THERAPEUTIC SUMMER CAMP OUTCOMES
AND NEGATIVE MOOD REGULATION
EXPECTANCIES

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ABSTRACT

Therapeutic summer camps are a relatively little researched treatment modality for children with attention deficit hyperactivity disorder and autism spectrum disorders. Little is known about factors that may moderate outcomes for therapeutic camps. One such potential moderator is negative mood regulation expectancies—individuals' beliefs about their ability to alter their own moods. Over two summers, Quest Camp, a therapeutic camp for children ages 6 to14 with mild to moderate behavioral, social and emotional symptoms was held. Data were collected via parent and counselor reports of behavior before, during, and after camp. A children's measure of negative mood regulation expectancies (NMR-Y) was given to children at the camp. Tests of differences were conducted for parent reported behavioral data between before and after camp. In addition, multilevel modeling analyses were conducted for counselors' daily behavior reports. Regression analyses tested for a moderation effect of negative mood regulation expectancies on camp outcomes.

The sample size was small relative to the number of analyses conducted, but there were significant improvements in parent reports of aggressive behavior, social problems, and overall problem behavior. Furthermore, negative mood regulation expectancies moderated the relationship between pre- and post-treatment symptoms for anxiousness, depression, and rule-breaking behavior. The findings suggest that further investigation of

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therapeutic camps as a treatment modality may prove fruitful, and that the NMR-Y is a

valid measure of negative mood regulation expectancies in children.

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CHAPTER 1

INTRODUCTION

Therapeutic camps are an under researched treatment modality. Both attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder have been successfully treated via therapeutic camps, but replications of research results for these camps are rare. In addition, factors that moderate outcomes of these camps have not been thoroughly examined. One such potential moderator is negative mood regulation expectancies.

ADHD and Emotion Regulation

ADHD is a chronic mental health disorder characterized by an age inappropriate pattern of hyperactivity or inattention that interferes with social, academic, or occupational functioning. ADHD has been estimated to occur in between 3% and 7% of school aged children, with a ratio of boys to girls of between 2:1 to 9:1 depending on the whether the diagnosis is for hyperactive or inattentive subtype. ADHD becomes noticeable at a very young age and symptoms can persist through adolescence and into adulthood. (American Psychiatric Association, 2000).

One of the symptoms of the hyperactive subtype of ADHD is emotional lability or susceptibility to swift emotional change (American Psychiatric Association, 2000). ADHD is associated with a variety of deficits related to emotional expression, and individuals with ADHD show irritability, hostility, excitability, and general emotional

hyperresponsiveness (Barkley, 1990). ADHD is also comorbid with a host of affective disorders. Szatmari, Offord and Boyle (1989, cited in Barkley, 1990) found that up to 44% of children diagnosd with ADHD will be diagnosed with another psychological disorder. More specifically, Munir, Bierderman, and Knee (1987) found that 32% of children with ADHD suffered from a major affective disorder and 27% could be diagnosed with an anxiety disorder.

Children with ADHD exhibit greater frustration in the face of a lost reward and do not respond with greater effort in response to frustrating situations, as their non-ADHD peers do (Douglas 1994). Rosenbaum and Baker (1984) found similar results after introducing a noncontingent negative reinforcement schedule, which provided negative feedback about behavior regardless of performance on a task. Another study found boys either diagnosed with or at-risk for ADHD displayed more negative affect in the presence of the experimenter (Cole, Zahn-Waxler, & Smith, 1994).

The ability to respond appropriately the others' emotional responses is an essential part of adaptive interpersonal reactions (Kinsbourne & Bemporad, 1984). Children with ADHD often experience challenging, negative interpersonal relationships with siblings, teachers, parents, and peers (Greene et al., 2001). It has been suggested that these deficits in the quality of interpersonal relationships in children with ADHD may be related to undeveloped emotional recognition and regulation skills. (Braaten & Rosen, 2000; Da Fonseca, Seguier, Santos, Poinso, & Deruelle, 2009; Kats-Gold, Besser, & Beatriz, 2007).

Barkley's (1997) unifying theory of ADHD suggests that the cause of emotion regulation deficits associated with ADHD is impaired behavioral inhibition. While it does

not directly cause other symptoms, impaired behavioral inhibition early on may hinder later development of essential executive functions, which accounts for the symptoms of ADHD.

Barkley (1997) links behavioral inhibition to difficulties with affect regulation based on Kopp's (1989) work that suggests inhibition is vital to the development of emotional-self regulation. Barkley predicts that those with ADHD will show greater emotional reactivity to emotionally charged events, fewer anticipatory emotional reactions to future events, decreased awareness of the impact of their emotions on others, less capacity to self-regulate to complete goal directed behavior, and greater dependence on immediate rewards to participate successfully in goal-directed behavior. Children with ADHD's and their parents' emotion recognition abilities are not correlated, suggesting that faulty modeling on the part of parents and caregivers is likely not largely responsible for the deficits in emotion recognition (Norvilitis, Casey, Brooklier, & Bonello, 2000).

A study conducted by Kats-Gold et al. (2007) links emotional competence to the symptoms of ADHD. They examined a sample of 111 4-to-5 year old-Israeli boys, 50 of whom were considered at risk of being diagnosed with ADHD. The authors used Saarni's (1999) description of emotional competence: a combination of the ability to understand or to appraise emotions accurately, regulation of emotions, and expression of emotions. Kats-Gold et al. assessed risk of ADHD diagnosis and assessed peer opinions of the participants. Participants were then given a computerized emotion recognition task. At-risk participants took longer to recognize which emotions were being expressed in the emotion recognition task. Those participants were also more likely to mistake positive emotions for negative ones like sadness or anger. The authors concluded that children

with ADHD have deficits in emotion recognition, which is an essential skill for facilitating adaptive social integration (Kats-Gold et al., 2007).

Another study replicated this finding. Participants were shown pictures of scenes with faces whited out and asked to choose which emotion the person in the picture was likely experiencing. The authors found that children with ADHD were less able than peers to infer emotions from contextual clues (Da Fonseca et al., 2009). Another study found that boys with ADHD were less empathetic than their peers. When read stories designed to elicit empathetic responses, boys with ADHD were less likely to assess correctly the feelings of the characters in the story and were less likely to match the emotions of the characters after reading the story. The authors suggested that a lack of empathy may be responsible for the interpersonal relationship deficits children with ADHD experience (Braaten & Rosen, 2000).

Yuill and Lyon (2007) had similar findings. They compared the abilities of typical children and children with ADHD to match situations to pictures of those situations' emotional outcomes. They found children with ADHD and typically functioning children were no different in matching non-emotional situations to their outcomes. However, when those groups were asked to match pictures of emotional situations to pictures of appropriate facial expressions, children with ADHD were significantly less likely to make appropriate matches.

Beyond the lack of emotional recognition skills, Walcott and Landau (2004) researched if children with ADHD also demonstrate an inability to regulate emotions. They had children perform an impossible task for the promise of a reward they would always fail to receive, while at the same time prompting participants not to respond

emotionally to the task. The authors found that participants with ADHD displayed a significantly poorer ability to control the display of their emotions when the task became frustrating. Not only were children with ADHD unable to recognize social cues related to emotions, but they lacked the impulse control to consider context in their decisions to regulate their expressions of emotion. This finding fits with Barkley's (1997) prediction that those with ADHD may not consider how their displays of emotion affect those around them.

