-bound,  $\chi^2 (1, N = 64) = 1.05, p = 0.31$ , with 18.2% in the comparison condition and 29.0% in the goal-setting condition. Finally, goals were coded as optimistic

Figure 3. Goal Category Percentages. This figure illustrates the percentage of goals set by participants in each condition in the nine different goal categories.



if the goal target was approach-based. Surprisingly, all goals set in the comparison condition, and all but one in the goal-setting condition were approach-based.

### Goal Attainment

The second hypothesis tested was that adolescents who are taught goal-setting skills in group treatment rate their progress towards goals established in group higher after eight weeks of group treatment than adolescents who participate in group treatment that does not teach these skills. Data on goal attainment were collected from two sources; participant self-report and group leader ratings. Ratings were made on an 11-point scale where zero represented no progress and 10 represented successful goal completion. Ratings were treated as ordinal variables in the subsequent data analyses. A Mantel-Haenszel test of trend was run to determine if linear associations existed between participant and group leader ratings. The Mantel-Haenszel test showed a statistically significant linear association between participant and group leader ratings of goal attainment on the first goal set by participants (Goal A),  $\chi^2 (1) = 21.54, p < .001, r = 0.59$ . Similarly, a statistically significant linear association was found between participant and group leader ratings of goal attainment on the second goal set by participants (Goal B),  $\chi^2 (1) = 16.83, p < .001, r = 0.52$ .

On Goal A, Mann-Whitney tests were used to determine if there was a difference in goal attainment ratings between the goal-setting and comparison condition. For self-report and goal leader ratings, distributions of ratings in both conditions were similar based on visual inspection. Goal A self-report rating was not statistically significantly different between goal-setting ( $Mdn = 8$ ) and comparison conditions ( $Mdn = 7$ ),  $U = 569.50, z = 0.79, p = 0.43$ . Similar results were found on Goal A group leader ratings

between goal-setting ( $Mdn = 6.5$ ) and comparison conditions ( $Mdn = 7$ ),  $U = 587.00$ ,  $z = 1.02$ ,  $p = 0.31$ . These results indicate that Goal A attainment ratings for participants in the goal-setting and comparison condition were similar based on self-report and group leader ratings and did not support the hypothesis that participants in the goal-setting condition would rate goal attainment higher than participants in the comparison condition.

Mann-Whitney tests were also utilized for self-report and goal leader goal attainment ratings on Goal B. Distributions of ratings were similar based on visual inspection. There was a statistically significant difference between self-reported goal attainment in the goal-setting ( $Mdn = 8$ ) and comparison conditions ( $Mdn = 7$ ),  $U = 685.50$ ,  $z = 2.37$ ,  $p = 0.02$ . In addition, there was a statistically significant difference between group leader rating in the goal-setting ( $Mdn = 8$ ) and comparison condition ( $Mdn = 6$ ),  $U = 695.50$ ,  $z = 2.48$ ,  $p = 0.01$ . These results were consistent with the study hypothesis and indicate that participants in the goal-setting condition had significantly higher goal attainment ratings on Goal B than participants in the comparison condition.

#### *Race and Goal Attainment*

Due to the disproportionate distribution of Hispanic participants between conditions, additional analysis examined differences in goal attainment based on participant race. A Kruskal-Wallis H test was used to examine for differences in goal attainment ratings of African American, Hispanic, and white participants. Distributions of three of the four dependent measures (Goal A group leader rating, and Goal B self-report and group leader ratings) were similar based on visual inspection of boxplots. The distributions for group leader Goal A ratings for African American ( $Mdn = 6.75$ ), Hispanic ( $Mdn = 6.25$ ), and white ( $Mdn = 7.0$ ) participants were not statistically

significantly different,  $\chi^2 (2) = 2.06, p = 0.36$ . The distributions for self-reported Goal B ratings for African American ( $Mdn = 8$ ), Hispanic ( $Mdn = 7$ ), and white ( $Mdn = 8$ ) participants were not statistically significantly different,  $\chi^2 (2) = 5.78, p = 0.06$ . Finally, the distributions for group leader Goal B ratings for African American ( $Mdn = 6.50$ ), Hispanic ( $Mdn = 6.50$ ), and white ( $Mdn = 7.25$ ) participants were not statistically significantly different,  $\chi^2 (2) = 3.60, p = 0.17$ . The distributions of self-report ratings of Goal A were not similar between race based on visual inspection of boxplots and the distributions were statistically significantly different between African American, Hispanic, and white participants,  $\chi^2 (2) = 6.83, p = 0.03$ . Pairwise comparisons were performed using Dunn's (1964) procedure with a Bonferroni correction for multiple comparisons. An adjusted alpha level of 0.017 was used for the three pairwise comparisons. Post hoc tests indicated a statistically significant difference in self-report Goal A ratings between Hispanic (mean rank = 25.09) and white participants (mean rank = 38.68) ( $p = 0.009$ ), but not between African American (mean rank = 31.79) and the other groups.

#### *Hypothesis Two Conclusion*

Data analyses of goal attainment ratings provided mixed results related to the study hypothesis. Ratings of Goal A attainment were not statistically significantly different between the two conditions and thus did not support the hypothesis that those in the goal-setting condition would have greater goal attainment at the conclusion of the intervention. However, both participant and group leader ratings of Goal B attainment showed significantly greater attainment for participants in the goal-setting condition compared to participants in the comparison condition, supporting the hypothesis.

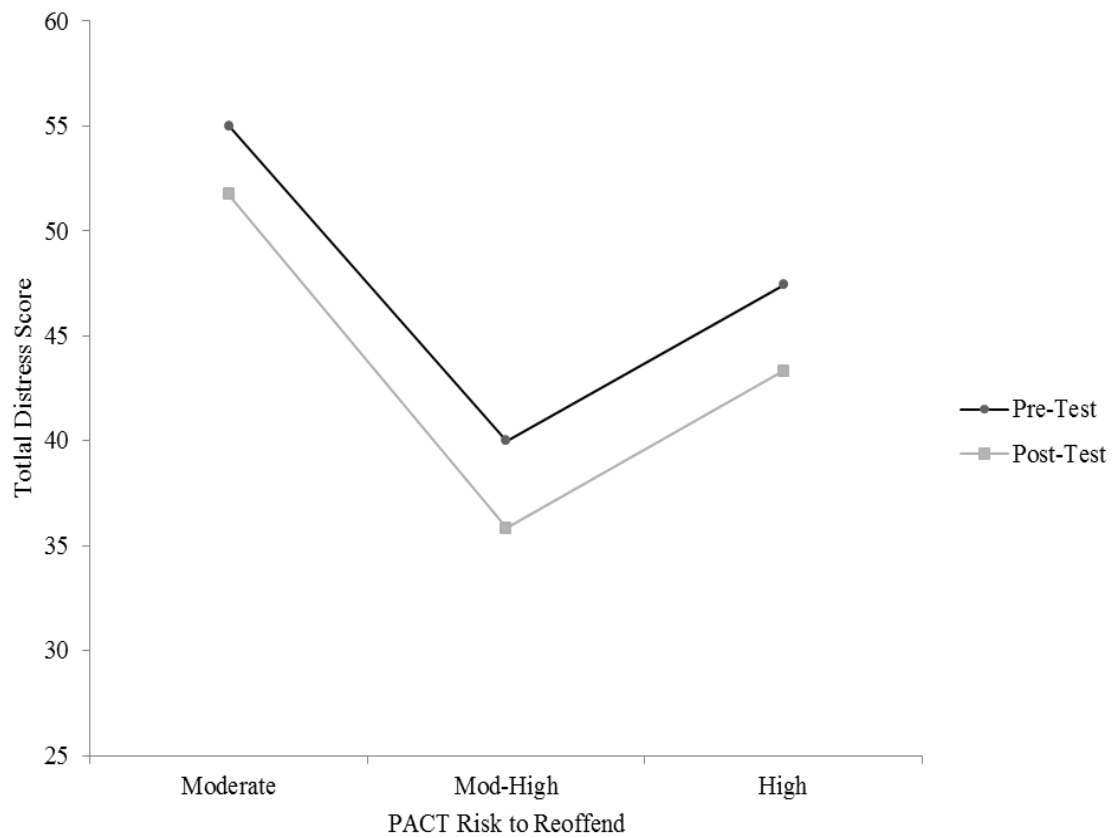
Examination of the race as a fixed factor in goal attainment did not find differences on Goal B, but indicated that Hispanic participants reported considerably less progress towards Goal A than white participants. The potential impact of these results is further explored in Chapter 5.

