Examining the Efficacy of the

Ninja Mind Training Program (NMT):

A Mindfulness-Based Intervention for Bullied Teens

by

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ABSTRACT

School bullying is a serious problem for children and adolescents, associated with a multitude of psychological and behavioral problems. Interventions at the individual level have primarily been social skills training for victims of bullying. However, investigators have had mixed results; finding little change in victimization rates. It has been suggested victims of school bullying have the social skills necessary to be effective in a bullying situation; however they experience intense emotional arousal and negative thoughts leading to an inability to use social skills. One intervention that has been getting increasing acknowledgement for its utility in the intervention literature in psychology is mindfulness. However, there has been no research conducted examining the effects of mindfulness meditation on victims of bullying. Therefore, the purpose of this study was to develop an online intervention for victims of bullying that utilizes the cutting-edge technique of mindfulness and to determine the efficacy of this intervention in the context of bullying victimization. Participants were 32 adolescents ages 11 to 14 identified by their school facilitators as victims of bullying. Repeated measures ANOVAs were used to assess the efficacy of the NMT program versus a treatment as usual (TAU) social skills program. Results revealed significant decreases in victimization and increases in mindfulness among both treatment groups from pre-test to follow-up and post-test to follow-up assessments. There were no differences found between the two treatment groups for mean victimization or mindfulness scores. Overall, the NMT program appears to be a promising online intervention for bullied teens. Directions for future research and limitations of this study were also discussed.

DEDICATION

To my amazing lifelong partner “Loca” (soon to be Stephanie Yabko) for being by my side throughout this entire process and always believing in me, and to my parents for their love, support, and wisdom.

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May you all be safe.
May you all be happy.
May you all be healthy.
May you all live with ease.

With Metta,
Brandon

TABLE OF CONTENTS

Page

LIST OF TABLES vii

CHAPTER

1 INTRODUCTION 1

2 LITERATURE REVIEW 4

Defining the Problem 4

Interventions at the Individual Level 7

Victimization Cycle: Theoretical Foundation for NMT 15

Mindfulness in the Context of Mental Health 17

Definitions and Theories of Mindfulness 17

Empirical Support for Mindfulness 21

Role of Mindfulness in Psychology and Psychotherapy 22

Mindfulness and Adolescence 25

Mindfulness in the Context of Bullying Victimization 30

Current State of the Literature on Measurement: Mindfulness and Victimization 35

Mindfulness 35

Victimization and Perpetration of Bullying 42

Purpose of the Current Study 45

3 METHOD 48

Participants 48

Measures 49

CHAPTER Page

Demographic Information 49
Victimization Instrument 49
Bullying Scale 50
Mindfulness Measure 51
Treatment Groups 53
NMT Program 53
Processing 54
Intervention 57
Control Group 58
Procedures 59
Selection of Participants 59
Implementation of Program 61
Experimental Design 62
Analysis 62
4 RESULTS 65
Examining Pre-test Group Differences 65
Bivariate Correlations among Pre-test, Post-test, and Follow-up Scores 65
Efficacy of NMT Versus TAU Group 66
Victimization 66
Mindfulness 68
Summary of Results 69
5 DISCUSSION 70

CHAPTER Page

Victimization 71

Advantage of Online Intervention 72

Mindfulness 73

Limitations 74

Sample Issues 74

Facilitator Bias 76

Modes of Administration 76

Inconsistent Schedule of Treatment Delivery 77

Future Directions 78

Increasing Sample Size 78

Curriculum Suggestions 79

Conclusion 81

REFERENCES 82

APPENDIX

A MEASURES 92

B PARENTAL CONSENT: WRITTEN 97

C PARENTAL CONSENT: VERBAL 101

D PARTICIPANT INFORMED ASSENT 105

E IRB APPROVAL 107

LIST OF TABLES

Table Page

1. Administration of Measures During Pre-test, Post-test, and Follow-up 61
2. Means and Standard Deviations for Pre-test Victimization, Bullying, and Mindfulness for Total Sample and by Treatment 65
3. Correlations of Victimization, Bullying, and Mindfulness, at Pre-test, Post-test, and Follow-up for both Treatment Groups Combined 66
4. Means and Standard Deviations for Pre-test, Post-test, and Follow-up Victimization..... 67
5. Means and Standard Deviations for Pre-test, Post-test, and Follow-up Mindfulness..... 68

Chapter 1

INTRODUCTION

School bullying is a serious problem for children and adolescents that is associated with a multitude of psychological and behavioral problems (Olweus, 1993). Many intervention and prevention efforts have been attempted to address bullying at the school or community level, but have had mixed results (e.g., Andreou, Didaskalou & Vlachou, 2007). Because of the growing concern regarding bullying, a few investigators have designed interventions at the individual level (e.g., DeRosier, 2004; DeRosier & Marcus, 2005). These interventions have primarily been social skills training for victims of bullying. However, these investigators have had mixed results as well; finding little change in victimization rates (e.g., DeRosier, 2004; DeRosier & Marcus, 2005). They postulated that victims of school bullying may indeed have the social skills necessary to be effective in a bullying situation; however, these victims experience intense emotional arousal and negative thoughts. They further reason that this emotional dysregulation and negative thinking make it very difficult for victims of bullying to successfully navigate a bullying attack (e.g., DeRosier, 2004; DeRosier & Marcus, 2005).

Investigations into the emotional difficulties associated with bullying have revealed that victims do exhibit emotion regulation difficulties (e.g., Wilton, Craig, & Peplar, 2000). In fact, the two main coping styles victims engage in are passive (e.g., ignores, acquiescence, avoidance) and provocative (physical/verbal aggression, emotional outbursts; e.g., Olweus, 1993; Wilton et al., 2000) styles, which have been theorized to increase or perpetuate bullying. In addition to the passive or provocative behavior of the victims, their high emotional arousal, negative thinking, and exaggerated displays of

sadness and surprise may be reinforcing the bully's goal of social dominance (Wilton et al., 2000). Wilton and colleagues (2000) noted that victims may often experience surprise when faced with a bullying situation because they fail to process the aggressive act and, therefore, do not identify contextual cues associated with bullying. Therefore, it seems necessary that an intervention aimed at the individual level needs to address emotional dysregulation and unproductive thoughts that may be interfering with successful and/or appropriate use of social skills as well as helping victims identify contextual cues associated with bullying.

One intervention that has been getting increasing acknowledgement for its utility in the intervention literature in psychology is mindfulness meditation (e.g., Hayes & Smith, 2005; Linehan, 1993; Segal, Williams, & Teasdale, 2002). Mindfulness has been found to be associated with improvements in many important physical and mental health difficulties (e.g., Carmody, Baer, Lykins, & Olendzki, 2009; Coffey & Hartman, 2008). Specifically, mindfulness has been shown to decrease anxiety (e.g., Evans, Ferrando, Findler, Stowell, & Haglin, 2007) and depression (e.g., Deyo, Wilson, Ong & Koopman, 2005), two disorders with emotion dysregulation difficulties that have also been associated with school bullying victimization (e.g., Olweus, 1993). However, little research has been done to show the direct relationship between mindfulness and emotion regulation. Therefore, I developed an intervention that utilizes this cutting edge technique.

NMT is an intervention based on Mindfulness Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002) and Mindfulness Based Stress Reduction for Teens (MBSR-T; Biegel et al., 2009) with an added component specifically for victims of

bullying. Therefore, the main component for change was mindfulness. Thus, another aim of this study was to examine whether there was a greater increase in mindfulness scores in the NMT than the Treatment As Usual (TAU) group.

What follows is a brief review of school bulling victimization and interventions. A model of bullying that makes salient the key areas of intervention with this population will be illustrated. Then a review of mindfulness including the definition and empirical research that supports the efficacy of this intervention will be provided. Following an overview of mindfulness, a particular type of mindfulness-based intervention called Mindfulness Based Cognitive Therapy (MBCT; Segal et al., 2000) will be discussed in the context of outcome studies associated with this intervention. I will then review the literature on the topic of mindfulness interventions with children and adolescents. This will then lead to an overview of the current state of the literature on measurement in my constructs of interest (i.e., bullying/victimization, mindfulness). This should provide the reader with a background on the literature on bullying and an understanding of how mindfulness-based therapies can help victims of bullying. Finally, a conclusion of specific research questions that were addressed in this study is provided.

Chapter 2

LITERATURE REVIEW

Defining the Problem

Bullying is an intentional negative behavior repeated over time and is characterized by an "extreme imbalance of perceived or actual power," (Olweus, 1993, p. 54; Solberg, Olweus & Enderson, 2007). A person is considered bullied when he or she is verbally (e.g., teased, called names, belittled, ridiculed, dominated, subdued), physically (e.g., get picked on, pushed around, shoved, punched, hit, kicked) (Olweus, 1993, p. 54) and/or relationally (e.g., social exclusion, jealousy) (e.g., Crick & Grotpeter, 1995) abused by a peer, repeatedly over time. Unfortunately, over 68% of children age 12 to 15 years old rated teasing and bullying "a big problem" at their school (Juvonen, Graham, & Schuster, 2003). This well documented universal phenomenon has been associated with many negative outcomes, such as, behavior problems (e.g., defiance, destroying property, fighting) (Espelage, Bosworth, & Simon, 2000) and psychological difficulties (e.g., anxiety, depression, feelings of insecurity, low self-esteem, helplessness, shyness) (Olweus, 1993, p. 55). Interestingly, bullying has also been found to be "associated with children's risk for concurrent and later adjustment difficulties" (Ladd, 2005, p. 262), such as, sibling bullying (e.g., Duncan, 1999) and dating violence (e.g., Connolly, Pepler, Craig, & Taradsh, 2000).