Greater emotional reactivity and a tendency toward exhibiting negative affect when communicating have been observed in the social interactions of children with ADHD (Barkley, 1990). Hinshaw and Melnick (1995) found that children with ADHD who have comorbid aggression are more likely than ADHD children without aggression to display negative affect. Barkley (2006) posits that these findings might account for defiant and hostile behaviors that Hinshaw (1987, cited in Barkley 1997) associated with ADHD, by suggesting such behaviors in part are due to deficiencies in emotion self-regulation.

Children with ADHD also struggle with responding appropriately to emotional cues. Kochel, Leutgeb, and Schienle (2013) conducted an emotion oriented Go/NoGo task, a series of trials in which participants either press or don't press a button when presented with a series of facial expressions. Participants were 16 8- to 12-year-old boys. The authors investigated how those emotional stimuli affected brain activity measured by EEG, reaction time, and accuracy of response throughout the task. The authors found that children with ADHD made more errors in recognition of emotion, especially anger. Furthermore, children with ADHD made more commission errors—hitting "go" when no

response was required—than the control group. Once again anger emerged as a significant source of error for children with ADHD.

One challenging aspect of ADHD is the emotion recognition and regulation deficits that affect many other areas of functioning. In particular, emotion regulation difficulties may be responsible for the challenging interpersonal interactions that those with ADHD often experience. The symptoms of ADHD span many different areas of functioning. Because of the severe impairments associated with the diagnosis, a variety of treatments has been implemented to address the symptoms of ADHD.

Treatment of Children and Adolescents with ADHD

Medication

Among children diagnosed with ADHD by their primary care physician 88% were prescribed methylphenidate, a stimulant (Wolraich et al., 1990). Ninety percent of stimulant treatment for ADHD is methylphenidate (Goldman, Genel, Bezman, & Slanetz, 1998). Stimulant treatment improves hyperactivity, impulsivity, and inattention. Stimulants have also been shown to improve ADHD's associated symptoms, like poor academic performance, oppositional behavior, and irritability. However use of stimulants can cause side effects, including upset stomach, headaches, decreased appetite, insomnia, depressed mood, and increased tic behavior (Ahmann, Waltonen, Theye, Olson, & Van Erem, 1993).

Behavioral Treatments of ADHD

In a review of outcome studies for behavior therapy of ADHD clients, Pelham and Gnagy (1999) outlined several modalities of behavior oriented interventions: cognitive behavioral therapy, clinical behavior therapy, contingency management, and intensive

treatments. Cognitive behavioral therapy of ADHD involves modeling, teaching, and practicing skills like self-reinforcement and impulse control. This modality of therapy does not produce clinically significant improvements in ADHD symptoms in the traditional therapeutic format of one hour per week in an office setting (Pelham & Gnagy, 1999).

Intensive treatment combines parent or teacher training in behavior management techniques of clinical behavior therapy, and professionally implemented reinforcements and punishments contingent on appropriate or inappropriate behavior. The reinforcements are points that can be exchanged for privileges like field trips, public recognition, and home rewards. Punishments included time-outs and negative daily report cards. Whereas cognitive behavioral treatments have failed to produce meaningful results, 66% of participants in an intensive summer treatment program no longer met diagnostic criteria for ADHD after the program ended (Pelham & Gnagy, 1999).

One such program is the Summer Treatment Program (STP) an 8-week intensive summer camp-like program meant to address peer relationships, interactions with adults, academic performance, and self-efficacy in children and adolescents with ADHD. The program runs for 7 to 8 weeks for 8 to 9 hours each day. Two to three of those hours are spent in a mock classroom setting. The remaining hours are spent in group recreational activities. During the course of the program, parent-training meetings are held. STP uses a point system and systematic praise to reinforce appropriate behavior and the absence of maladaptive behavior. Points can be exchanged for rewards and privileges. A daily report card is sent home to parents at the end of each day. Rewards are tied to good report cards.

Many studies of the efficacy of STP for reducing symptoms of ADHD have been conducted (e.g., Pelham et al., 2005; Sibley et al., 2011). Chronis et al. (2004) investigated the role of the behavioral modification component in STP's efficacy with a treatment withdrawal design, running the STP as normal then removing behavioral interventions for the last two weeks of camp. Maladaptive behavior spiked so intensely that the oldest and youngest groups in the study had behavioral interventions reinstated within 5 to 6 hours. The authors concluded that behavioral interventions must remain a core component of the summer treatment program. These findings demonstrate that intensive programs with behavioral components can be effective for addressing deficits related to ADHD.

Fabiano et al. (2007) compared changes in behavior between several levels of STP behavior modification procedures, and several dosage levels of methylphenidate. Participants were divided into groups that received no behavior modification, those that received low levels (e.g., were unable to earn points or early release from time-outs), and a high level group that received the complete STP procedure. Each day, participants were given varying doses of medication. The number of rule violations was tallied; percentages of classroom assignments completed were recorded; and teachers completed symptom intensity and impairment ratings.

The authors found that both high and low levels of behavior modification significantly improved classroom productivity and conduct. They also found that, when behavior modification was present, lower medication dosages still produced significant improvements in behavior. In fact the high behavior modification group saw very little improvement with medication beyond the lowest level. Finally, behavior modification

had effect sizes that were on par with or superior to receiving only medication regardless of dosage (Fabiano et al., 2007). This suggests that behavior modification is a viable alternative to medication for reducing symptoms of ADHD.

An NIMH 14-month longitudinal study compared outcomes of behavioral treatment, medication management, and combined treatment. The sample was demographically representative of patients seen in a clinical environment. Behavioral treatment consisted of parent training, STP, biweekly meetings with teachers, and behaviorally trained paraprofessional aides' working directly with the children at school. The parent-training component consisted of group and individual sessions with each family. The school-based treatment involved teacher consultation regarding behavior management strategies. Medication management was a double-blind titration process with methylphenidate followed by monthly medication maintenance visits (Jensen et al., 2001).

Results were that combined treatment and medication management groups did not significantly differ in terms of symptom improvement. Ninety percent of combined treatment participants and 88% of medication management participants no longer met the full criteria for ADHD. The combined and medication management groups were both statistically and clinically superior to the behavioral treatment group. The researchers observed a different pattern of findings in other areas of functioning. Combined treatment was slightly superior to other treatments in improving academic functioning, parent-reported anxiety and depression ratings, and parent reported aggressive or oppositional behavior (Jensen et al., 2001).

When other areas of functioning are considered in concert with ADHD symptoms, the combined treatment group was better than all other treatment models. Furthermore, the behavioral treatment strategy was more effective at improving areas of functioning like scholastic performance (Jensen et al., 2001). The superior performance of the combined treatment group and the increased effect size of behavioral treatment suggest that ADHD's social symptoms and oppositional/defiant behaviors are more effectively addressed by intensive behavioral interventions. Overall, the study found that 68% of participants in the combined treatment group achieved a normal level of functioning. This is compared to 56% for medication management alone, and 34% for strictly behavioral intervention (Jensen et al., 2001).