#### Pre-Treatment Level of Risk to Reoffend

The third study hypothesis stated there would be no significant main effect of pre-treatment level of risk to re-offend on reduction in level of distress and goal attainment ratings in the goal-setting condition. While the distribution of participant risk levels between conditions was not statistically significantly different,  $\chi^2 (2, N = 64) = 0.90, p = 0.64$ , a majority of participants in the study were in the high risk to reoffend category on the PACT ( $n = 54, 84.4\%$ ), compared to those in the moderate category ( $n = 4, 6.3\%$ ) and moderate-high category ( $n = 6, 9.4\%$ ). In the goal-setting condition, 80.6% of participants were in the high risk category ( $n = 25$ ), 12.9% were in the moderate-high risk category ( $n = 4$ ), and 6.5% were in the moderate category ( $n = 2$ ).

The large discrepancy in the representation of adolescents across the three risk to reoffend categories prevented statistical comparisons of outcome data between these categories. However, participants in the moderate category reported high levels of distress at both pre-test ( $M = 55.00, SD = 6.63$ ) and post-test ( $M = 51.75, SD = 28.61$ ); compared to those in the moderate-high category at pretest ( $M = 40.00, SD = 21.00$ ) and post-test ( $M = 35.83, SD = 19.85$ ), and those in the high category at pre-test ( $M = 47.43, SD = 27.85$ ) and post-test ( $M = 43.31, SD = 26.02$ ). Figure 4 shows the pre- and post-test mean distress scores of participants in the moderate, moderate-high, and high categories. In addition, participants in the moderate category reported low mean RCI ( $M = -3.25, SD$

Figure 4. Y-OQ-SR Total Distress Means by PACT Level of Risk to Reoffend. This figure illustrates the pre-test and post-test total distress scores of participants in the moderate, moderate-high, and high levels of risk to reoffend.





= 22.19), indicating minimal improvement from pre-test to post-test; compared to those in the moderate-high category ( $M = -4.17, SD = 13.26$ ) and high category ( $M = -4.11, SD = 16.04$ ). Conversely, participants in the moderate category rated goal attainment high ( $M = 8.88, SD = 1.65$ ) compared to those in the moderate-high category ( $M = 7.25, SD = 1.94$ ) and high category ( $M = 6.96, SD = 2.23$ ). While these data point towards a potential impact of risk level on treatment outcomes, statistical analyses could not be conducted and interpretations should be made cautiously.

### *Hypothesis Three Conclusion*

A conclusion could not be reached on hypothesis three due to the majority of the sample being identified as high risk to reoffend. The descriptive results presented here suggest a possible association between risk level and both outcome variables. Participants in the moderate category reported high levels of distress at pre- and post-test, and showed the little improvement in distress level over the course of eight weeks in treatment. In contrast, these participants rated high levels of goal attainment. Again, there were not sufficiently balanced numbers of participants in each category to examine the statistical significance of differences between adolescents in the moderate, moderate-high, and high risk categories.

### Length of Stay

Length of stay was measured as the number of days the participant was in placement at RVYSC at the onset of the study. As reported previously, there was no statistically significant difference in the length of stay in the comparison and goal-setting conditions,  $U = 550, z = 0.52, p = 0.61$ . When compared overall, length of stay was not statistically significantly correlated with Y-OQ-SR total distress score at pre-test ( $r =$

0.11,  $p = 0.41$ ). Correlations of length of stay and treatment outcomes were also examined for both conditions and presented in Table 6. In the comparison condition, length of stay was not statistically significantly correlated with any outcome variables. However, in the goal-setting condition there were statistically significant correlations between length of stay and the four measurements of goal attainment, but the association was not statistically significant between length of stay and pre-test total distress ( $r = 0.19$ ,  $p = 0.31$ ), post-test total distress ( $r = 0.22$ ,  $p = 0.24$ ), or change in total distress ( $r = 0.02$ ,  $p = 0.93$ ). Number of days in treatment was statistically significantly correlated with self-reported attainment of Goal A ( $r = -0.48$ ,  $p = .006$ ) and Goal B ( $r = -0.39$ ,  $p = .03$ ), as well as group leader rated attainment of Goal A ( $r = -0.38$ ,  $p = .03$ ) and Goal B ( $r = -0.65$ ,  $p < .001$ ). In other words, lengths of stay in both conditions was not associated with level of distress or change in level of distress from pre- to post-test. In addition, length of stay was not associated with reported goal progress in the comparison condition. However, length of stay was associated with reported goal attainment in the goal-setting condition, where longer lengths of stay were associated with less goal progress.

#### Number of Groups Attended

Participants' group attendance was tracked throughout the study. Twelve groups were held over the course of eight weeks. Figure 5 provides an illustration of the number of groups attended in the comparison and goal-setting conditions. One participant in the comparison condition and two participants in the goal-setting condition missed more than half of the group sessions. As a result, the distribution of group attendance was negatively skewed and a Mann-Whitney U test was utilized for condition comparisons. The distributions for the two conditions appeared similar based on visual inspection.

Table 6

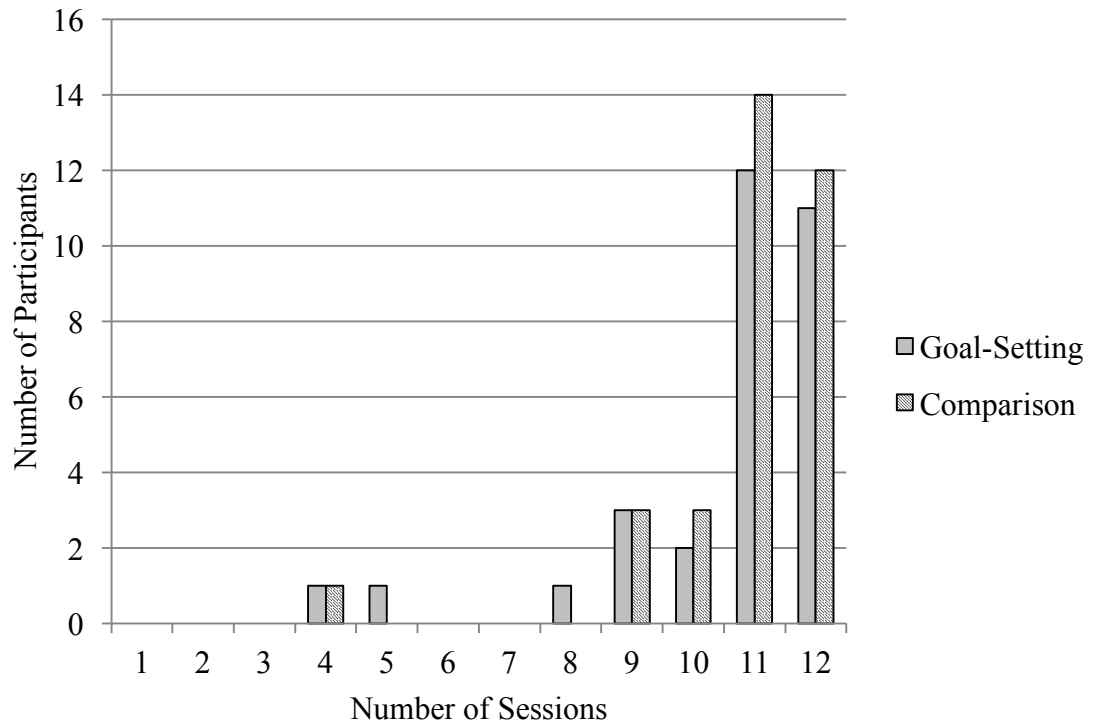
*Correlations of Length of Stay and Outcome Variables*

Outcome Variable	Correlation with Length of Stay	
	Comparison Condition	Goal-Setting Condition
Y-OQ-SR Total Distress		
Pre-Test	$r = 0.04$	$r = 0.19$
Post-Test	$r = 0.19$	$r = 0.22$
RCI	$r = 0.25$	$r = 0.02$
Goal A		
Self-Report	$r = 0.23$	$r = -0.48^{**}$
Group Leader	$r = 0.25$	$r = -0.38^*$
Goal B		
Self-Report	$r = 0.24$	$r = -0.38^*$
Group Leader	$r = 0.07$	$r = -0.65^{**}$

\* = Correlation significant at  $p < .05$

\*\* = Correlation significant at  $p < .01$

Figure 5. Group Session Attendance. This figure illustrates the number of group sessions that participants in the goal-setting and comparison conditions attending during the course of the eight-week (12-session) intervention.