Given the negative impacts of bullying (e.g., Ladd, 2005; Olweus, 1993) it is not surprising that recent attention has been placed on designing and implementing prevention (e.g., Olweus, 2005) and intervention (e.g., Baldry & Farrington, 2004; Boulton & Flemington, 1996; Frey, Hirschstein, Snell, Edstrom, MacKenzie &

Broderick, 2005) programs for children who bully and their victims. Because bullying occurs in the school setting (e.g., Juvonen et al., 2003), a large majority of the literature has focused on designing interventions to address intervening at the school level. Moreover, bullying intervention programs (e.g., Menesini, Codecasa, Benelli, & Cowie, 2003) have had positive results in decreasing problematic behaviors at the school level, while some have showed mixed results (e.g., Andreou, et al., 2007). Moreover, many studies have focused on a school-based anti-bullying approach by enacting a variety of policies, such as, anti-bullying focused school policies (e.g., zero-tolerance for bullying, staff training) (Twemlow, Fonagy, Sacco, Gies, Evans & Ewbank, 2001), providing support to victims of bullying (i.e., peer, teacher) (e.g., Menesini et al., 2003; Stevens, Bourdeaudhuij & Van Oost, 2000), classroom curriculum designed to meet needs of children (e.g., social skill training for victims, problem-solving strategies, didactic instruction with active practice) (e.g., DeRosier, 2004; Frey et al., 2005; Stevens et al., 2000), and increasing bystander intervention in bullying acts (e.g., Kendall et al., 1991). Similarly, a majority of the literature has focused on cognitive behavioral and social cognitive orientations by increasing awareness and knowledge of bullying, developing class rules, teaching social skills and problem-solving strategies (Andreou et al., 2007; DeRosier & Marcus, 2005; Frey et al., 2008; Stevens et al., 2000).

Interventions targeted at the individual level have had mixed results in decreasing the incidence of bullying (Andreou et al., 2007; Baldry & Farrington, 2004). For example, Nickel et al. (2005) successfully reduced bullying behavior in 16 out of 22 participants through family therapy intervention as compared to the control group (no-treatment), which decreased bullying in 2 out of 22 participants. Similarly, DeRosier

(2004) evaluated the efficacy of a social skills group intervention for children who experience peer dislike, bullying, or social anxiety. These authors found a decrease in aggressive children's aggression and bullying behavior compared to a no-treatment control group. While other interventions were successful at increasing awareness and decreasing acceptance of bullying behaviors, they reported no change between the experimental and no-treatment control groups (e.g., Boulton & Flemington; Frey et al., 2005). Another factor contributing to mixed results was the fact that some studies found no change in the experimental group, but found increases in bullying behavior in the control group (Kimber, Sandell & Bremberg, 2008; Menesini et al., 2003).

Effectiveness of bullying interventions have been further complicated by studying different age groups and achieving disparities in regard to efficacy of the interventions with differences in age (i.e., young child, adolescent) (e.g., Andreou et al., 2007; Baldry & Farrington, 2004). For example, Andreou et al. (2007) who implemented a school-based curricular program to create awareness and help with problem-solving skills found that in a sample of 4^{th} to 6^{th} graders, the intervention was more effective among younger children. The authors reasoned that bullying intervention might simply be more effective with younger children. Contrastingly, Baldry and Farrington (2004) conducted a bullying and violence intervention aimed at developing social-cognitive skills and understanding negative impacts of aggressive behavior by showing three videos to 10 to 16 year-old adolescents. The authors found the intervention to work best among older students, but not younger, which in some cases had an increase in violence. The authors attributed this difference to the cognitive skills the intervention required and the idea that the younger

children may be more sensitive to bullying and may have had artificially deflated pre-test scores do to the fact they were unaware of bullying behaviors.

Although addressing problems associated with bullying at the school-level has achieved some success, few studies have implemented interventions specifically targeting and intervening on the mental health and behavior of victims of bullying.

Interventions at the Individual Level

While the literature on interventions at the individual level for victims of bullying appears sparse, there have been a few promising studies (e.g., DeRosier, 2004). These interventions have primarily focused on social skills training interventions (e.g., DeRosier & Marcus, 2005; Fox & Boulton, 2003a; Kimber et al., 2008) and appear to have mixed support for using these interventions. While some interventions appear promising and have decreased victimization to some degree (e.g., DeRosier, 2004), others have seemingly stopped children from deteriorating and getting more victimized (e.g., Kimber et al., 2008). Moreover, the interventions that have evidenced the most positive gains (e.g., DeRosier & Marcus, 2005, Fox & Boulton, 2003a, Fox & Boulton 2003b) have included a cognitive-emotional component in addition to social skills training. Additionally, these interventions have typically used cognitive behavioral techniques (e.g., modeling, role-playing, didactic component). Therefore, it appears the literature on interventions for victims of bullying primarily focuses in two areas, social skills training and cognitive/emotional skills acquisition.

In a study examining the efficacy of the Social Emotional Training (SET) among Swedish children (ages 7 to 16), Kimber et al. (2005) found mixed results on improvements of social functioning. The SET program was designed to address: 1) self-

awareness (e.g., values clarification), 2) managing one's emotions (e.g., handling strong emotions, stress management), 3) empathy (e.g., appreciating diversity, interpretation of pictures), 4) motivation (e.g., goal setting and action planning) and social competence (peer pressure, cooperation). The program was led by school teachers and was administered over the course of an entire school year.

The experimental group contained 41 classrooms, while the control group contained 14 classrooms. These authors found that the SET program was only successful in positive outcomes for children in grades 4 to 9, but not grades 1 to 3. Moreover, they found that while experimental group scores on their bullying victimization measure decreased slightly, the scores on this same measure for those in the control group increased at a larger rate. Therefore, this intervention was somewhat helpful in decreasing bullying victimization rates and stopped these children from deteriorating farther from fall to spring semesters (Kimber et al., 2008). Therefore, social skills training might not have a direct affect on bullying, per se, but actually stop children from getting bullied more than they are at present.

The findings of this study (Kimber et al., 2008) should be seen in light of several controversial factors. To begin, the SET program was not developed to directly address bullying and/or decrease victimization of bullying, as evidenced by the author's aims (noted above). As such, they did not include any exercises that addressed bullying. In addition, this social skills program taught a variety of skills, including relaxation training, however, they did not teach students how to choose which skills to use at an appropriate time, nor did they help children broaden their awareness surrounding the responsibility to choose one of these skills. Moreover, there did not seem to be a lesson that bridged the

material from lesson to action on specific behavioral outcomes/goals. Specifically, although they included a relaxation and stress management portion, they did not seem to show children how to use these skills to reduce emotional dysregulation in the face of a problematic situation. This program was taught by teachers, which could have many implications for null findings (i.e., skill level at implementing intervention, lack of novelty in mode and methods of instruction). Lastly, the school atmosphere is a place where victims are likely to be withdrawn and insecure (e.g., Olweus, 1993), which may have impacted the learning of the material for these children (Kimber et al., 2008).

In their investigation, Fox and Boulton (2003a, 2003b) used a Social Skills Training (SST) program developed by Spence (1995) to try to improve social skills and reduce individual risk for victimization of bullying. These researchers conducted an 8-week group intervention on 28 children (ages 9 to 11) peer-identified chronic victims with poor social skills, and utilized a wait-list control methodology. The intervention had 2 trainers, mixed gender participants and was 1-hour long. The goals of the program were a) how to use social skills (e.g., social problems solving game), b) how to use relaxation skills (e.g. progressive muscle relaxation; imagery), c) how to think positively (e.g., positive self-statements, d) how to modify non-verbal behavior (e.g., body language), and e) how to use verbal strategies in social situations (e.g., assertiveness). In order to teach these skills, trainers utilized techniques such as, modeling, role-playing, feedback, reinforcement and techniques to enhance generalization (e.g., worksheets, games). In addition, this intervention included three cognitive behavioral activities to help participants see how thoughts affect feelings and also how thoughts and feelings may prevent them from acting in a socially appropriate/skilled way with their interactions.

These investigators failed to find improvements on victimization, social skills problems, peer acceptance, anxiety, depression, and social acceptance. In fact, the only outcome that was statistically significant was global self-worth. The authors suggested that victims may not be broadly socially deficient. Moreover, they asserted that it might be that victims of bullying have the social skills to ward off attackers but cannot utilize them because they are too emotionally aroused, which interferes with their ability to respond (Fox & Boulton, 2003a). Furthermore, in another paper by these authors, Fox and Boulton (2003b) explained that interventions should be designed to focus on thoughts and emotions that interfere with their ability to utilize social skills, instead of a blanket approach of providing social skills training.

The SST training program (Fox & Boulton, 2003a) appeared to address social skills in a slightly different way than the SET program (Kimber et al., 2008). The SST program was conducted in a group format and was led by two trainers (origin not specified) who were non-teachers. Both interventions used similar cognitive-behavioral strategies (e.g., psychoeducation regarding emotions, psychoeducation regarding social skills, relaxation training). The SST program added psychoeducation on how thoughts and emotions are related, as well as, psychoeducation on bullying. Moreover, the SST program was aimed solely at helping victims of bullying, rather than the universal aim of the SET program.