A 24-month follow-up revealed that growth made by the medication management and combined treatment groups deteriorated over time. Medication management and combined treatment groups continued to display significant improvements in ADHD and oppositional/defiant symptoms, but the effect sizes of those treatments were reduced by nearly half (MTA Cooperative Group, 2004). A 36-month follow-up to the 2004 study found that the differences in outcomes among medication management, behavior therapy, and combined medication and behavior treatment vanished, but all remained significantly improved over baseline symptomology (Jensen et al., 2007).

Autism spectrum disorder also features emotion regulation deficits and has been successfully treated with intensive behavioral interventions.

Autism Spectrum Disorder and Emotion Regulation

Autism spectrum disorder (ASD) is a developmental disorder characterized by delayed speech typically followed by a lack of interest in social interaction in favor of

engaging in repetitive behaviors. ASD includes autism and Asperger's syndrome and is usually identified between 12 and 24 months of age. ASD affects just under 1% of the population (American Psychiatric Association, 2013).

Emotion dysregulation correlates significantly with the severity of core features of autism (Samson et al., 2014). Konstantareas and Stewart (2006) found a relationship between ASD and less adaptive affect regulation strategies, like crying or non-compliance when presented with a frustrating task. Individuals with Asperger's syndrome and high functioning autism have higher levels of negative affect, greater difficulty identifying and describing their emotions and less ability to reappraise emotionally taxing situations, and they more often suppress emotional expression. People with ASD are less able to label and to describe their emotions. ASD individuals are more likely to rely on less adaptive suppression than on reappraisal when coping with negative emotion (Samson et al., 2012).

Treatment of Autism Spectrum Disorder

There are a variety of treatments that are employed for children with ASD. However, the literature on interventions for ASD is relatively sparse (Mesibov & Shea, 2011). Psychopharmacological treatments have been used to treat autism. Often these treatments target symptoms like aggression and inattention rather than core features of autism (des Portes, Hagerman, & Hendren, 2003). However, intensive behavioral intervention improves the language development deficits that are symptomatic of autism (Cohen, Amerine-Dickens, Mila, Smith, & Tristram, 2006; Sallows & Graupner, 2005; Smith, Groen, & Wynn, 2000).

Applied behavior analysis (ABA), outlined by Lovaas (1987), uses operant conditioning principles to increase desired and appropriate behaviors and to extinguish maladaptive behaviors associated with autism over the course of years. Reviews of the effectiveness of ABA and other treatments offer a variety of conclusions that suggest ABA is not yet an evidence-based best practice for the treatment of ASD. Rogers and Vismara (2008) reviewed studies targeting ASD in early childhood and found conflicting results. The authors call for further exploration of treatment methods and more rigorous examination of the moderators of the effects of existing interventions.

Therapeutic Camps

Intensive treatments in a summer camp are a new and relatively little-researched option for families seeking therapeutic intervention for children with psychopathology. Camps offer a variety of features that differentiate them from other treatments, including treatment in a group format. While little research has been done on group therapy's effectiveness for treating children with ADHD, Hinshaw (1996) notes that group intervention allows children with behavioral problems to practice new skills in a genuine environment and to learn from one another. A group environment allows the participant to receive feedback from peers, as well as counselors or therapists. Furthermore the consistent presence of peers who may model desired behavior provides another avenue by which participants can learn (Russel, 2003).

Camps also provide a more physically active environment for participants. Exercise therapy has been implemented with clinically significant success in patients with depression. Babyak et al. (2000) found exercise had comparable gains to pharmacological treatment and gains persisted 6 months after treatment. Summer camps

may incorporate some of the therapeutic advantages of regular exercise. In addition, a summer day camp provides many hours of intervention compressed into a relatively short timeframe.

Therapeutic camps have been used to address the distress of burn victims, pediatric patients with terminal illnesses and their siblings, and troubled youth (Dunkley, 2009; Hancock, 2011; Maertens & Ponjaert-Kristoffersen, 2006). Gillard, Witt, and Watts (2011) examined the goals and outcomes of Camp Strong, a camp for children with HIV/AIDS. Camp Strong sought to help its participants reduce feelings of isolation, to provide recreation, to enhance feelings of reprieve, and to increase knowledge, attitudes, and skills. The notion of raising self-efficacy for managing behavior is a theme that appears among the goals set by other therapeutic camps (Dunkley, 2009; Hanston, et al., 2012).

Therapeutic camps have successfully treated anxiety and mood problems. Siblings of terminally ill cancer patients who attended camp Oziku saw clinically significant reductions in PTSD symptomology and anxiety symptoms; furthermore they experienced a marked increase in self esteem (Packman et al., 2004). Another camp for pediatric cancer patients and their siblings led to significant affective improvements that were measureable 4 to 6 months after the week long program had concluded (Wellisch, Crater, Wiley, Belin, & Weinstein, 2006).

Summer camps have successfully treated social interaction deficits associated with autism. Walker, Barry and Bader (2010) studied a summer camp program that treated a group of 12 children with autism, ages 3 to 7. The camp fostered significant improvements in participants' abilities to transition between activities and to maintain

attention to tasks, verbal communication, and quality of social interaction over the course of 4 weeks. Both therapists and parents observed these improvements post-treatment. The authors suggest that this finding demonstrates generalization of the social skills gained from camp to home and therapy settings. Hung and Thelander (1978) used a camp to teach self-help skills and language, and to reduce undesirable behaviors via a token economy. Though a majority of autistic participants showed at least 15% improvement in the measured areas, Hung and Thelander's study's sample size was small—a problem that recurs throughout the literature on therapeutic camps.

ADHD is another disorder that has been treated through summer camp programs. Tremendous variety exists among summer camp models—ranging from art therapy (Henley, 1999) to role play and traditional group therapy. Hanston et al. (2012) ran a two week intensive social skills program along with parent psychoeducation and training to treat children with ADHD and their families. The program enrolled 33 children. The camp ran 6 hours each day for 2 weeks. Participants were divided into treatment groups of 4 to 6 to work on social skills, including "knowing your feelings" and "dealing with anger." The aim of the program was to reduce symptoms and to improve peer relationships, social skills, and self-esteem.

Three weeks after the children returned to their community schools, researchers assessed retention of gains made from camp. Hanston et al. (2012) found that, after their program, participants had made significant gains in social skills and emotion regulation abilities. The success of this program demonstrates that an intensive summer camp program can improve ADHD symptoms, particularly in the realm of emotion regulation.

Greenberg (2009) examined the effectiveness of a Quest Therapeutic Camp to address self-esteem, inattention, hyperactivity/impulsivity, aggression and social relationships using parent, counselor, and child ratings at the beginning and end of camp. The camp consisted of 157 children ages 5.5 to 17 years with diagnoses like ADHD, autism, Asperger's, and mood and anxiety disorders. Participants attended camp for a minimum of 3 weeks to a maximum of 8 weeks. The camp consisted of daily group therapy activities, skill building and teamwork exercises, and a token economy in camp and at home. At the end of camp, participants had made significant improvements in all areas as reported by parent and camp counselor measures. This study lacked a control group but was unique in that it had a relatively large sample size compared to other studies.