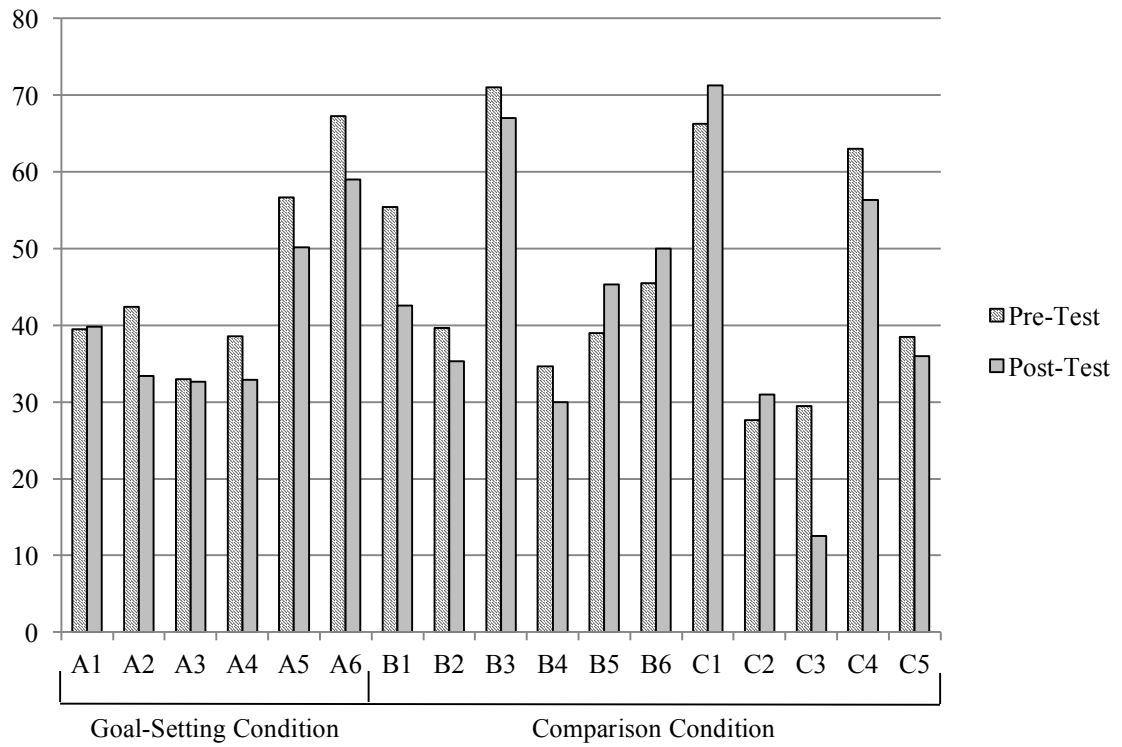
Median number of group sessions attended for participants in the goal-setting ( $Mdn = 11$ ) and comparison ( $Mdn = 11$ ) conditions was not statistically significantly different,  $U = 486$ ,  $z = -0.36$ ,  $p = 0.72$ . Kruskal-Wallis H test showed that median number of groups attended were not statistically significantly different between African American ( $Mdn = 11$ ), Hispanic ( $Mdn = 11$ ), and white participants ( $Mdn = 11$ ),  $\chi^2(2) = 1.04$ ,  $p = 0.60$ . Number of groups attended was not statistically significantly correlated with participant self-reported goal progress on Goal A ( $r = -0.14$ ,  $p = 0.27$ ) and Goal B ( $r = -0.01$ ,  $p = 0.94$ ), group leader goal progress rating on Goal A ( $r = -0.03$ ,  $p = 0.84$ ) and Goal B ( $r = -0.22$ ,  $p = 0.08$ ), or total distress RCI ( $r = 0.15$ ,  $p = 0.25$ ). These results suggest that number of groups attended was not related to group outcome measures in this study.

#### Treatment Group Comparisons

Seventeen unique treatment groups were utilized in the study (six groups in the goal-setting condition and 11 groups in the comparison condition). Only group members with the necessary consent were enrolled in the study. Therefore, the number of participants in each group varied. Data were reviewed to assess for differences on the two outcome variables, level of distress and goal attainment, at the individual therapy group level.

Mean pre-test total distress scores for each therapy group are presented in Figure 6. At pre-test there were no outliers in total distress scores based on boxplot inspection. Shapiro-Wilk's test indicated that total distress was normally distributed in all therapy groups and there was homogeneity of variance as assessed by Levene's test ( $p = 0.07$ ). A one-way ANOVA showed there was no statistically significant difference on the pre-test total distress score between therapy groups,  $F(16, 47) = 0.95$ ,  $p = 0.52$ .

Figure 6. Y-OQ-SR Total Distress Scores by Therapy Group. This figure illustrates the mean total distress scores of each therapy group at pre-test and post-test.



A two-way mixed repeated measures analysis of variance was conducted to assess for interaction between therapy group and time on total distress score. There were no outliers, as assessed by examination of studentized residuals for values greater than  $\pm 3$ . Y-OQ-SR total distress score was normally distributed, as assessed by Shapiro-Wilk's test ( $p > 0.05$ ). There was homogeneity of variance and covariance, as assessed by Levene's test of homogeneity of variance ( $p > 0.05$ ) and Box's test of equality of covariance matrices ( $p > 0.05$ ). There was no statistically significant interaction between therapy group and time on level of distress,  $F(16, 47) = 0.45, p = 0.96, \eta^2 = 0.13$ . The main effect of therapy group did not show a statistically significant difference in mean total distress score,  $F(16, 47) = 1.12, p = 0.37, \eta^2 = 0.28$ . In addition, there was no statistically significant main effect of time on mean total distress score from pre- to post-test,  $F(1, 47) = 2.52, p = 0.12, \eta^2 = 0.05$ . In other words, data did not indicate that the therapy groups differed significantly in pre-test total distress score or in the interaction between therapy group and time on level of distress.

A Kruskal-Wallis H test was used to determine if there was a difference in goal progress ratings between therapy groups. Distributions of the dependent measures (self-reported and group leader ratings) were similar based on visual inspection of boxplots. The distributions for self-reported Goal A ratings for each therapy group were not statistically significantly different,  $\chi^2(16) = 20.77, p = 0.19$ ; nor were the distributions of group leader Goal A ratings,  $\chi^2(16) = 22.72, p = 0.12$ . The distributions for self-reported Goal B ratings for therapy group were not statistically significantly different,  $\chi^2(16) = 14.18, p = 0.59$ ; nor were the distributions of group leader Goal B ratings,  $\chi^2(16) = 22.74, p = 0.12$ . These results indicate the therapy groups did not differ significantly

on treatment outcome variables examined, suggesting that no group leaders performed significantly better or worse than other group leaders.

### Summary

Data analyses found mixed results for the three study hypotheses. Parametric tests were utilized to examine the first hypothesis with level of distress as a repeated-measure dependent variable. Support was not found for the first hypothesis as participants in both conditions reported reduction in level of distress from pre- to post-test. Non-parametric tests were utilized to examine the second hypothesis with goal attainment ratings utilized as an ordinal dependent variable. Results indicated no difference between goal attainment on the first goal set by participants in the two conditions, but did show that participants in the goal-setting condition had substantially higher goal attainment ratings on the second goal compared to participants in the comparison condition. Finally, data review related to hypothesis three was limited due to the number of participants in each category. Therefore, a conclusion on hypothesis three could not be reached. The following chapter discusses the clinical implications of these results, limitations of this study, and recommendations for future research.



## Chapter Five: Discussion

Goals play an essential role in guiding not only developmental trajectory, but also treatment (Jansson, Tham, & Ramnerö, 2015; Nurmi, 1993). Maladaptive goals and poor goal-setting skills may contribute to the development and maintenance of delinquent behaviors (Massey et al., 2008). Goal-setting is widely accepted as an essential task in the development of the therapeutic alliance, outlining expectations for each party and direction for therapeutic work (Jansson, Tham, & Ramnerö, 2015). This study showed that group therapy focused specifically on teaching goal-setting skills and actively monitoring goal progress has some additional benefit over traditional cognitive-behavioral group treatment provided to delinquent adolescents in residential treatment. This chapter discusses the implications from comparisons of a group goal-setting intervention and group treatment-as-usual on two outcome variables; distress level and goal attainment. In addition, the implications of findings related to level of risk to reoffend and length of time in treatment are examined. Finally, the limitations and recommendations for future research are presented to encourage further examination of the utility of goal-setting skills as a treatment intervention.