Fox and Boulton (2003a) added to traditional social skills programs by focusing on thoughts and cognitions, as well as, bullying. However, their lack of significant findings might have several reasons. First, caution must be taken when interpreting these findings because of their low sample size (i.e., 15 participants in experimental group; 13

children in control group), which may have led to insignificant findings. These authors primarily focused their eight sessions on social skills training and addressed bullying psychoeducation and exercises in only two sessions. Therefore, there might have been a lack of guidance in connecting the social skills material with victimization of bullying. Lastly, the aim of the study was to increase social skills, rather than to create a program that helped children with emotion regulation and utilization of these social skills in intense, emotionally charged situations. Therefore, it seems likely that the use of relaxation techniques acted as a supplement to the social skills, rather than one of the main resources for children to use, which may have resulted in the children not being able to implement these techniques in dangerous situations.

Other investigators (i.e., DeRosier, 2004; DeRosier & Marcus, 2005) have combined social skills training with cognitive behavioral interventions, placing more emphasis on both behavior and cognitions. DeRosier (2004) and DeRosier and Marcus (2005) utilized the School-Based Group Social Skills Program called S.S.GRIN from a previous study by the first author (DeRosier, 2002). This program was intended to a) build basic behavior and cognitive social skills, b) reinforce prosocial behavior and attitudes, c) promote adaptive strategies for social problems, teasing and peer pressure. Furthermore, the intervention was in a group format and covered topics, such as, social responsibility training, coaching, anger coping, and prosocial skills in conjunction with identification and remediation of negative perceptions and behaviors. The intervention consisted of a) skill acquisition for emotional and behavioral control, impulse control and fact checking, b) skills for positive coping with teasing and peer pressure, and c) assertiveness training. Each session combined didactic instruction with experiential

learning (e.g., role-playing, modeling, hands on activities). There were three experimental groups consisting of six children, in each of the 11 schools, and the groups met for 50 to 60 minutes for 8 weeks. Additionally, the group leaders were a school counselor and an intern who was trained by DeRosier.

DeRosier (2004) examined 1079 3rd graders and selected those who were rejected or victimized by their peers, or those who were socially anxious. The treatment group consisted of 187 3rd graders and the control group contained 194 of these children. Positive treatment effects were found in the domains of peer acceptance and social behavior, as well as, self-reported self-esteem, social self-efficacy and social anxiety. In addition, children who did not receive treatment reported feeling worse about themselves, more pessimistic about their ability to interact positively with peers and more socially anxious. However, there were no significant findings for change in victimization of bullying. In the one-year follow-up study DeRosier and Marcus (2005) found that children who were victimized and aggressive had the largest gains, in that they were less aggressive and victimized less often. According to their peers, the children in the treatment group were significantly less disliked and fought less with their peers. Males did not evidence a change in victimization, however, girls showed more positive adjustments in areas of peer liking, aggression, victimization, self-efficacy and social withdrawal. Therefore, the children who evidenced the most change in victimization were those who were also aggressive, as well as, female victims.

Given the findings of DeRosier and Marcus (2005), it may be that the S.S.GRIN program was impactful on aggressive behavior and relational aggression. This is consistent with the literature on aggressive victims that supports that idea that aggression

likely increases victimization (e.g., Schwartz, 2000). Moreover, the findings that girls improved on victimization may be due to the fact that girls are more likely to report relational difficulties with their peers (e.g., Crick, Casas, & Mosher, 1997). The findings that the S.S.GRIN program did not lead to improvements in victimization among boys may be due to several factors. First, the authors seemed to have a shot-gun approach to social skills training, as they targeted a multitude of problematic behaviors rather than creating a program with more specificity on specific target behaviors that are likely to decrease bullying. Secondly, the S.S.GRIN program was taught to children who were not only victims, but also had poor social skills, which may have resulted in a sample that had such poorly constructed social skills, that training in a group format was not sufficient, and/or these children could not obtain the level of social acuity needed to decrease bullying. Finally, children were not taught about how to make choices between certain social skills, nor were they taught skills in increasing their awareness of choice.

Although these results appear promising, the mixed results have led researchers to highlight a possible limitation with social skills trainings program for victims of bullying. As Fox and Boulton (2003b) point out, these children may indeed have the social skills, but are in need of interventions aimed at decreasing emotional arousal and cognitions that attribute to such an arousal. As Perry, Hodges, and Egan (2001) asserted that victims of bullying may likely have self-defeating thoughts and debilitating emotional arousal that leads to submission or disorganized, ineffectual responding. Therefore, it seems interventions, which have primarily been concerned with social skills, may be missing the mark.

In all of the studies discussed above (i.e., DeRosier, 2004; Fox & Boulton, 2003; Kimber et al., 2008), none of the researchers aimed their programs to address emotional arousal and negative thoughts. In fact, each program emphasized skill building of social strategies because it was thought that victims of bullying lack the social skills necessary to successfully navigate a bullying situation. The investigators that focused their programs specifically for victims of bullying (e.g., DeRosier, 2004; Fox & Boulton, 2003a), appear to have addressed some aspect of thoughts and emotions as they relate to bullying, however, both investigators did not use specific skills/exercises that were aimed to target high emotional arousal and negative thinking. Instead, these researchers intervened by teaching social skills and relaxation exercises, as well as, psychoeducation about the interdependency of thoughts and emotions. Moreover, since the goal of these studies (e.g., DeRosier, 2004; Fox & Boulton, 2003a) was to focus on social skills training, the use of relaxation training was likely not enough to lead to decreases in emotional arousal, as this was an ancillary exercise. Additionally, none of these programs focused on increasing victims' of bullying awareness of how many choices they have, nor how to select these choices, when faced with a bullying situation. Likewise, no investigator has developed an intervention that helps victims of bullying to examine their specific victim cycle (i.e., the characteristics of what their own cycle of victimization entails). Therefore, the NMT program addressed emotional regulation, negative thoughts, bullying education/awareness, selectivity/choice in social skills and identification of one's own victim cycle as part of an intervention for victims of bullying.

Victimization Cycle: Theoretical Foundation for NMT

Victims of bullying are generally described as anxious and insecure children who do not generally go to adults for help, and thus, "suffer quietly," (Olweus, 1993, p. 98). Victims have generally been associated with one of two groups of victims: 1) passive victims, characterized as non-aggressive, inhibited in social interactions, passive and/or submissive (e.g., Toblin, Schwartz, Gorman, & Abou-esseddine, 2005), and 2) provocative victims, who are those victims that are anxious, insecure, unhappy, distressed, more likely to be male, and much like passive victims, may be physically weaker than their peer counterparts (e.g., Olweus, 1993). The latter group has also been referred to as aggressive victims (e.g., Toblin et al., 2005) or bully-victims (e.g., Holt & Espelage, 2007). What appears to distinguish these two types of victims (e.g., passive versus provocative) is their styles of interaction with bullies, however, the outcome appears to lead to similar results of being victimized (e.g., Wilton, et al., 2000). Therefore, it is important to investigate what similarities these children share in how they cope during an incident of bullying.

Wilton and colleagues (2000) examined possible indicators for how victims may get caught in a "victimization cycle," that perpetuates and/or reinforces the bullying. In their investigation, these authors examined emotional coping strategies of children in elementary school. The findings of this investigation resulted in identifying two coping styles of victims, one characterized by passive coping (e.g., ignores, acquiescence, avoidance, and instrumental coping – constructive/ problem-solving behaviors) and the other as provocative or aggressive coping (e.g., physical aggression, verbal aggression, avoidance, and emotional outbursts). The authors discussed how these two forms of

coping, which did not include assertive and active problem-solving behaviors, perpetuate the victim cycle.

Wilton et al. (2000) explained that both types of victims show exaggerated displays of sadness and surprise. The sadness may lead them to feel helpless, resulting in surrender, withdrawal or reactions of aggression and anger. These behaviors may serve to reinforce the bully's motives of social dominance (Wilton et al., 2000), thus, leading to future victimization. The authors noted that victims appear to have a low threshold of arousal for fear, anxiety and poor emotional regulation skills. This high emotional arousal and lack of processing of the bullying situation may lead to an inability to identify the contextual cues of bullying situations, and therefore, the next bullying situation is unanticipated by the victim. Furthermore, they noted that the victim's choices, in terms of emotional expression/regulation and "behavioral coping styles have a discernable influence on the course and outcome of classroom bullying," (Wilton et al., 2000, p. 239).

The current study has highlighted a possible model of victimization that includes findings and theoretical understanding from Wilton and colleagues (2000). As previously noted there are certain characteristics (physical, psychological, behavioral problems) that make victims a target for bullying (e.g., Olweus, 1993). When a victim engages in the first bullying situation, their high emotional arousal and negative thinking (e.g., Perry et al., 2001) may cause the victim to become too emotionally overwhelmed to choose an effective coping strategy (e.g., Wilton et al., 2000). This failure to choose an effective coping strategy likely reinforces the bully's notion that the victim is not able to defend himself or herself (Wilton et al., 2000). Additionally, the human propensity to want to avoid discomfort, likely diminishes or halts the victim's ability to process the situation

and identify contextual cues of the bullying situation (e.g., Wilton et al., 2000). The lack of awareness regarding contextual cues likely leads to an unanticipated (Wilton et al., 2000) confrontation with the bully. I believe that when the bully approaches, the victim likely has a fear response that includes negative thoughts and high emotional arousal (Perry et al., 2001), which again, greatly limits their ability to make choices on how to proceed when the bully attacks, leading to another victimization. Additionally, I add that repeated victim cycles, may lead to avoiding/withdrawing behaviors rather than approaching the situation and responding effectively, thus, perpetuating the victim cycle.