Therapeutic camps have been employed successfully to treat a wide variety of disorders. A summer camp environment combines aspects of group therapy, short-term, intensive treatment, and outdoor physical activity into a cohesive, natural environment to teach skills like social interaction. One thing that remains unexamined in the literature of therapeutic camps is moderator effects and predictors of success. These moderators include individual personality characteristics. Characteristics related to emotion regulation should be particularly relevant. One such variable is generalized expectancies for negative mood regulation.

Negative Mood Regulation Expectancies

The role of children's negative mood regulation (NMR) expectancies in treatment outcomes has yet to be investigated. NMR expectancies are based in Rotter's (1954) social learning theory, which posits that behavior can be predicted via individuals'

generalized expectancies for problem solving, their specific expectancies based on past experiences with a similar situation, and the potential value of the outcome of their behavior in the situation. The influence of generalized expectancies in a given scenario depends on the breadth of an individual's past experiences with that situation. The more novel the scenario, the more generalized expectancies influence behavior.

NMR expectancies refer to individuals' beliefs that their behaviors or cognitions can alleviate their negative moods (Catanzaro & Mearns, 1990). NMR expectancies correlate with a number of positive outcomes, including less depression in the wake of an upsetting event, and less anger and distress among police officers (Mearns, 1991; Mearns & Mauch, 1998). Kassel, Bornovalova, and Mehta (2006) found that NMR expectancies predicted changes in college students' levels of anxiety and depression over eight weeks. NMR expectancies were negatively correlated with anxiety and depression, even when controlling for age, sex, coping strategies, and baseline depression or anxiety.

NMR expectancies mediate treatment effects for posttraumatic stress disorder. Cloitre, Stovall-McClough, Miranda, and Chemtob (2004) conducted a two-phase 16-week treatment for survivors of childhood sexual abuse. The roles of NMR expectancies and the strength of the therapeutic alliance in changes in PTSD symptoms were examined. Phase 1 focused on the development of interpersonal and emotion regulation skills, like identifying and labeling mood states. Phase 2 was a modified form of prolonged imaginal exposure followed by emotional processing of the reviewed memories. Strength of the therapeutic alliance at the end of phase 1 was a significant predictor of post treatment PTSD symptoms. However, changes in NMR expectancies during phase 2 acted as a mediator of the relationship between PTSD symptom

improvement and therapeutic alliance (Cloitre et al., 2004). These findings suggest that participants' confidence in the effectiveness of coping skills taught during phase 1 allowed them to more successfully use the skills acquired during imaginal exposure.

Backenstrass et al. (2006) found NMR expectancies to mediate treatment outcomes for depression. In their study, individuals with major depressive disorder participated in ten weeks of twice-weekly group cognitive behavioral therapy (CBT). Changes in NMR expectancies correlated significantly with changes in depression symptoms, suggesting that NMR expectancies mediate treatment outcome (Backenstrass et al., 2006). This study further supports NMR expectancies as a vital component of successful emotion regulation.

Kirsch, Mearns, and Catanzaro (1990) found that NMR expectancies predicted active coping strategies and were negatively related to dysphoria. The correlations between NMR expectancies and dysphoria remained strong when coping was statistically controlled, suggesting that one's confidence that coping will succeed plays a crucial role in changing a negative mood (Kirsch et al., 1990).

NMR expectancies also moderate risk factors for problem drinking. Catanzaro and Laurent (2004) studied adolescents who completed measures of family environment, alcohol expectancies, coping preferences, NMR expectancies, motives for drinking, and drinking behavior. The authors found that NMR expectancies were moderators of environmental risk factors for problem drinking. Essentially, NMR expectancies acted as a buffer, preventing risk factors from resulting in adolescents' choosing to drink to cope with negative mood and a stressful environment.

Despite Franko, Powers, Zuroff, and Moskowitz's (1985) observations that NMR expectancies manifest in children as young as 6 years old, there is very little research on children's NMR expectancies. A measure of children's negative mood regulation expectancies (NMR-Y) is in development. Laurent, Roome, Catanzaro, and Mearns (2014) administered the NMR-Y to students in grades 4 through 8. Participants were also given measures of positive and negative coping, depression and anxiety. The measure was unidimensional. The NMR-Y correlated negatively with negative affect and avoidant coping, and positively with positive affect and adaptive coping. The NMR-Y related to measures of other constructs in the same ways that the NMR Scale does for adult and older adolescent populations. Thus, although not yet published, the NMR-Y shows promise as a reliable and valid measure of children's NMR expectancies (Laurent et al., 2014).

The studies above demonstrate that NMR expectancies act both as a mediator between treatment and outcomes and as a protective moderator against environmental risk-factors. ADHD and ASD both feature prominent emotion regulation deficits that contribute to other problem behaviors. Current therapeutic camp interventions seek to address these deficits by teaching emotion regulations skills. Based on NMR expectancies' significant role in the success of treatment of adults, it is vital to explore their role in children's treatment to understand better the process of change brought about by therapeutic camps.

The Current Study

The purpose of the current study was threefold. First, the study was meant to investigate the efficacy of a therapeutic camp for reducing maladaptive behavior in its

participants, and to expand the literature on therapeutic camps as a treatment modality for ASD and ADHD. The second objective was to expand research on NMR expectancies' role in moderating treatment outcomes to the treatment of children. Lastly, reliability and validity data are to be gathered for the NMR-Y

The outcomes of a therapeutic summer camp were measured by parent and counselor reports, along with camp attendees' self-reported NMR expectancies. NMR expectancies were expected to moderate the relationship between treatment and outcomes of therapeutic camp. This study tested two hypotheses.

Hypothesis 1

The NMR-Y scale would show reliability; evidence for validity would also be significant negative correlations with symptoms of pathology.

Hypothesis 2

Participants in a therapeutic summer camp would show significant improvement in assessments of behavior by camp staff and parents over the course of their camp experience. The interventions provided at the camp were intended to teach emotion regulation techniques, to offer live practice for new social skills, and to reduce problem behaviors, thereby resulting in better scores on daily report cards over the course of treatment.

Hypothesis 3

NMR expectancies would moderate the relationship between treatment and outcomes for the therapeutic campers. Participants with higher NMRE would show greater improvement over the course of treatment. Just as Kirsch et al. (1990) found that

NMRE were a vital component of effective coping, high NMR should be a vital

component of gains made through therapeutic camp treatment.

CHAPTER 2

METHOD

Participants

Participants were 47 volunteers among the population of a therapeutic summer camp in Huntington Beach, California. Initially, 89 families had agreed to participate in the study. Data were collected across two summers. This represents a participation rate of 52.8%. The ages of participants at the summer camp ranged from 6 to 14 with a mean of 9.85. There were 36 boys and 11 girls. While no diagnosis is required for participation in the camp, diagnoses of participants were typically either ADHD or high functioning ASD. More broadly, the camp is billed as catering to families of children with mild to moderate behavioral, social, or emotional difficulties. Children attended camp daily for 3 to 6 weeks. The weeks were completed consecutively.