### Goal-Setting and Distress

Distress was examined as a measure of treatment progress, with the hypothesis that learning adaptive goal-setting skills would improve psychosocial functioning, thus decreasing level of distress. Distress has been used to measure progress in outpatient

treatment, and the Y-OQ-SR was developed to be sensitive to change in distress during the course of treatment (Wells, Burlingame, & Rose, 2003). As expected, delinquent adolescents in residential treatment reported a high level of distress on this measure, with 50% of the sample reporting clinically significant distress at the onset of the study. At the conclusion of the study, the sample reported an overall improvement in level of distress, with a reduction to 45.3% reporting clinically significant distress. While reductions in distress were observed in both conditions, the study hypothesis that adolescents taught goal-setting skills in group would report greater reductions in distress was not supported. In order to detect an interaction between treatment condition and time on level of distress, a larger sample size ( $n = 150$  to  $160$ ) would be necessary based on the calculated effect size of .04. The current study, these findings suggest that the two interventions, goal-setting and treatment-as-usual, resulted in similar reductions in distress level. Factors in addition to insufficient power that may have contributed to this finding include increased attention to goals in both conditions and training of the group leaders in the goal-setting condition.

Participants in both conditions were asked to record two goals that they wanted to work on in group sessions at the onset of the study. While participants in the treatment-as-usual condition did not receive additional support or guidance in the establishment of goals, the recording of goals in the group may have primed participants and group leaders to these topics during the course of treatment-as-usual. This additional attention to goals distinguishes the comparison conditions from the standard treatment-as-usual prior to the study and may account for improvements seen in both conditions. There is an extensive body of literature on the effects of priming on goal pursuit that is beyond the scope of this

discussion. However, there is evidence that priming can activate behavioral systems associated with goal pursuit (Förster, Liberman, & Friedman, 2007).

Another factor that may have contributed to failure to find difference in distress level outcomes is the training of group leaders. Group leaders in the goal-setting intervention received two hours of training on facilitating the group goal-setting intervention. Consistent with literature on group facilitation training, multiple modes of learning were provided (Hill & Knox, 2014). However, the amount of time to acquire these skills was limited and no measures were used to assess for acquisition of skills by group leaders. More extensive training with assessment of skill acquisition may have increased the effect of the goal-setting intervention and differentiated it from treatment-as-usual.

Despite the hypothesis not being supported, these results suggest that group sessions were beneficial and contributed to improved psychosocial functioning as measured by decreased distress. While not the focus of the current study, overall improvement in distress despite different content provided in group treatment in the two conditions is consistent with the model of change mechanisms in group treatment proposed by Burlingame, Strauss, and Joyce (2014) that identifies the therapeutic environment of group as a potential source of change. Principles of small group process such as group cohesion have been empirically linked to group treatment outcomes (Burlingame et al., 2014).

While the overall improvement in distress level reported by adolescents in both conditions is positive, the amount did not reach the level of clinically significant change and thus warrants further examination. This may be due to the short portion of

participants' time in treatment captured in this study. Twelve group sessions were conducted during the eight-week study. Based on the participants' average length of time in treatment at the onset of the study, eight weeks only represents 29% of their time in treatment. In addition, the 'pre-test' and 'post-test' time points did not represent true pre-treatment and post-treatment measurements. Participants were already enrolled in treatment and receiving services at the onset of the study, and participants who completed the post-test measures remained enrolled in treatment services at the conclusion of data collection. Therefore, benefits from group treatment would be expected to continue after final data were collected in this study. Additional data on level of distress prior to admission, at time of discharge, and post-discharge (e.g., six-month follow-up), would provide more information on this topic.

#### Goal-Setting and Goal Attainment

Goals set by adolescents in the two conditions were compared based on the category of the goal target and goal characteristics. One of the most frequent goal targets in both conditions was earning status within the program's behavioral management system. Based on the residential setting of the study, this finding is not surprising. In addition to status goals, adolescents who received the goal-setting intervention set a high rate of behavior goals, and set significantly more behavioral goals than adolescents in treatment-as-usual. This is consistent with what would be expected for those taught the SMARTGOALS model, as behavioral goals provide concrete objectives and goal targets. In treatment-as-usual, adolescents set higher rates of exit and program completion goals than adolescents in the goal-setting intervention. These goals place an emphasis on freedom and autonomy, which is consistent with previous research that found delinquent

adolescents placed more importance on goals related to freedom and autonomy than non-delinquent or at-risk adolescents (Carroll et al., 2009). Exit and program completion goals provide an endpoint for goal-pursuit, but do not identify steps or behaviors necessary to achieve these targets. Lack of specificity in these goals was also evident in findings related to goal characteristics.

In this study, adolescents who received the goal-setting intervention set more specific goals than adolescents in treatment-as-usual. According to the goal-setting theory, goals that are specific improve performance and increase motivation (Latham & Locke, 2006). Goal attainment and progress provide a sense of self-efficacy and promote continued goal pursuit (Fujita & MacGregor, 2012). Vague goals do not provide these same benefits and are associated with increased rates of depression and delinquency in adolescents (Carroll et al., 2013; Dickson & MacLeod, 2004b). Results from this study suggest that goal specificity can be improved with focus on goal-setting skills in group therapy. However, one domain of goal characteristics that was low in both conditions was for goals to be time-bound. Goals that set appropriate timeframes for monitoring and achievement increase motivation (Fried & Slowik, 2004). Only 29% of the goal-setting condition and 18.2% of treatment-as-usual condition set goals with timeframes explicitly stated in the goal. Low rates of time-bound goals in the goal-setting condition may have been the result of an emphasis on making goals specific with less time available to focus on other goal characteristics. While adolescents in both conditions set goals that were optimistic and measurable, the increased goal specificity was strength of the goal-setting intervention compared to treatment-as-usual; however, it does appear that additional

emphasis is needed in guiding adolescents to establish appropriate time constraints for goal monitoring and goal achievement.

Results from this study suggest that without additional support, as provided in the goal-setting intervention, delinquent adolescents set maladaptive goals, and that an intervention targeting goal-setting skills can improve goal specificity. In addition, these interventions can assist adolescents in shifting the focus of their goals towards behavioral change. While exiting residential treatment may have remained a motivation for change, it was not the explicit target of these goals. Instead, goals are focused on specific steps needed to exit residential treatment and improve psychosocial functioning.

Goal attainment was used as a second measure of treatment outcome. Adolescents and group leaders in both conditions rated goal attainment similarly, suggesting that ratings were an accurate reflection of goal attainment. Goal attainment ratings on the first goal set in both conditions were similar. However, on the second goal, adolescents who received the goal-setting intervention had higher goal attainment ratings than adolescents who received treatment-as-usual. As discussed earlier, priming towards goals through the completion of the Pre-Treatment Goal Questionnaire may have unintentionally increased the focus on goals in both conditions. This may account of the similar attainment ratings seen in the two conditions on the first goal. However, greater attainment ratings on the second goal suggests the goal-setting intervention had added benefit over treatment-as-usual on this measure of treatment outcome. These results are meaningful because adolescence is a period of development during which there are expectations for growth in multiple domains of functioning (e.g., academics, relationships with family and friends, future planning, social expectations). In addition, delinquency is not the result of a single

risk domain, but is multifactorial often encompassing concerns with academics, mental health, peer relationships, family relationships, risky behaviors (e.g., substance abuse) and physical health. Therefore, treatment must address multiple risk and protective domains, and teach skills to support the pursuit of simultaneous goals in multiple domains of functioning. Based on these results, it appears that adolescents, with guidance, support, and feedback, are able to learn goal-setting skills that promote the pursuit of multiple goals simultaneously.

Goal attainment outcomes were not significantly associated with adolescent demographics, pre-test distress levels, or group leader factors measured in this study. However, length of time in treatment was associated with goal attainment in the goal-setting condition. While length of time in treatment was not related to treatment outcomes, distress or goal attainment, in the treatment-as-usual condition or distress outcomes in the goal-setting condition, longer lengths of stay were associated with lower goal attainment ratings in the goal-setting condition. Longer lengths of time in treatment can be influenced by a number of factors such as criminal history and behavioral problems in treatment. These results suggest that either adolescents with longer lengths of stay benefited less from the goal-setting intervention or that adolescents earlier in their course of treatment benefited more from the goal-setting intervention. In the absence of additional information on the reasons for increased length of time in treatment, additional interpretations of these results cannot be provided, but is an area for future research.