To date, no investigators have implemented a successful intervention that targets the victim's emotional expression/regulation in addition to teaching them how to cope in bullying situations. Thus, when designing interventions for victims of bullying, investigators should focus their attention on decreasing emotional arousal (i.e., emotional dysregulation) and ineffective cognitions that might contribute to such an arousal. Likewise, interventions should increase awareness of the victim's choices on how to proceed when presented in a bullying situation. Moreover, it seems encouraging for researchers to utilize methods with empirical support for regulating emotions and cognitions. One increasingly supported and utilized method of achieving such a regulation has been the use of mindfulness meditation (e.g., Bishop, et al., 2004; Brown & Ryan, 2004; Kabat-Zinn, 1990) in a variety of psychological interventions (Hayes & Smith, 2005; Linehan, 1993; Segal, et al., 2002).

Mindfulness in the Context of Mental Health

Definition and Theories of Mindfulness

Mindfulness is paying attention, on purpose, to each unfolding moment of experience with an attitude of non-judging, patience, beginner's mind, trust, non-striving, acceptance and letting go (Kabat-Zinn, 1990). According to Kabat-Zinn (1990) it is a non-elaborative present-centered process of awareness in which each thought, feeling or sensation that arises is acknowledged and accepted. In addition to internal stimuli, mindfulness involves paying attention in this same way to external stimuli (Brown & Ryan, 2004). Through paying attention to one's experience in this way, one is able to become aware of direct experience in the present moment rather than experience filtered through their beliefs, assumptions, expectations and desires (Bishop, et al., 2004). Furthermore, by paying attention to each moment in this way, one is able to step out of the mode of "doing" (i.e., autopilot) and step into the mode of "being" (Kabat-Zinn, 1990).

Mindfulness meditation involves both concentration and awareness/insight meditation practices. The former refers to maintaining attention on a particular stimuli (e.g., breath) and noticing when the mind wanders to other stimuli. When the mind inevitably wanders, the intention is to bring the focus back to the original stimuli while maintaining the mindfulness attitude. This allows one to observe the original stimuli with interest and acceptance (Brown & Ryan, 2004). The latter type of mindfulness meditation refers to being aware of all internal and external experiences as they arise, without maintaining attention on one stimulus (Brown & Ryan, 2004).

Models of mindfulness have been developed by researchers to help clarify and create an operational definition of this phenomenon (Bishop et al., 2004; Brown & Ryan, 2004). Bishop and colleagues (2004) developed a two-component model of mindfulness

that involves 1) self-regulation of attention, and 2) orientation toward experience. While Brown and Ryan (2003) developed a similar two-component model that includes 1) attention and awareness, and 2) acceptance. Both models include an attention/awareness component and a turning toward component of experience. Thus, it seems logical that mindfulness involves training the mind (Bishop et al., 2004) in sustaining and self-regulating attention toward unbiased awareness, while turning toward the experience through acceptance and openness (Bishop et al., 2004; Brown & Ryan, 2004).

Along with the operational definitions, researchers (e.g. Bishop et al., 2004) have begun to highlight several components or skills that make up mindfulness meditation. According to Bishop et al. (2004) mindfulness involves sustained attention on one or several aspects of experience. This allows one to detect thoughts, emotions and sensations as they arise in awareness. When the mind wanders and then comes back to the object(s) of attention, a kind of switching occurs, and one learns how to acknowledge one's thoughts, emotions and sensations and then return back to one's object(s) of attention. This results in one learning the skill of non-elaborative awareness, in which, one can return to direct experience instead of getting caught-up in ruminative or elaborative streams of thought. The authors note that this type of non-elaborative awareness deters people from thinking about the origins, implications, and associations of their thoughts, feelings or sensations, which may otherwise keep people from direct experience. Bishop and colleagues further state that mindfulness involves an "active process of choosing to take whatever is offered with an attitude of openness and receptivity to whatever happens in awareness," (Bishop et al., 2004).

The psychological mechanisms by which mindfulness affects the internal psychological structures have been discussed (Bishop et al., 2004; Brown & Ryan, 2003). According to Bishop et al. (2004) mindfulness allows one to have dispassionate stance toward thoughts and feelings and are observed as events of the mind, rather than over-identifying with them. They further state that mindfulness provides a space between one's perception and response, which enables one to respond reflectively, rather than reflexively to situations. These authors believe that mindfulness leads to the skills of sustained attention, switching, flexibility and stimulus selection. Moreover, mindfulness can train people to sustain attention on the current experience by continuously observing the breath. The acknowledgement of the wandering mind and returning it back to the breath trains the person to be able to switch between experiences, thus leading to psychological flexibility. Similarly, instead of getting stuck on one aspect of experience, in a ruminative way, mindfulness trains the mind to focus on present experience and thus leads to non-elaborative thinking. Furthermore, the authors noted that mindfulness trains the mind in cognitive inhibition, in which one learns stimulus selection and when one is released from filtering their experience through prior thoughts, beliefs and assumptions, they have more resources, which leads to more choices. The authors explained that the commitment to maintain an attitude of curiosity about where the mind wanders, trains the brain to be open to new experience and accept the present moment (Bishop et al., 2004).

Other investigators have developed a model that suggests mindfulness is made up of three components: intention, attention, and attitude (Shapiro, Carlson, Astin, & Freedman, 2006). The authors noted that mindfulness leads to re-perceiving, an increased capacity for objectivity in relation to internal and external experience. From this meta-

cognitive idea, the researchers believe that mindfulness leads to decentering and de-identifying from one's thoughts and emotions, which then allows people to step back and observe their thoughts and emotions. Furthermore, taking on an observer stance to thoughts and feelings can lead to self-regulation of emotions, values clarification, cognitive and emotional flexibility and exposure (serves to desensitize people to aversive thoughts/emotions).

Empirical Support for Mindfulness

Researchers have begun to find benefits of mindfulness in a variety of health related disciplines, as well (e.g., Carmody, et al., 2009; Coffey & Hartman, 2008; Creswell, Way, Eisenberger, & Lieberman, 2007; Davidson et al., 2004; Lykins & Bear, 2009; Shapiro, et al., 2006). Researchers have found that mindfulness practice leads to reductions in cortisol (Greeson, 2010) and increases in parasympathetic nervous system, and immune functioning (Davidson et al., 2004). Creswell and colleagues (2007) found that mindfulness interventions led to changes in the brain associated with positive emotions and lowered amygdala responses.

Other clinical and non-clinical populations in which mindfulness has been found to be effective include chronic pain (Rosonzweig, 2010; Teixeira, 2008), chronic illness (e.g., Proulx, 2003; Smith, Richardson, Hoffman, & Pilkington, 2005), depression (Deyo, et al., 2005; Segal et al., 2002), stress (Carmody & Baer, 2008), sleep (e.g., Howell, Digdon, Buro, & Sheptycki, 2008), eating disorder (e.g., Leahey et al., 2008; Tapper, Shaw, Ilsley, Hill, Bond, & Moore, 2009), smoking cessation (e.g., Davis, Fleming, Bonus, & Baker, 2007) anxiety and chronic worry (e.g., Delgado, et al., 2010; Kabat-Zinn & Chapman-Waldrop, 1988; Lovas & Barsky, 2010), and emotion regulation

problems (e.g., Leahey, et al., 2008). Proulx (2003) noted that these "interventions appear to lead to self-regulation, promote adaptive coping, reduce physical and psychological distress and improve quality of life despite the presence of chronic illness." Mindfulness has also been associated with increase in positive affect and decrease in negative affect (e.g., Schroevers & Brandsma, 2010). Therefore, when mindfulness is utilized in chronic illness populations (e.g., Rosonzweig, 2010; Smith et al., 2005; Teixeira, 2008) it does not have direct affect on the illness, but instead, leads to improvements in physical and mental health.

Role of Mindfulness in Psychology and Psychotherapy

Mindfulness has been given much attention recently in the field of psychology and psychotherapy by researchers and program developers (e.g., Segal, et al., 2002). Mindfulness has been added to some empirically validated therapies, such as, cognitive behavior therapy (e.g., Mindfulness-based Cognitive Therapy; Segal et al., 2002), Dialectical Behavior Therapy (Linehan, 1993) and Acceptance and Commitment Therapy (Hayes & Smith, 2005). These therapies are regarded as Mindfulness and Acceptance therapies in which the client is encouraged to practice mindfulness to gain awareness of their psychological and behavioral activity and accept their reality as it is in the present moment (e.g., Segal et al., 2002). Mindfulness and acceptance therapies have also been regarded as the "Third Wave" of cognitive and behavioral psychotherapy (Hayes & Smith, 2005).

The basic tenets of Mindfulness and Acceptance therapies are that people have been living their lives on autopilot and not noticing how their attempts to help themselves (e.g., worrying; cutting; binging) have actually begun to narrow their experience.

Moreover, they are stuck in this narrow pattern of being because they are not aware of their thoughts, feelings and behaviors. This may lead people to go through a process of experiential avoidance (Roemer & Orsillo, 2005), in which, aversive thoughts, feelings, and sensations, lead to avoidance and/or escape of internal and external experiences rather than approaching these experiences. Roemer and Orsillo (2005) further assert that experiential avoidance develops via real or imagined encounters with a threatening stimulus that elicits painful psychological responses that would normally trigger escape or avoidance. In addition, because many people are socialized to generally attempt to suppress internal and avoid external experiences of pain, experiential avoidance is further reinforced through societal messages.