Measures

Parent Questionnaire

Parents filled out a questionnaire about their child prior to camp attendance. It included Likert-type assessments of the child's abilities in various psychosocial areas, like attentiveness and cooperation. Its Cronbach's alpha was .91, which is just slightly high for a broad measure. Corrected item-whole correlations ranged from .17 to .85 with 8 items falling outside of the ideal range of .30 to .60. The average item-whole correlation was .58. The mean item score was 4.57 with a range from 3.23 to 5.61.

Daily Report Card

Every participant's primary counselor filled out a report to be sent home with parents. Each hour, children were given a score from 1 to 5 based on their participation, individual goal achievement, and the absence of maladaptive behavior. The total possible score each day was a sum of the hourly scores for a maximum of 45 points.

Child Behavior Checklist.

The Child Behavior Checklist (CBCL) is administered to parents or guardians of a child to assess behavioral and emotional problems. The CBCL has 118 items with these responses: 0 = *not true*, 1 = *somewhat or sometimes true*, and 2 = *very true or often true*. All 8 syndrome scales, such as "Anxious/depressed" and "Thought problems," were used. In 2001, DSM-oriented scales were identified to assess affective, attention deficit/hyperactivity, anxiety, somatic, oppositional defiant, and conduct problems. The internal consistency of syndrome scale scores on the CBCL was high: alphas ranged between .78 and .97. Test-retest for scale scores was .91 across intervals of 6 to 18 days (Achenbach & Rescorla, 2001).

Social Responsiveness.

The Social Responsiveness Scale 2 (SRS-2) is a quantitative measure of interpersonal behavior, communication, and repetitive/stereotypic behavior characteristic of ASD. The SRS-2 has 38 four-point items, like "expressions on his or her face don't match what he or she is saying." Answers are on a scale from 1 (*not true*) to 4 (*almost always true*). The SRS-2 can be filled out by parents of children ages 4 to 18. The scores are summed for 5 subscales: Social Awareness, Social Cognition, Social Communication, Social Motivation, and Restricted Interests and Repetitive Behavior. The revision of the

test has two additional DSM-V compatible subscales: Social Communication and Interaction, and Restricted Interests and Repetitive Behavior.

To assess the validity of the SRS, Constantino et al. (2003) compared scores on the SRS to those on the Autism Diagnostic Interview-Revised—the current standard of autism spectrum disorder assessment—and found that correlation coefficients between the two measures were above .64. No such study has been done for the SRS-2.

Negative Mood Regulation Expectancies

The NMR-Y is based on the Negative Mood Regulation Scale created by Catanzaro and Mearns in 1990. The NMR Scale measures participants' generalized expectancies about their ability to regulate their negative mood. The NMR Scale has alpha coefficients between .86 and .92. The NMR-Y has 26 items worded appropriately for participants under the age of 18. Items include phrases like "When I am upset, I believe that… Playing a game will help me calm down" followed by a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Laurent et al. (2014) found that the NMR-Y displayed good internal consistency and correlated with validity criteria.

Procedure

Prior to camp, packets containing informed consent documents, parent questionnaire, CBCL, and SRS-2 were mailed to parents who had enrolled their children. These packets were completed and either mailed back in the provided return envelop or hand-delivered on the child's first day of camp. On the first day of camp, children of parents who had consented had the study explained to them and were offered an assent form. Those who assented were given the NMR-Y. After camp ended, a follow-up packet was sent to parents with the parent questionnaire, the CBCL, and the SRS-2.

Children were divided into groups based on age. A counselor, who participated in a two-day training on rating procedures and implementation of the therapeutic model, acted as primary counselor to the members of his or her group. Those counselors were responsible for rating all of their assigned campers each hour and reviewing those scores with the children and their parents at the end of the day. Counselors performed interventions with campers outside of their primary group. Finally, prior to camp's beginning, the camp director wrote 10 personalized behavioral goals for each child. Goals included "use words to express feelings" or "use coping skills when sad, mad, or worried."

Behavioral Interventions

Campers were scored from 1 to 5 at the end of each hour by their primary counselor. These scores represented counselors' assessments of how well each child achieved personal goals and participated in the current activity. These scores were discussed each hour within each counselor's assigned group of campers, between activities. The counselors gave feedback on how to get higher scores in the next hour.

Social Interventions

The summer camp acted as an environment for campers to practice new social skills. Throughout camp, social skills like active listening and the importance of back-and-forth in a conversation were taught by counselors and lead staff therapists through games and lessons. Many campers were given personal goals around "starting conversations with peers" and "being willing to switch topics."

Emotional and Coping Skills Interventions

Camp also addressed the emotion regulation needs of its campers. Counselors were trained to help campers give words to feelings. For instance, a counselor might approach a child on the verge of a tantrum and ask that child to rate his or her anger from 1 = *totally calm* to 5 = *about to explode*. Children received bonus points for labeling their feelings.

Beyond labeling their emotions, children were taught three major emotion regulation skills: guided imagery, progressive relaxation, and deep breathing. These skills were taught and practiced in depth once a week, but counselors encouraged campers to use these skills throughout the course of camp. Finally, children whose parents reported they were using these coping skills at home earned more points toward their home goals.

CHAPTER 3

RESULTS

Analyses were conducted using SPSS. Assumptions of normality were tested

through analysis of skewness and kurtosis of the variables analyzed. For the correlational

analyses, assumptions of linearity and homoscedasticity were tested by examining

scatterplots of each variable. Finally, for the linear regression analyses, collinearity

diagnostics were conducted in SPSS to ensure the assumption of low multicolinearity was

met.

I collected reliability and validity data for the NMR-Y. The mean score was 90.85

with a standard deviation of 16.12 and a range of 67. The mean and standard deviation

are close to those reported by Laurent et al. (2014) who found a mean of 89.15 ($SD =$

16.10) for boys and 86.02 for girls ($SD = $ 17.76). The NMR-Y demonstrated good

internal consistency, with a Cronbach's alpha of .84. This falls within the target range for

a broadband test. Corrected item-whole correlations ranged from .20 to .70, with 7 items

falling below .30 and 1 item above .60. The mean item-whole correlation was .38. The

mean item score was 3.46, with the highest individual item mean being 4.12 and the

lowest being 2.88. These scores are close to ideal, suggesting the items address different

referents of negative mood regulation expectancies with equal intensity.

To test hypotheses 1, I calculated a correlation matrix. The NMR-Y had a significant negative correlation with the *Aggressive Behavior* and *Externalizing* subscales of the CBCL: $r(43) = -.29$ and $-.31$, respectively, $p < .05$. The NMR-Y also correlated significantly negatively with parent reports of problems with cooperation, $r(29) = -.37$, $p = .04$, and frustration tolerance, $r(29) = -.44$, $p = .01$. These results support the validity of the NMR-Y as a measure of negative mood regulation expectancies in that NMR expectancies were negatively correlated with pathology.