### Limitations

The sample utilized in this study appeared to be representative of the residential program; however, demographics of the program population were not available and could

not be collected without consent, preventing statistic comparisons between the sample and population. The sample was smaller than projected due to challenges with obtaining parental consent for adolescents under the age of 18. As a result, 45 adolescents interested in participating in the study were not eligible. Generalization from this study also are limited based on the sample. All participants were males adjudicated of at least one criminal offense. Therefore, comparisons between not at-risk, at-risk, and delinquent adolescents were not possible. In addition, the majority of the sample was in the high risk to reoffend category based on criminal and social histories (as measured on the PACT). This prevented statistical comparisons of treatment outcomes based on risk level. Suggestions for future research related to this topic are presented in the next subsection of this chapter.

The findings from this study are also limited based on the duration of the intervention and time points of data collection. While the observed decrease in distress levels over the course of eight weeks is a strength, this timeframe accounts for a small portion of adolescents' overall treatment and does not provide information on changes from pre-treatment to post-treatment to follow-up. This limited timeframe also did not provide information on the potential benefits of adding a goal-setting intervention during the early stages of treatment and maintaining a focus on goal setting throughout the course of treatment.

Level of distress was selected as global measure of functioning based on previous research and sensitivity to change (Wells, Burlingame, & Rose, 2003). Other areas of functioning and methods of measurement could have provided additional information regarding treatment outcome. Adolescent residential treatment programs often utilized



behavioral management systems that award privileges for achievement and maintenance of specific behavioral expectations. Similar behavioral standards are utilized in determining readiness to transition out of residential placement into a transitional setting or home. Understanding the relationship between distress and behavioral functioning in adolescents would provide additional benefit in the assessment and development of treatment interventions.

### Future Research

The results of this study suggest that there are benefits to additional focus on goal setting and pursuit in group therapy with delinquent adolescents. Maladaptive goal-setting skills contribute to self-efficacy and may perpetuate delinquency in this population. The traditional implementation of goal-setting in group psychotherapy encourages group members to set goals at the onset of treatment, often with little support and feedback. Goals are then set aside and revisited either sporadically or not at all during the course of treatment, with a review of goal progress at the end of treatment. This model assumes that individuals have prerequisite goal-setting skills or that very brief discussion of goals can shift maladaptive patterns in this skill. Expanding on the results of this study would provide further guidance in the implementation of goal-setting interventions in group psychotherapy and the benefits of this emphasis on psychosocial functioning and treatment outcomes.

Specific areas for further research on goal-setting interventions include duration, frequency, and timing of the intervention. Additional information is needed to determine the optimal number of group sessions needed to teach goal-setting skills and frequency of goal-pursuit feedback in groups. It would also be beneficial to learn if goal-setting

interventions could be utilized early in the treatment of delinquency to increase treatment engagement and improve treatment outcomes such as recidivism rate. This study compared goal-setting to treatment-as-usual. Comparisons of treatment-as-usual to treatment-as-usual plus goal-setting could also expand on the results of this study.

Additional research is also needed on the training of group leaders in facilitating goal-setting interventions. Specific topics such as the benefit of more extensive training and utilization of group leaders with graduate-level training in group facilitation would be valuable. Group leaders, like those in the current study, often receive little specific training in group facilitation. There is a strong need for research examining the impact of group leader training on treatment outcomes in general, but also on the benefits of teaching group leaders specific skills such as how to facilitate goal-setting in group psychotherapies and subsequent impact on treatment engagement and treatment outcomes.

Another area for future research is the examination of the influence of risk level on acquisition and benefit of goal-setting skills. The sample in this study was predominately in the moderate-high and high categories of risk to reoffend with only four participants in the moderate risk category. While this discrepancy prevented statistical comparisons based on risk level, the few participants in the moderate category reported high levels of distress and minimal improvement in distress level over the course of treatment. This may suggest that adolescents with less severe criminal history experience more distress when placed in residential settings, potentially due to challenges adjusting to out-of-home placement, and benefit less in the short-term from residential treatment. In contrast, the few adolescents in the moderate category reported a high rate of goal

attainment. The small size of the subsample of adolescents in the moderate risk category limits the inferences that can be made from this information, but it seems likely that there are differences in the benefits of treatment based on risk level and research is needed that includes adolescents across all risk levels. In addition, participants with longer lengths of stay in residential treatment showed less progress towards their goals. Length of stay is an indirect measure of severity of behavioral problems, as adolescents with less behavioral problems are able to exit residential treatment sooner than those with ongoing behavioral problems. Longer lengths of stay are likely associated with more significant histories of failed goal pursuit for a wide range of reasons, such as poorly established goals, low self-efficacy, lack of goal congruence, or limited social/family support. Research suggests that individuals unable to attain goals are subject to development of psychological distress (Michalak & Holtforth, 2006). Additional research is needed to determine the underlying factors in the relationships between level of risk, length of stay, and treatment outcomes.

This study also highlighted an area of social justice that warrants continued attention and research. Consistent with the criminal justice system at large, minority adolescents were overrepresented in this sample. African American adolescents accounted for 21.9% of the sample compared to 12.6% of the population based on 2010 census data (U.S. Census Bureau, 2010). Hispanic adolescents represented 34.4% of the sample compared to 16.3% of the population. While white participants made up 43.8% of the sample and 63.7% of the population. Results from this study indicated that African American participants were in residential treatment significantly longer than Hispanic and white participants, and that Hispanic participants rated their goal progress on one of

their two goals lower than white participants. These findings suggest that additional research is needed to identify effective interventions to support minority youth in residential treatment and to identify potential adaptations of goal-setting interventions for different cultural groups.

### Conclusion

This is the first study that looked at the implementation of a goal-setting intervention with delinquent adolescents in residential treatment. Adolescents appear to have benefitted from an eight-week (12 session) group treatment that focused specifically on teaching goal-setting skills and providing goal-pursuit feedback. Brief training and supervision of group leaders on goal-setting skills supported adolescents in establishing goals that were focused on behavioral change and increased specificity of goals. When compared to a treatment-as-usual condition, adolescents in the goal-setting intervention reported a similar decrease in level of distress over the course of treatment, suggesting the interventions were equivalent on this outcome measure. While adolescents in both conditions reported similar ratings of goal attainment on one of the two goals set in group treatment, adolescents who received the goal-setting interventions rated goal attainment higher on the second goal set in group.

This study provides an initial look at the benefits of teaching goal-setting skills and providing goal-pursuit feedback as the primary focus of group therapy sessions with delinquent adolescents. Further research is needed to build upon these results and determine if intervention duration, timing, or training of group leaders could improve outcomes. In addition, further research is needed to determine the utility of goal-setting interventions with adolescents at different levels of risk for delinquent behavior and

different lengths of time in treatment, and in the adaptation of goal-setting interventions for different cultural groups.

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Appendix A: Group Leader Demographic Questionnaire

**Instructions:** We are requesting your participation. Please respond to the each of the following questions regarding your experience and training facilitating group treatment sessions. Thank you for your participation.

**Unit/Living Group:** \_\_\_\_\_ **Age:** \_\_\_\_\_

<b>Ethnicity (check all that apply):</b>	<input type="checkbox"/> African American/Black	<input type="checkbox"/> Hispanic
	<input type="checkbox"/> American Indian	<input type="checkbox"/> Pacific Islander
	<input type="checkbox"/> Asian	<input type="checkbox"/> White/Cauc.
	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Multiracial