With the practice of mindfulness, the client soon begins to become aware of and accept thoughts and feelings. They are encouraged to accept all aspects of their experience (Roemer & Orsillo, 2005; Segal et al., 2002). This leads to the ability Hayes and Smith (2005) call cognitive defusion and Segal et al. (2002) refer to as decentering in which the client is able to become an observer of their experience rather than fully identifying with their thoughts and feelings, which likely leads to affect regulation (Gratz & Tull, 2010).

Investigators have argued that mindfulness interventions lead to emotion regulation (e.g., Gratz & Tull, 2010) because mindfulness has been associated with improvements in psychological issues (e.g., depression, anxiety, binge eating) associated with poor affect regulation (e.g. Segal et al., 2002). Investigators have postulated that greater psychological flexibility/openness (e.g., Kashdan & Rottenberg, 2010) and the ability to observe and describe one's thoughts and emotions in a non-reactive and non-

judgmental way (e.g., Linehan, 1993) leads to an increased capacity for emotion regulation. However, there has been little empirical evidence to directly support this claim (i.e., directly measuring affect regulation). One study that examined emotion regulation directly, conducted a 10-week Mindfulness-Based Behavior Therapy (MBBT) group intervention for binge eating with a small sample size of seven bariatric patients. Leahey and colleagues (2008) found that participants reported improvements in emotion regulation and eating self-efficacy, as well as reductions in binge eating, eating concerns, and depression. Similarly, Kumar, Hayes and Feldman (2008), ran an exposure-based cognitive therapy (EBCT) that utilized mindfulness meditation for depression. The authors had 29 participants that completed the 20- to 24-session intervention. The investigators noted that as mindfulness increased at significant levels, negative emotion regulation strategies decreased (e.g., rumination, experiential avoidance). Likewise, Coffey and Hartman (2008) found that mindfulness was inversely related to anxiety and depression and that emotional regulation, nonattachment and rumination mediated this relationship. Therefore, mindfulness may lead to emotion regulation, nonattachment to internal and external experience and decreased rumination, which may then lead to less psychological distress.

One mindfulness treatment that is getting increasing amounts of empirical attention is Mindfulness Based Cognitive Therapy (MBCT; Segal et al., 2002), which combines cognitive therapy with Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 1990). MBCT and MBSR are similar interventions, in that; mindfulness is the primary factor of the intervention (Breslin, Zack, & McMain, 2002). However, MBSR focuses on stress reduction and provides psychoeducation on stress (Kabat-Zinn, 1990);

whereas, MBCT was developed to target relapse of depression (Segal et al., 2002). MBCT has been found to decrease depressive relapse (Teasdale, Segal, Williams, Ridgeway, Soulsby, & Lau, 2000); active depression (e.g., Kenny & Williams, 2006); panic disorder (Borah et al., 2010); generalized anxiety disorder (e.g., Evans, et al., 2007) and negative affect (Schroevers & Brandsma (2010). Because of these promising findings, the NMT program followed the theoretical underpinnings of MBCT (e.g., decentering from thoughts, mindful awareness leads to more choices, present-moment awareness, slow down reactivity to one's moods and thoughts) as well as the processing component (see method section for a more detailed description) outlined by Segal et al. (2002).

Mindfulness and Adolescence

There are few studies examining mindfulness interventions for children and adolescents, however, preliminary studies have shown beneficial effects in physiological, psychological and behavioral outcomes (e.g., Biegel, Brown, Shapiro, & Schubert, 2009; Black, Milam, & Sussman, 2009; Burke, 2010). In fact, Black and colleagues (2009) conducted a meta-analysis on meditation studies with children and adolescence and found small to moderate effect sizes among mindfulness interventions for youth and adults on physiological, psychosocial and behavioral outcomes. Specifically, effect sizes for youth (ranging from .16 to .70) were only slightly smaller than findings found for adult meditation interventions (.25 to 1.01). Black et al. (2009) noted that meditation intervention studies have very low participant sizes and used a variety of different meditation techniques and programs (e.g., MBSR, MBCT, DBT, Transcendental Meditation) making it difficult to interpret findings.

Mindfulness has been successfully implemented with children and adolescence in the treatment of anxiety (Semple, Reid, & Miller, 2005), depression, withdrawn behavior, delinquent behavior, aggressive behavior (Lee, Semple, Rosa & Miller, 2008), attention and impulsivity problems associated with ADHD (Attention Deficit Hyperactivity Disorder), ODD (Oppositional Defiant Disorder), CD (Conduct Disorder), and Autism Spectrum Disorder (Bogels, Hoogstad, van Dun, Schutter & Restifo, 2008), sleep difficulties and emotional distress (Bootzin & Stevens, 2005; Britton, Bootzin, Cousins, Hagler, Peck & Shapiro, 2010). Mindfulness has also been associated with decreases in blood pressure in a sample of 73 middle school students (Barnes, Davis, Murzynowski & Treiber, 2004). In addition, successful DBT interventions for reductions in borderline features and behaviors associated with Borderline Personality Disorder (BPD) have been conducted (e.g., Miller, Wyman, Hupput, Glassman, & Rathus, 2000).

A few investigators have created a MBCT for Children (MBCT-C) intervention (e.g., Lee et al., 2008; Semple et al., 2005). These investigators examined the effects of MBCT-C with youth ages 7 to 12 years old. The MBCT-C format was derived from MBCT and MBSR for adults, but adapted for age appropriate techniques. MBCT-C goals are 1) to view mental events and behaviors as separate but interrelated to phenomena which interact with their perceptions (e.g., decentered perspective), 2) differentiate between observing and judging internal and external experience, 3) present-moment awareness aimed to help children stay focused in the present rather than the past. The authors note that they used the five senses as objects of mindfulness awareness meditation. In their study examining MBCT-C with anxious children, Semple and colleagues (2005) conducted a 6-week school-base intervention trial with five

participants. Lee et al. (2008) conducted the MBCT-C program with 25 children ages 9 to 12 who were in a remedial reading class and selected out because they had reading difficulties. Both studies found improvements on internalizing (e.g., depression, anxiety, withdrawal behavior) and externalizing (e.g., aggression, delinquent behavior) behaviors. In addition, Lee et al. (2008) provided sticker incentives for completion of tasks and assignments.

Similarly to MBCT-C another group of researchers (Bogels et al., 2008) developed a mindfulness-based intervention for 14 adolescents ages 11 to 18 year old. The intervention was used to address attention and impulse difficulties in adolescents with ADHD, ODD, CD or Autism Spectrum Disorder. These authors adapted the 8-week MBCT program for adolescents. Specifically, these investigators decreased mindfulness exercises to account for shorter attention spans, used more variety of practices to increase participant interest, used more concrete tasks (e.g., yoga, massage; mindful walking, eating, and listening). In addition, they adapted the intervention to meet children's "own idiosyncratic difficulties," (e.g., problem with family, school, homework). Additionally, these authors added mindful role-playing of distressing (i.e., humiliating, embarrassing) events that occurred at school. These researchers utilized the help of parents to ensure participation and treatment adherence. They created a point system and children could use the points with their parent for material (e.g., cash) and immaterial (e.g., going to restaurant with parents) rewards from their parents. Additionally, these investigators offered a small cash reward for completion of treatment. Following the intervention, children reported significant improvement on internalizing and externalizing behaviors, attention problems, happiness and mindful awareness.

Another group of researchers (i.e., Biegel et al., 2009) developed a program called Mindfulness Based Stress Reduction for Teens (MBSR-T) and appear to be the first to conduct a rigorous randomized clinical control trial. The 8-week program consisted of training in formal mindfulness practices (i.e., body scan meditation, sitting meditation, Hatha Yoga, and walking meditation) as well as informal practices (mindful attention brought to routine, day-to-day activities). These weekly sessions included Psychoeducation about stress and relationships, group sharing of practice-related experiences, and at-home mindfulness practices. The authors noted that in order to make this treatment specific to the needs of adolescents there were several adaptations made to the adult version of MBSR. For example, at-home mindfulness practice was reduced from 45-minutes to 20 to 35 minutes, there was no day-long retreat, Psychoeducation was focused on issues faced by adolescents (e.g., self-image, life transitions, self-harming behaviors, and difficulties related to communication and interpersonal relationships).

Biegel and colleagues (2009) had two master's level clinicians, who were trained in MBSR, lead an 8-week program, with group meetings of two hours each for adolescents age 14 to 18 years with a variety of presenting diagnoses in an outpatient facility. These researchers had the 102 participants complete mindfulness practice diaries, in which they responded to a series of questions on each of the mindfulness practices (i.e., number of days of practice; time spent practicing). The researchers examined the efficacy of MBSR-T plus treatment as usual group (TAU; group and individual psychotherapy and/or psychotropic medication management at the study site) versus a TAU only group, with no mindfulness training. These researchers found that when compared to the TAU-only group participants in the combined MBSR-T + TAU group

self-reported significant improvement in anxiety, depressive, and somatization symptoms, as well as improved self-esteem and sleep quality. Furthermore, when they examined only those who completed the study they found that the MBSR-T + TAU group reported significant declines in perceived stress, obsessive symptoms, and interpersonal problems. The MBSR-T + TAU group also had higher Global Assessment of Functioning (GAF) scores and higher percentage of mental health changes than the TAU-only group, "which were large enough to warrant a change in number of diagnoses" (Biegel et al., 2009, 864). Furthermore, these researchers explained how crucial mindfulness at-home practice is as they found that the greater number of days participants engaged in formal sitting mindfulness practice and the higher average length of each practice session were significantly related to positive change outcomes. Therefore, it appears that MBSR-T may be an efficacious treatment for teens in dealing with stress and it seems that at-home mindfulness practice is a very important component of the efficacy of this intervention.