To test hypothesis 2, I conducted 18 paired-samples *t*-tests to examine differences in parent reports of children's behavior before and after participating in the therapeutic camp. Significant *t*-tests would mean that the therapeutic camp brought about symptom improvement as observed by parents.. I analyzed the following scales: *Anxious/depressed*, *Withdrawn/depressed*, *Somatic Complaints*, *Social Problems*, *Thought Problems*, *Attention Problems*, *Rule Breaking Behavior*, *Aggressive Behavior*, *Internalizing, and Externalizing* from the CBCL and the CBCL total score; I also analyzed *Social Awareness, Social Cognition, Social Communication*, *Social Motivation*, and *Restricted Interest and Repetitive Behavior* from the SRS-2 along with the SRS-2 total score. Finally, I analyzed the Parent Questionnaire total score and the Counselor Questionnaire total score. Overall, I conducted 18 *t*-tests, 7 of which showed significant improvement between pre and post. Because of the large number of analyses relative to the sample size, there is an inflated chance of Type 1 error. Thus, these results should be interpreted cautiously.

Among CBCL subscales *Social Problems* and *Aggressive Behavior* significantly improved. The mean for *Social Problems* decreased from 67.37 (*SD* = 10.02) to 64.15

(SD = 8.55) (t(26) = 2.51, p = .02). Means on the *Aggressive Behavior* subscale

decreased from 64.63 (SD = 9.08) to 60.85 (SD = 8.99), t(26) = 2.84, p < .01. Decreases

on the broader *Internalizing* subscale approached significance (t(26) = 1.84, p = .08).

Improvements in scores on three SRS-2 problem subscales and its total score were

significant. The *Social Awareness* subscale mean improved from 66.48 (SD = 11.83) to

61.00 (SD = 12.19), t(22) = 3.14, p < .01. The mean *Social Cognition* score improved

from 64.57 (SD = 10.90) to 60.70 (SD = 12.12). *Social Communication* improved from

69.48 (SD = 12.56) to 64.39 (SD = 13.11), t(22) = 2.88, p < .01. Finally the mean overall

score on the SRS-2 decreased from 67.96 (SD = 13.54) to 63.74 (SD = 12.06). The

summed 15-item parent report total improved significantly. Mean score increased from

67.96 (SD = 11.79) to 70.62 (SD = 13.39), t(12) = 2.33, p = .04.

Multivariate Analyses

To test hypothesis 3, I conducted 18 hierarchal regression analyses to investigate

the possibility of NMR expectancies' moderating changes in parent report scores. A

significant interaction of NMR-Y scores x pre-camp scales as a predictor of post- camp

measures would suggest a moderation effect. I analyzed the following scales

Anxious/depressed, *Withdrawn/depressed*, *Somatic Complaints*, *Social Problems*,

Thought Problems, *Attention Problems*, *Rule Breaking Behavior*, *Aggressive Behavior*,

Internalizing, Externalizing from the CBCL and the CBCL total score; *Social Awareness,*

Social Cognition, Social Communication, *Social Motivation*, and *Restricted Interest and*

Repetitive Behavior from the SRS-2 and the SRS-2 total score; and the Parent

Questionnaire total score.

Out of the 18 analyses, 2 subscales showed significant interactions. Again, because of the large number of analyses relative to the small sample size, there was an inflated risk of Type 1 error. Thus, these results should be interpreted with caution. First the *Anxious/Depressed* subscale of the CBCL showed a significant interaction with NMR-Y: $R^2 = .64$, $F(3, 23) = 16.58$, $p < .0001$; $\Delta R^2 = .10$ $F(1, 23) = 7.30$, $p = .01$. The second significant interaction was for the *Rule-breaking Behavior* subscale of the CBCL: $R^2 = .45$, $F(3, 23) = 6.21$, $p < .01$; $\Delta R^2 = .16$, $F(1, 23) = 6.46$, $p < .01$. These results are presented in Table 1. Each line represents the individual contribution of each component of the predictive model. The interactions of NMR expectancies with *anxious/depressed* and *rule-breaking behavior* subscales significantly improved the models' prediction. This suggests that participants with differing levels of negative mood regulation expectancies responded differently to treatment.

Table 1

Linear Regression Models Predicting Post-Camp Anxious/Depressed and Rule-breaking Behavior Subscales

	β	ΔR^2
Anxious/Depressed subscale		
Pre-camp	-1.41	.04
NMR Expectancies	.17	.03
NMRE x Pre-test	2.22	.10**
Rule-breaking Behavior		
Pre-camp	2.84	.20**
NMR Expectancies	-.52	.22**
NMRE x Pre-test	-2.54	.16*

Note. NMR = Negative Mood Regulation.
*$p < .05$. **$p \leq .01$.

Figure 1, graphs the interaction of NMRE x pre-camp anxiety/depression as a predictor of post-camp anxiety/depression. The graph shows that campers' level of anxiety remained relatively stable. Those with high anxiety/depression before camp had higher levels of anxiety/depression after camp. Interestingly, among individuals with low initial *anxious/depressed* scores, those with high NMRE went on to have higher post-camp anxiety and depression. Outcomes of those with high initial depression do not appear to differ at all based on NMR expectancies. High and low scores represent median splits.
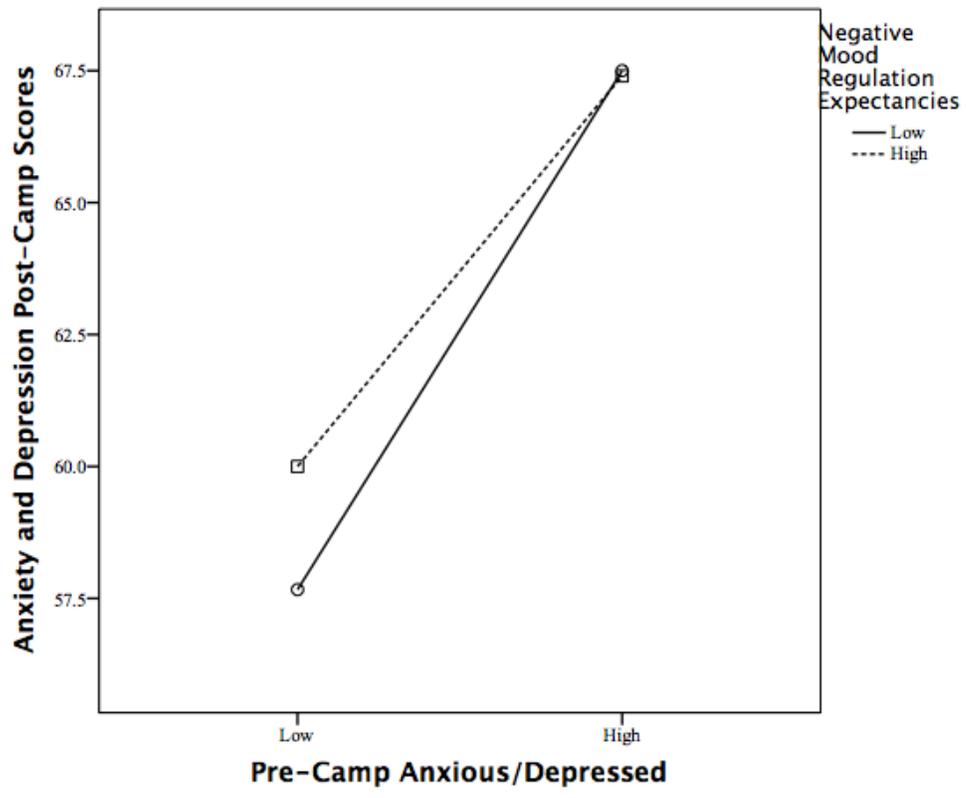
Figure 1: Changes in Anxiety/Depression for Participants with High and Low NMRE.