<b>Gender:</b>	<input type="checkbox"/> Male	<input type="checkbox"/> Female	<input type="checkbox"/> Transgender
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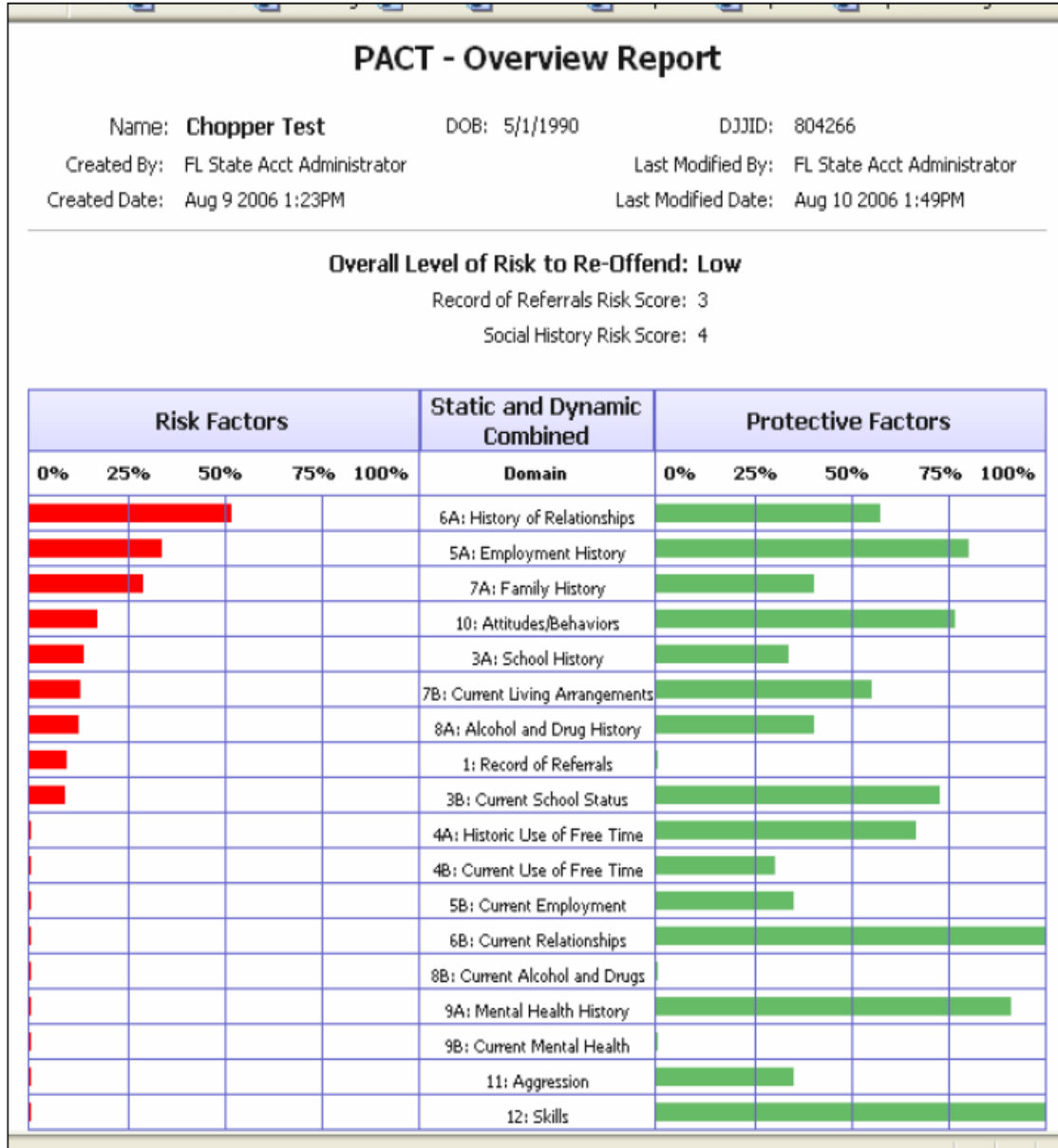
<b>Highest Level of Education Completed (check one):</b>	<input type="checkbox"/> GED	
	<input type="checkbox"/> High School Diploma	
	<input type="checkbox"/> Currently enrolled in College:	Major: _____
	<input type="checkbox"/> Associate's Degree:	Major: _____
	<input type="checkbox"/> Bachelor's Degree:	Major: _____
	<input type="checkbox"/> Master's Degree:	Major: _____
	<input type="checkbox"/> Doctorate Degree:	Major: _____

<b>Where have you received training on group facilitation skills?</b>	<input type="checkbox"/> I have no training
	<input type="checkbox"/> Training as part of a college or other academic course
	<input type="checkbox"/> Previous employment
	<input type="checkbox"/> Independent training program
	<input type="checkbox"/> Current employment pre-service training
	<input type="checkbox"/> Current employment on-the-job training

<b>How many years of experience do you have leading groups prior to working at RVYSC?</b>	Years: _____	Months: _____
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<b>How many years have you been leading group at RVYSC?</b>	Years: _____	Months: _____
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Appendix B: Positive Achievement Change Tool (PACT) Sample Report



Appendix C: Youth Outcome Questionnaire Self-Report 2.0 (Y-OQ-SR) Sample

Youth Outcome Questionnaire (Y-OQ® 2.01)

Name _____	Date _____	Never or Almost Never	Rarely	Sometimes	Frequ
<p><b>PURPOSE:</b> The Y-OQ® 2.01 is designed to describe a wide range of troublesome situations, behaviors, and moods that are common to adolescents. You may discover that some of the items do not apply to your current situation. If so, please do not leave these items blank but check the "Never or almost never" category. When you begin to complete the Y-OQ® 2.01 you will see that you can easily make yourself look as healthy or unhealthy as you wish. Please do not do that. If you are as accurate as possible it is more likely that you will be able to receive the help that you are seeking.</p> <p><b>DIRECTIONS:</b></p> <ul style="list-style-type: none"> <li>▪ Read each statement carefully</li> <li>▪ Decide how true this statement is during the past 7 days.</li> <li>▪ Completely fill the circle that most accurately describes the past week.</li> <li>▪ Fill in only one answer for each statement and erase unwanted marks clearly.</li> </ul>	1. I want to be alone more than other children of the same age.....	○	○	○	○
	2. I have headaches or feel dizzy.....	○	○	○	○
	3. I don't participate in activities that used to be fun.....	○	○	○	○
	4. I argue or speak rudely to others.....	○	○	○	○
	5. I have more fears than other my age.....	○	○	○	○
	6. I cut classes or skip school altogether.....	○	○	○	○
	7. I cooperate with rules and expectations of adults.....	○	○	○	○
	8. I have a hard time finishing assignments, or I do them carelessly	○	○	○	○
	9. I complain about things that are unfair .....	○	○	○	○
	10. I have trouble with constipation or diarrhea.....	○	○	○	○
	11. I have physical fights (hitting, kicking, biting, or scratching with my family or others my age.....	○	○	○	○
	12. I worry and can't get thoughts out of my mind.....	○	○	○	○
	13. I steal or lie.....	○	○	○	○
	14. I have a hard time sitting still (or I have too much energy).....	○	○	○	○
	15. I feel anxious or nervous.....	○	○	○	○
	16. I talk with others in a friendly way.....	○	○	○	○
	17. I am tense and easily startled (jumpy).....	○	○	○	○
	18. I have trouble with wetting or messing my pants or bed.....	○	○	○	○
	19. I physically fight with adults.....	○	○	○	○
	20. I see, hear, or believe in things that are not real.....	○	○	○	○
	21. I have hurt myself on purpose (for example cut, scratched, or attempted suicide)	○	○	○	○
	22. I use alcohol or drugs.....	○	○	○	○
	23. I am disorganized (or I can't seem to get organized).....	○	○	○	○
	24. I enjoy my relationships with family and friends.....	○	○	○	○
	25. I am sad or unhappy.....	○	○	○	○
	26. I have pain or weakness in muscles or joints.....	○	○	○	○
	27. I have a hard time trusting friends, family members, or other adults.....	○	○	○	○
	28. I think that others are trying to hurt me even when they are not	○	○	○	○
	29. I have threatened to, or have run away from home.....	○	○	○	○
	30. My emotions are strong and change quickly.....	○	○	○	○

Developed by  
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Youth Outcome Questionnaire (Y-OQ® 2.01)