Overall, there is increasing empirical support for the use of mindfulness interventions with children and adolescence. It appears that mindfulness interventions designed for children (e.g., MBCT-C; Lee et al., 2008; Semple et al., 2005) and adolescents (e.g., MBSR-T; Biegel et al., 2009) have made significant changes to the MBCT and MBSR adult programs. However, the study that examined MBCT for adolescents (e.g., Bogels et al., 2008) made only minor adjustments to the MBCT program to account for differences in attention span and to increase interest in meditation. Therefore, when designing a mindfulness-based intervention for victims of school bullying it is important to take into account these developmental aspects of adolescents in

middle school. Specifically, changes to the intervention must account for lower attention spans and make meditation interesting and applicable for this age group.

Mindfulness in the Context of Bullying Victimization

Few researchers have examined mindfulness as an intervention for bullying. One study that examined this relationship is a dissertation by McCloy (1994). In this dissertation, the author looked at a theory of mindfulness developed by Ellen Langer (e.g., Langer & Moldoveanu, 2000), which include a group of principles focused on "the process of drawing novel distinctions," rather than mindfulness in the meditation sense. The aims of their study were to "increase mindful thinking applied to bullying situations and increase the general mindfulness of children." The instrument that McCloy used was a 19-item measure, which was adapted from the Langer Mindfulness Scale (Bodner & Langer, 2001) that measures the propensity to be mindful. This instrument assesses cognitive characteristics of mindfulness, such as, novelty seeking (individual perceives each situation as an opportunity to learn something new), producing novelty (generating new information to learn more about the current situation), flexibility and open-mindedness (openness to new information and perspectives) and engagement and attention (noticing more details about the environment). The author conducted two 45-minute sessions of their intervention with a sample size of 37 (treatment n = 20, control n = 17). McCloy found that those students who were in the treatment group were more mindful (as defined above by Langer & Moldoveanu, 2000) of bullying than those who were not in the treatment group. However, the study's intervention was not successful at increasing mindfulness (as defined above by Langer & Moldoveanu, 2000) in general. Moreover, the author did not examine the effects of mindfulness on victimization status.

It is important to note that the mindfulness discussed in McCloy's dissertation is both conceptually and logistically different than mindfulness-based meditation described in this paper.

To date, there have been no known empirical investigations into the use of mindfulness meditation (as outlined by Kabat-Zinn, 1990) with victims of bullying. Therefore, it seems important to apply a theoretical base for understanding why and how mindfulness can be used in this population. As previously stated, prior investigators (e.g., Fox & Boulton) that have designed interventions for victims of bullying have acknowledged that future interventions should include an affect regulation component. Other investigators (e.g., Perry et al., 2001) have postulated that victims of bullying may indeed posses the social skills necessary to successfully navigate a bullying situation, however, because of their self-defeating thoughts and debilitating emotional arousal they either submit or respond in a disorganized and ineffectual manner. Therefore, when designing an intervention to address bullying, it seems necessary to address the self-defeating thoughts and emotional arousal so that these victims can act and respond in an organized and effectual manner.

A promising intervention that has been found to address self-defeating thoughts (e.g., Segal et al., 2002; Teasdale et al., 2000) associated with affect dysregulation is MBCT, which is an empirically validated intervention for the treatment of depression (e.g., Teasdale, 2000). The creators of this intervention (e.g., Segal et al., 2002; Teasdale et al., 2000) assert that "the focus of MBCT is to teach individuals to become more aware of thoughts and feelings and to relate to them in a wider, decentered perspective as 'mental events' rather than as aspects of the self or as necessarily accurate reflections of

reality" (Teasdale et al., 2000, p. 616). They believe that this decentered/detached perspective to thoughts and feelings centered around depression "is central" to helping people learn the skills to prevent negative thoughts and emotions at times of potential relapse. Thus, people learn how to observe their thoughts and feelings as mental and physical events (Coffman, Dimidjian, & Baer, 2006), rather than a definition of who they are. The qualitative difference is that depressed patients go from thinking, " I am bad," to thinking, "I had a thought that I was bad." Likewise, patients may change the way they interpret their emotional experience; they may go from "I am depressed," to "I have a depressive feeling."

The decentered perspective is further learned by focusing on direct physical sensations, rather than automatic reactions and overall moods of emotional and thought content. Decentering increases one's awareness that mental activity may not be true and helps to de-identify with these thoughts and emotions. Furthermore, this facilitates mental space between the person and what they are experiencing, therefore leading to greater awareness of choices they can make in a situation (Segal et al., 2002).

Coffman et al. (2006) further discussed the theoretical bases of MBCT. They noted that MBCT involves directly observing and accepting one's thoughts, feelings, and sensations, as well as the urge for immediate action or reaction. They highlight the salient difference between MBCT and classic cognitive therapy in that MBCT does not attempt to examine the rationality of one's thoughts or emotions, rather, MBCT trains people to notice and accept them as part of one's transient experience. These authors assert that mindful awareness training slows one's reactivity to their moods, which increases one's available resources to choose new responses. They further state that by "adopting the

observant and nonjudgmental stance of *being* mode increases the likelihood that individuals will notice phenomena indicative of an approaching relapse (such as fatigue and irritability) and refrain from maladaptive attempts to suppress or ignore them" (Coffman et al., 2006, p. 35).

The decentering/acceptance of thoughts and emotions and the ability to choose new responses for oneself are the fundamental principles that I believe will help victims of bullying with emotion regulation, negative-thought patterns, and the ability to choose effective responses to bullying situations. Within the MBCT framework, this intervention may help victims of bullying to observe their experience in a non-judgmental way. By observing their urges and impulses, and by breaking down their experience into thoughts, feelings, and sensations, victims may be less reactive and more responsive in the bullying situation. It is this responsive mode, in which the victim may be less emotionally aroused, that may give them the room to make a choice of how to respond, rather than simply responding by impulse, emotion, or other internal processes. Therefore, it seems logical that the Ninja Mind Training (NMT) program could lower the negative thought patterns and intense emotional reactions that victims of bullying face during an encounter with their perpetrator.

Moreover, this decentered perspective may also lead to increase choice in how to respond in an encounter with a bully. Furthermore, because MBCT has been shown to help with other psychological sequelae (e.g., depression, anxiety; Evans et al., 2007) associated with bullying (e.g., Olweus, 1993, p. 55), it is likely that this intervention may decrease other psychopathology that puts a victim at-risk for bullying (e.g., depression; Yabko, Hokoda, & Ulloa, 2008). Additionally, mindfulness exercises may induce a

relatively large level of relaxation (e.g., Bootzin & Stevens, 2005), which may also aid in psychological well-being and reduction in stress. However, for purposes of the present study, I did not test the proposed model. Instead, I examined the role of mindfulness in decreasing victimization.

An important limitation to consider in using MBCT in this study is that it was developed for depression relapse-prevention for adults and has not been adapted for adolescents who are bullied. The NMT program is a hybrid of the MBCT and MBSR-T programs, because the exercises were adapted from each program, as well as the theoretical underpinnings were derived from MBCT. For example, I used the formal and informal exercises that Biegel et al. (2009) used in their study that were specifically designed for this age group. However, I did not use the didactic components in MBSR-T that deal with stress reduction. Rather, it was replaced with psychoeducation on bullying and cognitive therapy derived from MBCT. Furthermore, the theoretical framework of MBCT (e.g., present-centered awareness, decrease in reactivity to internal experiences, decentered perspective) was used to create the the Ninja Mind Training Program (NMT). The purpose of calling my program NMT was to make it more appealing for teens while keeping the essence of the study on mindfulness. The word ninja has many implications but for this study the use was to exemplify the mindfulness and eastern philosophy components.

It is important to note that I do not place sole responsibility on the victims for discouraging or stopping the bullying behavior. Rather, the NMT intervention was created to help victims navigate and effectually respond to bullying at school by increasing their awareness and ability to make and implement choices. With this in mind,

I could not necessarily speculate that accounts of bullying would decrease. Rather my intention was for victims of bullying to achieve a more decentered view of bullying and gain the ability to respond effectively. Additionally, I could not account for bullies' responses to victims that are less emotionally reactive, as bullies can have a variety of disparate reasons for choosing a target (e.g., Olweus, 1993).

Current State of the Literature on Measurement: Mindfulness and Victimization

Mindfulness

Recent empirical investigation (e.g., Baer, Smith & Allen, 2004; Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008; Greco, Baer, & Smith, 2011; Lau et al., 2006) regarding how to measure mindfulness has led to many different conceptualizations of what mindfulness consists of and whether these mindfulness scales are examining state versus trait mindfulness. For example, the developers of the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) conceptualized mindfulness as the trait of being aware and attentive to present events and experiences. The creators of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007), the Philidelphia Mindfulness Scale (PHLMS; Cardaciotto et al., 2008), Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2008), and the Child and Adolescent Mindfulness Measure (CAMM; Greco et al., 2011) conceptualized mindfulness as set of skills (e.g., observing, describing, awareness, non-judgment) that can be obtained. Whereas, the investigators who derived the Freiburg Mindfulness Inventory (FMI; Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006) were

concerned with developing a reliable measure to assess the state of mindfulness that one achieves directly after a meditation experience.