Figure 2 depicts the interaction of NMRE x pre-camp rule-breaking behavior as a predictor of post-camp rule-breaking. Individuals with low pre-camp rule-breaking behavior had similar post-camp scores, in the middle of the range. However outcomes for those with high initial rule-breaking behavior differed based on level of NMRE. Those with high NMRE had lower rule-breaking behavior, while those with low NMRE reported more. High and low scores represent median splits.
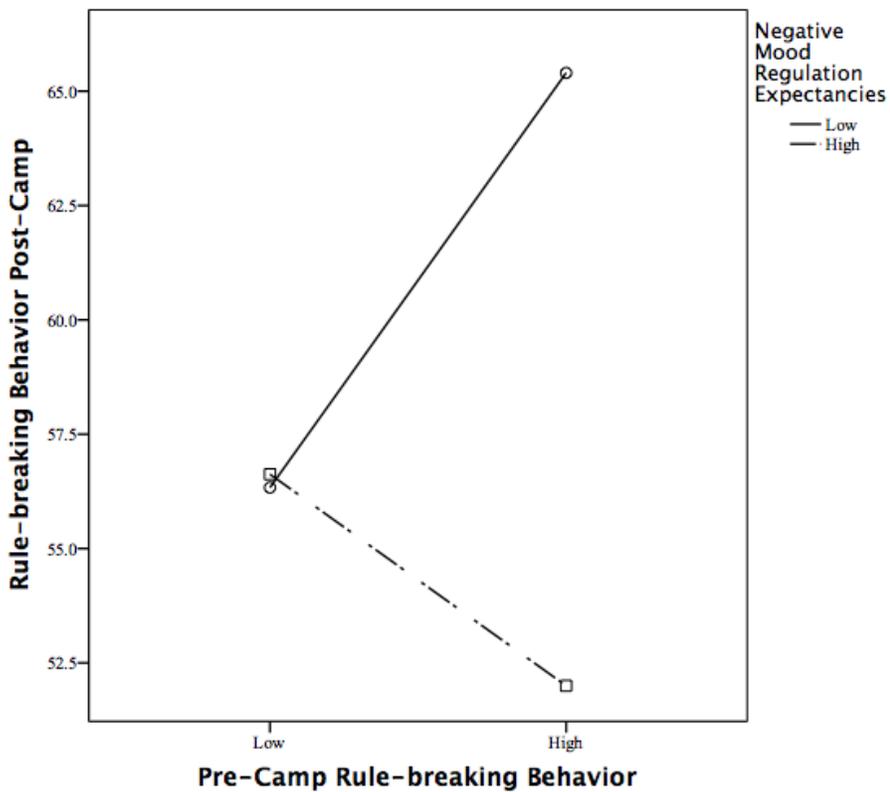
Figure 2: Changes in Rule-breaking Behavior for Participants with High and Low NMRE.

Multilevel Modeling Analysis

A multilevel modeling analysis of campers' daily report card scores was conducted. Level 1 of the model correlated time with report card scores for each individual. Level 2 of the model correlated NMR expectancies and the interaction of time x NMR expectancies The following model was used:

Level 1: $\qquad Y_{ij} = \beta_{0j} + \beta_{1j}(Day) + r_{ij}$

Level 2: $\qquad \beta_{0j} = \gamma_{00} + \gamma_{01}(NMRE) + u_{0j}$

$\qquad\qquad \beta_{1j} = \gamma_{10} + \gamma_{11}(NMRE) + u_{1j}$

For the multilevel modeling analysis, HLM statistical software was used. Multilevel modeling was used because it is more easily able to analyze data with such varying time points or missing data, compared to a repeated measures MANOVA, for instance (Luke, 2004). No element of the model significantly predicted changes in report card scores.

CHAPTER 4

DISCUSSION

Though some analyses were statistically significant, the limited sample size prevents definitive conclusions from being drawn. Instead these results can serve is a pilot study to provide avenues for more in depth investigations into more specific sets of variables.

Symptom Improvement

The decrease in CBCL aggression corroborates past findings related to aggression in children with ADHD. Barkley's (1997) universal theory of ADHD ties both aggression and emotion regulation to deficits in behavior inhibition. Elements of Quest Camp, like goals related to impulse control, token-based reinforcement and teaching of critical thinking strategies, are designed to address deficits in behavioral inhibition. It is possible that these interventions are responsible for improved impulse control, resulting in decreased aggression.

Another explanation for the changes in aggression could be related to Quest's emotion regulation interventions, like coping skills training and emotional labeling. Hinshaw and Melnick (1995) observed greater negative emotional expression in children with ADHD and comorbid aggression. Improved emotion regulation skills could obviate maladaptive coping strategies like aggression. In the camp setting, opportunities to use

more appropriate coping skills like deep breathing or progressive relaxation are plentiful, and campers who use such skills are reinforced.

The *social problems* subscale of the CBCL and the *social awareness, social cognition* and *social communications* subscales of the SRS-2, as well the SRS-2 total score, improved significantly. These improvements suggest that Quest Camp may shrink the social deficits that are observed in children with ADHD and are endemic to children with autism (American Psychiatric Association, 2013; Greene et al., 2001).

The specific subscales that showed significant improvement coincide with the emphases of Quest Camp's social interventions. The *social awareness* subscale measures a child's ability to observe social cues, the *social cognition* subscale is a representation of a child's ability to interpret social cues, and the *social communication* subscale measures a child's ability to communicate socially. All of these concepts are routinely targeted by Quest Camp interventions through work with peers, modeling and reinforcement by counselors, and the cultivation of an environment that is conducive to practicing new social skills.

The 15-item parent measure also improved significantly. This measure represented an aggregate of behavioral concerns parents might have about their child. Though limited, this change suggests that, overall, parents observed an improvement in children's behavior. This speaks to the generalization of the camp's treatments to the home setting. These findings support the hypothesis that camp would improve campers' behavior as measured by parent reports.

My findings replicate some aspects of similar studies. The significant improvements observed in some of the measures are in line with the findings of studies

investigating Pelham and Gnagy's (1999) STP and Greenberg's (2009) examination of the Bay Area Quest Camp. More specifically they replicate Walker et al.'s (2010) finding that a summer camp for children with autism can lessen social deficits. The present study's improvements in social functioning and reduction of aggressive behavior demonstrated that the therapeutic camp treatment modality can bring about significant change over the course of a few weeks.

<div align="center">**Negative Mood Regulation Expectancies**</div>

This study expanded the data on negative mood regulation expectancies by investigating reliability and validity for the NMR-Y. In addition, this study examined the role of negative mood regulation expectancies as a moderator of treatment outcomes for children.