Name \_\_\_\_\_ Date \_\_\_\_\_

	Never or Almost Never	Rarely	Sometimes	Frequently	Almost Always or Always
<b>PURPOSE:</b> The Y-OQ® 2.01 is designed to describe a wide range of troublesome situations, behaviors, and moods that are common to adolescents. You may discover that some of the items do not apply to your current situation. If so, please do not leave these items blank but check the "Never or almost never" category. When you begin to complete the Y-OQ® 2.01 you will see that you can easily make yourself look as healthy or unhealthy as you wish. Please do not do that. If you are as accurate as possible it is more likely that you will be able to receive the help that you are seeking.					
<b>DIRECTIONS:</b>					
▪ Read each statement carefully					
▪ Decide how true this statement is during the past 7 days.					
▪ Completely fill the circle that most accurately describes the past week.					
▪ Fill in only one answer for each statement and erase unwanted marks clearly.					
31. I break rules, laws, or don't meet others' expectations on purpose.....	○	○	○	○	○
32. I am happy with myself.....	○	○	○	○	○
33. I pout, cry, or feel sorry for myself more than others my age.....	○	○	○	○	○
34. I withdraw from my family and friends.....	○	○	○	○	○
35. My stomach hurts or I feel sick more..... than others my age.	○	○	○	○	○
36. I don't have friends or keep friends very long.....	○	○	○	○	○
37. My parents or guardians don't approve of my friends.....	○	○	○	○	○
38. I think I can hear other people's thoughts..... or they can hear mine	○	○	○	○	○
39. I am involved in sexual behavior that my family..... would not approve of	○	○	○	○	○
40. I have a hard time waiting for my turn in activities or conversations.....	○	○	○	○	○
41. I think about suicide or feel..... I would be better off dead	○	○	○	○	○
42. I have nightmares, trouble getting to sleep..... oversleeping, or waking up from sleep too early	○	○	○	○	○
43. I complain about or question rules, expectations..... or responsibilities	○	○	○	○	○
44. I have times of unusual happiness or excessive energy.....	○	○	○	○	○
45. I'm generally okay with frustration or boredom.....	○	○	○	○	○
46. I am afraid I am going crazy.....	○	○	○	○	○
47. I feel guilty when I do something wrong.....	○	○	○	○	○
48. I demand a lot from others or I am pushy.....	○	○	○	○	○
49. I feel irritated.....	○	○	○	○	○
50. I throw-up or feel sick to my stomach more than others my age.....	○	○	○	○	○
51. I get angry enough to threaten others.....	○	○	○	○	○
52. I get into trouble when bored.....	○	○	○	○	○
53. I'm hopeful and optimistic.....	○	○	○	○	○
54. Muscles in my face, arms..... or body twitch or jerk	○	○	○	○	○
55. I destroy property on purpose.....	○	○	○	○	○
56. I have a hard time concentrating, thinking clearly, or..... sticking to tasks	○	○	○	○	○
57. I get down on myself and blame myself for things that go wrong.....	○	○	○	○	○
58. I have lost a lot of weight without being sick.....	○	○	○	○	○
59. I act without thinking and don't worry about what will happen.....	○	○	○	○	○
60. I am calm.....	○	○	○	○	○
61. I don't forgive myself for things I've done wrong.....	○	○	○	○	○
62. I don't have much energy.....	○	○	○	○	○
63. I feel like I don't have any friends, or that..... no one likes me	○	○	○	○	○
64. I get frustrated or upset easily and give up.....	○	○	○	○	○

Appendix D: Pre-Treatment Goal Questionnaire – Group Member Form

**Instructions:** Please write two goals that you would like to work on during group over the next eight weeks.

ID: \_\_\_\_\_

Date: \_\_\_\_\_

**GOAL 1:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How committed are you to working towards this goal? (circle the number)

0      1      2      3      4      5      6      7      8      9      10

I am not  
committe  
d at all

I am not  
really  
committed

I am kind  
of  
committed

I am  
slightly  
committed

I am  
committed

I am very  
committed

**GOAL 2:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How committed are you to working towards this goal?

0      1      2      3      4      5      6      7      8      9      10

I am not  
committed  
at all

I am not  
really  
committed

I am kind  
of  
committed

I am  
slightly  
committed

I am  
committed

I am very  
committed



Appendix E: Post-Treatment Goal Questionnaire – Group Member Form

**Instructions:** Look back at the goals you wrote down eight weeks ago in group and answer the following questions.

ID: \_\_\_\_\_

Date: \_\_\_\_\_

**GOAL 1:**

Did you change this goal over the past eight weeks?  Yes  No

If yes, what did you change the goal to be?

\_\_\_\_\_

---

How much progress have you made towards this goals in the past 8 weeks? (circle the number)

0	1	2	3	4	5	6	7	8	9	10
No progress		A little		Some progress		Moderate progress		Close to achieving the goal		Achieved the goal

**GOAL 2:**

Did you change this goal over the past eight weeks?  Yes  No

If yes, what did you change the goal to be?

\_\_\_\_\_

---

How much progress have you made towards this goals in the past 8 weeks? (circle the number)

0	1	2	3	4	5	6	7	8	9	10
No progress		A little		Some progress		Moderate progress		Close to achieving the goal		Achieved the goal

Appendix F: Post-Treatment Goal Questionnaire—Group Leader Form

**Instructions:** Look back at the goals written by each group member eight weeks ago and rate how much progress they made towards their goal by checking the box under the number that best describes their level of progress.

Student ID:		No progress      A little      Some progress      Mod. progress      Close to achieving      Achieved the goal											
		0	1	2	3	4	5	6	7	8	9	10	
	Goal 1												
	Goal 2												
	Goal 1												
	Goal 2												
	Goal 1												
	Goal 2												
	Goal 1												
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	Goal 2												

## Appendix G: Consent Form for Parents – English

### **DESCRIPTION:**

Your child is invited to participate in a research study on the benefits of goal setting as part of group treatment. The purpose of the current study is to gather information on strategies that can be used to help improve adolescent goal-setting skills. This research is being conducted by Paul Grimsley, M.A., a doctoral student from the University of Denver, and is supervised by Maria T. Riva, Ph.D., a faculty member of the College of Education at the University of Denver.

### **RISKS AND BENEFITS:**

The risks associated with this study are minimal. No changes will be made to your child's individualized treatment plan and participation in the study will in no way impact your child's length of stay or commitment status. Questionnaires completed by your child will ask about his goals and the effectiveness of treatment. Your child's participation in this study will take approximately 30 minutes to complete questionnaires. The benefits, which may reasonably be expected to results from this study, are improved goal-setting skills and overall wellbeing. We cannot and do not guarantee or promise that your child will receive any benefits from this study. Your child will not receive payment for his participation.

All information gathered through questionnaires will be kept confidential and will be coded with identification numbers, as well as stored in a locked area. To protect confidentiality, finding will be general and no individual data will be included so no individual can be identified.

There are two exceptions to confidentiality in this study. If information is revealed concerning suicide, homicide, child abuse, or child neglect, it is required by law that this be reported to the proper authorities. In addition, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order of the subpoena.

### **SUBJECT'S RIGHTS**

Your decision whether or not to allow your child to participate in this study will not affect your child's placement or status in the program. If you have read this form and have decided to allow your child to participate in this project, please understand your child's participation is voluntary and your child has the right to withdraw his consent or discontinue participation at any time without penalty or loss of benefits to which he is otherwise entitled. Your child has the right to refuse to answer particular questions.

### **CONTACT INFORMATION:**

The researcher carrying out this study is Paul Grimsley, M.A. If you have questions, you may call Paul Grimsley at (303) 847-9168.

I agree to have my child participate in this study

Yes

No

\_\_\_\_\_  
Signature(s) of Parent(s), Guardian or Conservator

\_\_\_\_\_  
Date

**A copy of this signed and dated consent form is for you to keep.**

If the researchers cannot be reached, or if you would like to talk to someone other than the researcher about questions, concerns, or complaints regarding this study, research participant rights, research-related injuries, or other human subject issues, you may contact the Chair of the Institutional Review Board for the Protection of Human Subjects at 303-871-4015 or by e-mailing [IRBChair@du.edu](mailto:IRBChair@du.edu). You may also contact the Office of Research Compliance by calling 303-871-4050 or e-mailing [IRBAdmin@du.edu](mailto:IRBAdmin@du.edu) or in writing to: University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, Colorado 80208-2121.

## Appendix H: Consent Form for Parents – Spanish

### **DESCRIPCIÓN:**

Se invita a su hijo a participar en un estudio sobre los beneficios de establecer metas como parte del tratamiento de grupo. El propósito del presente estudio es de juntar información sobre las estrategias que se pueden utilizar para ayudar a mejorar las habilidades y establecer objetivos para adolescentes. Esta investigación está siendo realizada por Paul Grimsley, M.A., estudiante de doctorado de la Universidad de Denver, y es supervisado por Maria T. Riva, Ph.D., un profesor de la Facultad de Educación de la Universidad de Denver.

### **RIESGOS Y BENEFICIOS:**

Los riesgos asociados con este estudio son mínimos. No se harán cambios al plan de tratamiento individual de su hijo y la participación en el estudio no afectará de ninguna manera la duración de la habitación o el compromiso de estado de su hijo. Los cuestionarios completados por su hijo le preguntarán acerca de sus objetivos y la eficiencia del tratamiento. La participación de su hijo en este experimento tomará aproximadamente 30 minutos para completar los cuestionarios. Los beneficios, que razonablemente se puede esperar de este estudio, son la mejora de las habilidades para establecer objetivos y el bienestar general. No podemos y no hacemos garantías ni prometemos que su hijo recibirá ningún beneficio de este estudio. Su niño no recibirá pago por su participación.