The MAAS (Brown & Ryan, 2003) is a widely used instrument that has also been used with adolescents (Brown, West, Loverich, & Biegel, 2011). The MAAS was created in order to measure an internal state of awareness (i.e., continual monitoring of internal and external environment) and attention (i.e., focusing of conscious awareness, and heightened sensitivity to a limited range of experiences; Brown & Ryan, 2003). This scale has 15 items and was derived from a factor analysis. The scale showed adequate convergent validity with openness to experience new events, previous mindfulness scales, flexibility, novelty seeking, novelty production, engagement in life, internal state awareness, and need for cognition. On the other hand, the MAAS showed strong divergent validity with social anxiety, rumination, and absorption (Brown & Ryan, 2003). The MAAS for Adolescence (MAAS-A) is the same as the MAAS, with the exception of one item (regarding driving a car) that was deleted because it was not pertinent to adolescence. In a sample of adolescents ages 14 to 18, the MAAS-A had very similar convergent and divergent validity as the MAAS (Brown et al., 2011).

Other measures of mindfulness assess a broad range of skills associated with mindfulness. For example the CAMS-R measures a variety of constructs within mindfulness, such as, attention, awareness, present-focus, and non-judgment (Feldman et al., 2007). The CAMS-R is a 12-item measure that was derived via factor analysis and in a sample of college students, showed adequate convergent and discriminant validity with distress, well-being, emotion-regulation and problems solving-approaches. Similarly, the KIMS (Baer et al., 2004) is a 77-item questionnaire that addresses the skills of accepting

(or allowing) without judgment (i.e., nonjudgmental or nonevaluative stance about the present moment), acting with awareness (i.e., engaging in present activity with full attention), describing (i.e., labeling external and internal phenomena), observing (i.e., attending to a variety of internal and external stimuli). Additionally each of these skills was assessed as separate subscales within the measure. Furthermore, exploratory and confirmatory factor analysis led the researchers to find these four separate factors were present. Specifically, they found that exploratory factor analysis "yielded a clear four-factor solution," and each of the factors "corresponded closely to the four mindfulness skills which the items were written and accounting for 43% of the variance after factor extraction," (Baer et al., 2004, p. 195). The confirmatory factor analysis was conducted using the four-factor model and the researchers found that the four factor solution was superior to the one factor. Moreover, factor loading "were consistently high, ranging from .62 to .91, with 15 of the 16 at .70," (Baer, et al., 2004, p. 197). This measure is used to derive four separate subscale scores for participants, in addition to a total mindfulness score. The observe subscale was found to be positively correlated with measures on openness, attention to feelings, clarity of feelings, emotional intelligence, as well as, negatively correlated with Alexythymia. The Describe subscale was positively correlated with measures on agreeableness, emotional intelligence, as well as, negatively correlated with measures on neuroticism, psychopathology, Alexithymia, and experiential avoidance (negative evaluation of and unwillingness to keep contact with internal experiences). The acting with awareness subscale was positively associated with measures on agreeableness only, but was negatively associated with measures of neuroticism, conscientiousness, experiential avoidance, and dissociative experience.

Finally, the acceptance subscale was negatively correlated with neuroticism, psychopathology, difficulty identifying and describing feelings, and experiential avoidance. Overall, it appears that the KIMS has a very broad assessment of mindfulness that incorporates the ability to be aware of internal experience, fully present, and open to new experiences.

The CAMM (Greco et al., 2011) is the newest instrument that was developed specifically for children and adolescents. These investigators developed this measure to assess the skills of "present-centered awareness and a nonjudgmental stance toward internal experiences," (Greco et al., 2011, p. 607). Furthermore, Greco and colleagues (2011) intended to develop a measure for understanding mindfulness processes in youth as well as to help identify the mechanisms of change in mindfulness-based interventions for this population. The original scale was derived from the four mindfulness factors from the KIMS (described above), with the exception of the describing facet due to developmental level of the target population. This scale has 10 items and was derived from a factor analysis. The scale showed adequate convergent validity with quality of life, academic competence, and social skills. On the other hand, the CAMM showed strong divergent validity with somatization, internalizing/externalizing symptoms, thought suppression, psychological inflexibility, and problematic behavior. The CAMM was normed on children age 10 to 17 and will be described further in chapter III.

Another scale that assesses specific skills of mindfulness is the PHLMS that assesses present-moment awareness and acceptance. This measure is 20-items with two subscales the awareness and acceptance subscales. The awareness subscale was found to be correlated with the MAAS and measures of reflection; whereas, the acceptance

subscale was found to be positively correlated with the MAAS, the Acceptance and Action Questionnaire (assess one's ability to accept undesirable thoughts and feelings while pursuing desired goals), as well as, negatively correlated with rumination, thought suppression, anxiety and depression. Therefore, it appears that the PHLMS is a brief measure that assesses one's ability to be fully aware of internal and external experiences, as well as, accepting of the present moment (regardless if it is determined to be negative of positive).

Other methods of self-report of mindfulness appear to measure it as a state of mindfulness that is achieved directly after a meditation session. For example, the creators of the FMI (Walach, et al., 2006) examined mindfulness states of people attending a retreat for meditation and regarded mindfulness as a state of being, rather than skills or a trait. This scale was derived from asking expert meditators about their concept of what mindfulness consists of, as well as a literature review conducted by the authors. The investigators developed a 30-item measure of mindfulness that was positively correlated with self-awareness, self-knowledge and meditation experience in years. On the other hand, this scale was negatively correlated with constructs of dissociation (i.e., absorption, derealization) and psychological distress (Walach et al., 2006). Therefore, it appears that the FMI assesses the state of being self-aware and knowledgeable, as well as, fully being fully present in direct moment-to-moment experience.

Another scale that looks at specific skills of mindfulness is the Toronto Mindfulness Scale (Lau et al., 2006). Lau and colleagues (2006) looked at meditators versus non-meditators, and define mindfulness as a state of curiosity and decentering from thoughts and emotions. This 15-item measure consists of a total mindfulness score,

as well as, curiosity and decentering subscales. The curiosity subscale was positively correlated with absorption, awareness of internal/external states, reflective self-awareness, psychological mindedness, and self-consciousness. The decentering subscale was positively correlated with absorption, awareness of external experience, reflective self-awareness, openness to experience and psychological mindedness. This subscale was also negatively correlated with cognitive failures (failures in cognition and behavior due to inattention). Overall, it appears that the TMS measures the act of getting fully absorbed into experiences and being able to step back (i.e., decenter) from thoughts and emotions.

One measure of mindfulness that seemingly combined all the previously discussed measures into one is the FFMQ (Baer et al., 2007). Baer and colleagues (2007) validated their scales among clinical populations and college students. They conceptualized mindfulness as a set of skills (i.e., observing, describing, acting with awareness, non-judging and non-reactivity) that one can have or can be obtained. Additionally, Baer and colleagues (2007) added to the existing literature by empirically deriving a concise measure of mindfulness through factor analyzing the most widely used mindfulness measures in the field (i.e., MAAS, FMI, KIMS, CAMS, Mindfulness Questionnaire - MQ). This 39-item measure consists of 5 subscales that show similar results as previously discussed measures, in terms of convergent and divergent validity. The observe facet was positively correlated with openness to experience, emotional intelligence, self-compassion, dissociation, absent-mindedness, psychological symptoms, and thought suppression. The remainder of the subscales were positively correlated with emotional intelligence, self-compassion, and openness to experience (non-reactivity only). These subscales were also negatively correlated with Alexithymia, dissociation

(with the exception of non-reactivity), absent-mindedness, psychological symptoms, neuroticism, thought suppression, difficulties in emotion regulation, and experiential avoidance. Therefore, it appears that the FFMQ assesses a broad range of mindfulness skills that are associated with self-compassion, openness to experience, awareness of internal and external events, emotion regulation and a decrease in psychological difficulties.

It appears that the overall state of measures for use in research and evaluation for mindfulness-based interventions (e.g., Baer et al., 2004; Brown & Ryan, 2003; Cardaciotto et al., 2008) is beginning to develop a wide array of scales and is still in its beginning stages. It appears that these researchers are trying to develop a universal operational definition of mindfulness that encompasses the state, trait, and skills of mindfulness. This way, future researchers could examine each of these areas and be assured that they are measuring the same thing within and between studies. Moreover, the state of the scales currently leads to some confusion about what each scale actually measures. In the development of the FFMQ, Baer and colleagues compared the leading mindfulness scales in the field in terms of convergent and divergent validity. The authors findings appear to show that many of these scales appear to converge and diverge on the same variables, as described above, with the exception of meditation experience. In that, the FMI and KIMS were the only mindfulness scales that were positively correlated with meditation experience. Therefore, those who score higher on these measure had more meditation experience. The MAAS and the CAMS-R, however, were not significantly correlated with meditation experience. Therefore, it seems that these latter two scales are more appropriate for assessing the ability to be mindful in the current study. However,

there are only two measures that have been validated among adolescence, the MAAS-A (Brown et al., 2011) and CAMM (Greco et al., 2011). Because the CAMM was more specifically designed to measure treatment effectiveness (i.e., skill attainment) and was derived specifically for the target age group of this study, I used the CAMM to assess the mindfulness skills of present-moment awareness and non-judgment of internal experiences. This measure was used to assess skills of mindfulness in this study because the intervention was designed to help victims of bullying develop mindfulness skills and integrate them into their lives. The mindfulness scale will be used to assess whether the NMT program produces greater mindfulness than the TAU treatment.