The NMR-Y showed strong internal consistency and individual items displayed statistics in the desired range. In terms of validity, several significant correlations between the NMR-Y and other scales provide evidence of the measure's validity as an assessment of negative mood regulation expectancies of children. NMR-Y scores correlated negatively with *aggressive behavior* and *externalizing* subscales of the CBCL, and the *cooperation* and *frustration tolerance* items on the parent questionnaire. The findings related to aggressive behavior, externalizing problems, and frustration tolerance all fit with previous findings related to NMR expectancies. Previously, Kassel et al. (2007) found that high NMR expectancies correlated with lower anxiety and depression. Mearns and Mauch (1998) found that police officers with higher NMR expectancies reported lower anger and distress. In children, greater anxiety, depression, and distress may lead to acting-out behaviors, such aggression and externalizing behaviors.

One of the significant interactions with the NMR-Y scale supports its validity. NMR expectancies related to increased magnitude of changes in *anxious/depressed* and *rule-breaking behavior* between time points. This finding suggests that changes on these scores were moderated by participants' negative mood regulation expectancies. Surprisingly, Figure 1 showed that, among children with low initial anxiety/depression, those with high NMR expectancies actually had higher post-camp anxiety/depression. This does not fit with results of similar studies, like Mearns's (1991) investigation of depression following the end of a romantic relationship.

The graph of the interaction for *rule-breaking behavior* showed that NMR expectancies had no effect among those with low pre-camp rule-breaking. However, for participants with high pre-camp rule-breaking, those with high NMR expectancies ,had the lowest post-camp rule-breaking, while those with low NMR expectancies had the worst. A possible explanation for this finding is that individuals with high NMR expectancies may be more willing to attempt coping skills and alternatives to negative behavior, because they believe that such behaviors will work. One of the goals of camp was to reduce rule-breaking behavior. For campers with worse rule-breaking, those with high NMRE appeared able to use the strategies the camp provided. Whereas, the campers with low NMRE showed high levels of rule-breaking following camp. This finding would suggest that such expectancies played a pivotal role in outcomes for this particular type of behavior.

Finally, these findings suggest that NMR expectancies may be a vital component of success in therapy. As Kirsch et al. (1990) opined in the conclusion of their study, the expectation that the coping skills taught in therapy will actually work is vital to

improvement. If NMR expectancies do moderate changes in depressive symptoms and rule-breaking behavior, then taking steps to increase confidence in campers that the skills they are learning can work is of comparable importance to the teaching of the skills itself.

Limitations

This study had several limitations. The first was that the sample size was not adequate to support the number of analyses performed. This was due to a 47.2% attrition rate between time points. This attrition limits the ability to draw solid conclusions from the data. Therefore, the present study can be considered to be a pilot study for future investigations. This limitation can also be mitigated by limiting the number of planned analyses in future studies to better fit the participant pool. Alternatively, one could take more steps to limit attrition, such as having an established process for following up with participants who have not returned their packets prior to a deadline.

The multilevel modeling analysis returned non-significant results. Several types of data could have been added to the analysis that were not collected. For instance, each primary counselor or age group could have represented another level. More robust data could lead to more usable statistical results.

This study lacked important demographic data like the ethnicity and socioeconomic data for both participants and counselors. Such information could provide useful information about confounds or other factors that influence camp outcomes.

Another limitation of this study was the sampling method. A convenience sample was used based on the clientele of the camp. In addition consent and assent were self selected. The cost of the camp, its location, and potentially inconvenient hours all represent constraints on who attended camp. While Quest Camp offers a few scholarships

every year, third party funding sources like insurance and regional centers rarely provide financial aid to potential campers from families of lower socioeconomic status. The camp's hours of operation are also a potential barrier to attendance. The camp day ends at 3:30, a challenging time for working parents to be expected to retrieve their children.

The absence of a control group further limits the usefulness of this study's findings. Ideally a control group would consist of a second camp with comparable levels of adult supervision without the behavioral, social, and emotional interventions of Quest Camp. A control group is vital to making conclusive judgments about the efficacy of any therapeutic program. In the case of a budding treatment modality like therapeutic camps, solid methodological practices in early studies seem vital to building a strong body of foundational research.

Finally, this study lacked longer-term longitudinal data. More information about the trajectory of campers after their time at camp ends would be invaluable. As it stands, it is often unknown how campers fair when they return to school after camp ends. It would be valuable to know if camp skills generalize to the school setting.

Future Studies

Future studies assessing the efficacy of camp have a more robust experimental design. An ideal study design would feature a control group who attended a camp with comparable levels of supervision, but none of the therapeutic interventions. This would allow the future researcher to control for the influence of variables like counselor attention, time outdoors, exercise, new peer interactions, and time away from their parents.

An individual component analysis of the various parts of the camp program would also be a vital next step for future studies of therapeutic camps. The treatment withdrawal design used by Chronis et al. (2004) to examine the impact of behavioral interventions on the overall success of the STP provided insight into just how important those interventions were to the success of the program overall. Investigations into the impact of components like parent meetings, home goals, and direct skills teaching would allow for a refinement of the elements of camp that are most effective. ABA's wide acceptance as a treatment for autism without successful replication of the gains found in the original Lovaas (1987) study was highlighted by Rogers and Vismara (2008) as a problematic practice. A full analysis of what works and doesn't work in therapeutic camps is vital to establishing their effectiveness.

In the realm of negative mood regulation expectancies, gathering reliability and validity data for the NMR-Y must be an ongoing process. Replicating the present findings, and administering the NMR-Y to different clinical populations, are pressing priorities for further research. The findings in this study suggest that NMR expectancies play a similar role in therapy outcomes for children as they do with adults; these findings must be replicated. Finally, future studies should examine NMR expectancies in children as a mediator of treatment outcomes. Using the methods of studies like Backenstrass et al. (2006) and Cloitre et al. (2004) that found NMR expectancies to be mediators of treatment outcomes, but with child and adolescent populations, would add a new and important facet to NMR expectancy research.

APPENDIX

PARENT AND COUNSELOR MEASURE

✳1. Research Study Participation Number

2. Please indicate your child's current level in the following areas.

	Struggles Greatly			Struggles Somewhat			Not a Problem Area or Concern
Attentiveness	☐	☐	☐	☐	☐	☐	☐
Concentration	☐	☐	☐	☐	☐	☐	☐
Conversational skills	☐	☐	☐	☐	☐	☐	☐
Cooperation	☐	☐	☐	☐	☐	☐	☐
Family relationships	☐	☐	☐	☐	☐	☐	☐
Fearfulness	☐	☐	☐	☐	☐	☐	☐
Flexibility	☐	☐	☐	☐	☐	☐	☐
Following Directions	☐	☐	☐	☐	☐	☐	☐
Frustration Tolerance	☐	☐	☐	☐	☐	☐	☐
General Anxiety	☐	☐	☐	☐	☐	☐	☐
Hyperactivity	☐	☐	☐	☐	☐	☐	☐
Impulsivity	☐	☐	☐	☐	☐	☐	☐
Organizational skills	☐	☐	☐	☐	☐	☐	☐
Peer relationships	☐	☐	☐	☐	☐	☐	☐
Self-esteem	☐	☐	☐	☐	☐	☐	☐
Tantrums	☐	☐	☐	☐	☐	☐	☐

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