Toda la información reunida a través de los cuestionarios será confidencial y se codifica con números de identificación y será almacenada en un área cerrada. Para proteger la confidencialidad, la conclusión será general y no hay datos individuales que serán incluidos de modo que ningún individuo puede ser identificado.

Hay dos excepciones a la confidencialidad en este estudio. Si la información que se revela es en relación con el suicidio, homicidio, abuso infantil o negligencia infantil, se requiere por ley que esto se informó a las autoridades correspondientes. Además, en caso de cualquier información contenida en este estudio forma objeto de una orden judicial o citación legal, la Universidad de Denver podría no evitar el cumplimiento de la orden de la citación.

### **DERECHOS DEL INTERESADO**

Su decisión de si debe o no permitir que su hijo participe en este estudio no afectará el puesto o el estado de su hijo en este programa. Si usted ha leído esta forma y ha decidido permitir que su hijo participe en este proyecto, por favor, comprenda la participación de su hijo es voluntaria y su hijo tiene el derecho de retirar su consentimiento o suspender su participación en cualquier momento sin penalidad o pérdida de beneficios a las que tiene derecho de otra manera. Su hijo tiene el derecho de negarse a responder a preguntas concretas.

**INFORMACIÓN DEL CONTACTO:**

El investigador que llevar a cabo este estudio es Paul Grimsley, M.A. Si tiene alguna pregunta, puede llamar a Paul Grimsley al (303) 847 - 9168.

Acepto que mi hijo participe en este estudio  Sí  
 No

\_\_\_\_\_  
Firma (s) del padre (s), tutor o curador

\_\_\_\_\_  
Fecha

**Una copia de este formulario de consentimiento firmado y fechado, es para que usted mantenga.**

Si no puede conseguir hablar con los investigadores o si le gustaría hablar con alguien que no sea el investigador acerca de las preguntas, inquietudes o quejas con respecto a este estudio, los derechos de los participantes de investigación, las lesiones relacionadas con la investigación, o otras cuestiones de asuntos de seres humanos, puede ponerse en contacto con el Presidente de la Junta de Revisión Institucional para la Protección de sujetos Humanos al 303-871-4015 o por correo electrónico a IRBChair@du.edu. También puede comunicarse con la Oficina de Cumplimiento de Investigación llamando al 303-871-4050 o por correo electrónico IRBAdmin@du.edu o por escrito a: University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, Colorado 80208-2121.

## Appendix I: Consent Form for Group Members

### **DESCRIPTION:**

You are invited to participate in a research study on the benefits of goal setting as part of group treatment. The purpose of the current study is to gather information on strategies that can be used to help improve adolescent goal-setting skills. This research is being conducted by Paul Grimsley, M.A., a doctoral student from the University of Denver, and is supervised by Maria T. Riva, Ph.D., a faculty member of the College of Education at the University of Denver.

### **RISKS AND BENEFITS:**

The risks associated with this study are minimal. No changes will be made to your individualized treatment plan and participation in the study will in no way impact your length of stay or status in the program. You will be asked to complete questionnaires about your goals and the effectiveness of treatment that will take approximately 30 minutes to complete. The benefits, which may reasonably be expected to results from this study, are improved goal-setting skills and overall wellbeing. We cannot and do not guarantee or promise that you will receive any benefits from this study. You will not receive payment for your participation.

All information gathered through questionnaires will be kept confidential and will be coded with identification numbers, as well as stored in a locked area. To protect confidentiality, findings will be general and no individual data will be included so no individual can be identified.

There are two exceptions to confidentiality in this study. If information is revealed concerning suicide, homicide, child abuse, or child neglect, it is required by law that this be reported to the proper authorities. In addition, should any information contained in this study be the subject of a court order or lawful subpoena, the University of Denver might not be able to avoid compliance with the order of the subpoena.

### **SUBJECT'S RIGHTS**

Your decision whether or not to participate in this study will not affect your placement or status in the program. If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You have the right to refuse to answer particular questions.

### **CONTACT INFORMATION:**

The researcher carrying out this study is Paul Grimsley, M.A. If you have questions, you may call Paul Grimsley at (303) 847-9168.

I will participate in this study:  Yes  
 No

---

Signature of Adolescent

---

Date

**A copy of this signed and dated consent form is for you to keep.**

If the researchers cannot be reached, or if you would like to talk to someone other than the researcher about questions, concerns, or complaints regarding this study, research participant rights, research-related injuries, or other human subject issues, you may contact the Chair of the Institutional Review Board for the Protection of Human Subjects at 303-871-4015 or by e-mailing [IRBChair@du.edu](mailto:IRBChair@du.edu). You may also contact the Office of Research Compliance by calling 303-871-4050 or e-mailing [IRBAdmin@du.edu](mailto:IRBAdmin@du.edu) or in writing to: University of Denver, Office of Research and Sponsored Programs, 2199 S. University Blvd., Denver, Colorado 80208-2121.



## Appendix J: Group Leader SMARTGOALS Facilitation Guide

1. Hand out SMART GOALS overview to students. Introduce goal topic
  - a. “Over the next couple of groups we are going to be working on setting goals. Goals help direct and guide our behaviors. However, we often set goals that are not helpful. There are specific features to goals that make them more useful. These include [refer to student handout] being Specific, Measurable, Attainable, Relevant, Time-bound, Gainful, Optimistic, Agreed-upon, and Legitimate.”
2. Briefly review each feature – you can have students take turns reading each of the following
  - a. **Specific** goals provide clear criteria to tell when a goal has been reached.
    - i. How will you know if you have reached your goal? What specifically will be different?
  - b. **Measurable** goals define how progress will be measured.
    - i. What will others see if you make progress towards your goal?
    - ii. How often will you ....?
  - c. **Attainable** goals are within the student’s control. They are not dependent on someone showing up or someone else changing.
    - i. What can you do different to achieve....?
  - d. **Relevant** goals are related to overall treatment goals
    - i. How could...help you progress in your treatment domains?
  - e. **Time-bound** goals indicate when the goal will be reached or how often you will do a specific behavior. Goals for group should be attainable within 6 to 8 weeks.
    - i. How could you make progress towards that larger goal in the next 8 weeks?
  - f. **Gainful** goals are related to personal growth and are meaningful to the individual
  - g. **Optimistic** goals should identify what you will do different, not what you don’t want to do anymore.
    - i. Instead of doing X, what could you do?

- ii. For example, I don't want to be mean to others becomes I will be nice to others.
  - h. **Agree-upon** goals are those that people in your treatment team would agree would be beneficial
    - i. Do you think that your [mom, family, client manager, case worker] would agree that that goal is appropriate?
  - i. **Legitimate** goals are those that student is committed to working on.
    - i. Is that something you are willing to work towards?
  - j. **Simple** goals only focus on one thing at a time.
    - i. How could you break down that goal?  
What would the first step be in achieving that goal?
- 3. Have students write down one goal they want to work on over the next 8 weeks (on a scratch piece of paper).
- 4. Have students share that goal and get feedback from group leader and other students around each of the goal features.
- 5. Have students make revisions to their initial goal and **record goal on the Goals Worksheet.**
- 6. Have students rate how committed they are to the goal on the same form.
- 7. Once all students have recorded the first goal, repeat steps 3-6 with a second goal.

Appendix K: Participant SMARTGOALS Handout

## Specific

- What exactly do you want to accomplish?
- What will others see if you are making progress?

## Measurable

- How will you measure your progress towards this goal?
- How will you know you met your goal?

## Attainable

- Is it within your control to reach this goal?

## Relevant

- Is your goal related to your treatment domains?
- Is your goal related to growing as a positive, healthy person?

## Time-bound

- When will you reach your goal?
- How often, for how long, or how many times will you do something?

## Gainful

- How will you benefit from reaching or working towards this goal?

## Optimistic

- Does your goal say what you will do? (instead of what you will not do)
- What will you start doing? (instead of what will you stop doing)

## Agreed-upon

- Do you think that your family, case manager, client manager, case worker, or therapist would agree with this goal?

## Legitimate

- Is this a goal that you are committed to reaching?

## Simple

- Is your goal one thing you can achieve or is it multiple goals that you can separate into steps?