Victimization and Perpetration of Bullying

Victimization and perpetration of bullying have generally been assessed using peer nominations (e.g., Gottheil & Dubow, 2001) or self-report (e.g., Holt & Espelage, 2007) and self-report measures (e.g., Solberg et al., 2007). Peer nominations describe the methodology of asking peers to report on sociometric data as to whether another child is bullied or a bully themselves. Although peer nominations have been regarded as "the method of choice in identifying bully behavior," and is the standard by which other measures have been compared (Gottheil & Dubow, 2001, p. 89), it is does not seem appropriate for the current study because it would not allow for easy dissemination and examination of the intervention to people in a variety of rural areas, where in-person interventions are not available. Therefore, this study focused on the use of self-report measures of victimization and bullying.

There have been a variety of measures that have been used when examining bullies and victims in empirical investigations (e.g., Solberg et al., 2007). For example,

Nansel et al., (2001) used the criterion of "moderate" to "frequent" report of bullying or being victimized to determine subgroup status, whereas, Solberg et al. (2007) used the Olweus Bullying scale and utilized the criteria of being bullied or victimized two to three times, or more, per month. Therefore, in the Solberg et al. (2007) study, students who reported being victimized and bullying others two to three, or more, times per month were considered bully-victims. Interestingly, Holt and Espelage (2007) introduced a third way to distinguish subgroups, in that, they chose participants whose scores fell in the top 25th percentile on the bully and victim measures to determine subgroup status. Thus, scores on bullying and victimization measures that were in the top 25th percentile indicated victim and bully group status, respectively.

The Olweus Bully/Victim Questionnaire (Solberg et al., 2007) has been most widely used scale for self-assessment of victimization and bullying behavior. This scale was originally developed in Norway in 1983 (Olweus, 1993). It was then revised in 1996 (Olweus, 1996) and was originally normed in a Norwegian sample (Olweus, 1994), and later validated in United States and United Kindom samples (Olweus, 1996). However, it appears that the questionnaire was simply translated and not reconstructed to fit the norms of the US. This could have a big impact on the results as the scale may not actually address the same constructs amongst the different cultures. In other words, what accounts for verbal and physical bullying in one country does not necessarily directly transfer to the other and may be measuring different constructs or not addressing as much of the variance had the instrument been factor analyzed for a US sample. Additionally, this scale requires payment of fees for to the author and it beyond the capacity of this study. Furthermore, the Olweus Bully/Victim Questionnaire does not capture relational

aggression and therefore, may not be capturing the type of victimization that females encounter (Crothers & Levinson, 2004). However, another well-respected measurement of victimization is the Children's Self-Experiences Questionnaire–Self Report (CSEQ-SR; Crick & Grotpeter, 1996). Crothers and Levinson (2004) pointed out that the strength of this particular instrument is the inclusion of the relational victimization subscale, which the Olweus Bully/Victim Questionnaire does not account for. This is a 10-item scale assessing frequency of victimization of bullying. Specifically, this scale assesses both overt (i.e., physical and verbal) and relational (i.e., using the relationship to be aggressive) aggression. When these authors examined this scale in a sample of third through sixth graders, they found that overt victimization was significantly related (positively) to loneliness, depression, social anxiety, and social avoidance and that relational victimization significantly added to prediction. Furthermore, they then did these analyses in reverse and found that relationship victimization predicted loneliness, depression, social anxiety and social avoidance. However, overt victimization only added significantly to the prediction of depression, but not the other psychological phenomenon.

A well-known measure of bullying is Bosworth et al.'s (1999) Bullying Scale derived from an exploratory factor analysis that addressed verbal, relational and physical forms of bullying. This is a five-item instrument that asks students to rate how many times they engaged in a particular behavior over the past 30 days. In a sample of 1,361 children between the grades of six and eight, Bosworth et al. (1999) found that boys were more likely than girls to engage in higher amounts of bullying behavior. These authors found that the Bullying Scale was positively correlated with Misconduct, access to guns, anger, feelings of depression, impulsivity, and beliefs supportive of violence. The

Bullying Scale was found to be negatively associated with feeling one belongs at school and confidence in using nonviolent strategies.

The measures used to examine victimization and bullying in the current study were the CESQ (Crick & Grotpeter, 1996) and the Bullying Scale (Bosworth et al., 1999). Both the CSEQ and the Bullying Scale are succinct measures and appear to have good reliability and validity (discussed in further detail in Chapter 3). Additionally, these scales are readily available and do not require extra resources (i.e., financial, scoring time) that other measures may require (i.e., Olweus Bully/Victim Questionnaire; Solberg et al., 2007). Furthermore, the CESQ was one of the first scales to measure relational aggression (e.g., social exclusion and rumors), in addition to overt aggression (i.e., physical and verbal aggression). Therefore, it is a well-known scale that measures the main constructs of victimization (i.e., overt and relational aggression). Thus, the CESQ and the Bullying Scale were used to measure victimization and bullying, respectively.

Purpose of the Current Study

Bullying is a serious problem (Juvonen et al., 2003) and studies examining bullying (e.g., Pepler et al. 2002; Yabko, et al., 2008) have stated that interventions need to be designed to address this behavior. However, interventions concerned with decreasing victimization have had limited success. Furthermore, these studies have primarily aimed to decrease bullying by intervening at the school-level by teaching prosocial skills and creating school policies. Thus, I created a 4-week web-based intervention for adolescence who are victims of bullying. The purpose of the current study was to investigate the efficacy of the Ninja Mind Training Program (NMT) intervention for victims of bullying.

The overall aim of this study was to create, implement and evaluate the NMT program intervention. I did so by examining the following:

The first aim was to compare the effects of the NMT intervention and the treatment as usual group (i.e., Socio-Emotional Skills Group) on post-test and follow-up outcome measures of victimization. I compared the NMT intervention to socio-emotional skills group because, up to this point, it seems that social skills training has been the treatment of choice for helping victims of bullying (e.g., DeRosier, 2004; Fox & Boulton, 2003; Kimber et al., 2008). The NMT component included mindfulness as the main intervention, whereas, the socio-emotional skills program had social and emotional skills training. Both programs included psychoeducation about bullying. This allowed me to examine whether mindfulness was the key component that led to desired changes.

Investigators have commonly used social skills training to intervene in bullying, implying that victims of bullying are deficient in social skills (e.g., Andreou, et al., 2007; DeRosier, 2004; DeRosier & Marcus, 2005) resulting in mixed results. Scholars have also argued that victims of bullying may not actually be deficient in social skills (e.g., DeRosier, 2004; DeRosier & Marcus, 2005; Perry, Hodges, & Egan, 2001), instead they have difficulty regulating emotions and dealing with negative self-defeating thoughts (e.g., Wilton et al., 2000), which leads to an inability to access their social skills (Fox & Boulton, 2003b). Therefore, the future direction of intervening at the individual level appears to be aimed at helping children with their negative thought patterns that lead to emotional dysregulation. The NMT program was designed to address these concerns by using the cutting-edge clinical intervention of mindfulness meditation that addresses the limitations (Coffey & Hartman, 2008; Kashdan & Rottenberg, 2010; Kumar, et al., 2008;

Leahey et al., 2008; Linehan, 1993) the above authors (e.g., Fox & Boulton, 2003b) have outlined. Therefore, it was hypothesized that the NMT program would lead to greater changes in victimization than the TAU group, from pre- to post-test, post-test to follow-up, and pre-test to follow-up administrations. However, if the NMT group led to greater increases in victimization as compared to the TAU group, then the NMT program would be considered a less effective intervention for victims of bullying.

Issues such as intense fear/anxiety, depression (Wilton et al., 2000), negative thoughts patterns, and emotion dysregulation (e.g., DeRosier, 2004; DeRosier & Marcus, 2005; Perry, Hodges, & Egan, 2001) have been found to lead victims to handle bullying situations in one of two ways: 1) exaggerated sadness and surprise, 2) aggression and anger (Wilton et al., 2000). Both of these reactions lead to further bullying (e.g., Wilton et al., 2000). On the other hand, mindfulness meditation has been found to lead to improvements in a variety of mental and behavioral health issues such as anxiety/chronic worry (Delgado, et al., 2010; Kabat-Zinn & Chapman-Waldrop, 1988; Lovas & Barsky, 2010), depression (Deyo, et al., 2005; Segal et al., 2002), stress (Carmody & Baer, 2008), and emotion regulation problems (e.g., Leahey, et al., 2008). Because the NMT group taught formal mindfulness skills it was hypothesized that mindfulness scores would increase over the course of treatment for the NMT group from pre- to post-test, post-test to follow-up, and pre-test to follow-up assessments. If there was no interaction in Treatment X Time it could be concluded that the NMT group did not successfully teach mindfulness skills. On the other hand if mindfulness scores increased among both groups then it may be that the formal practice of meditation was not necessary to facilitate improvements in mindfulness.

Chapter 3

METHOD

Participants

The final sample consisted of 32 sixth (n = 11; 34.4%), seventh (n = 9; 28.1%), and eight grade (n = 12; 37.5%). The mean age was 12.25 (SD = 1.05) with a range of 11 – 14 years, The sample consisted of 68.8% boys (n = 22) and 31.3% girls (n = 10). In terms of ethnicity, the final sample consisted of 43.8% Mexican-Americans (n = 14), 21.9% Caucasians (n = 7), 15.6% African Americans (n = 5), 15.6% identified as multiethnic or "other" (n = 5), and one person identified as Indian American. In the final sample there were 17 participants in the NMT group and 15 enrolled in the TAU group. There were three facilitators (1 per school), each facilitator ran one NMT and one TAU group. The exception was one facilitator who, due to scheduling conflicts and school dynamics, ran 2 TAU and 2 NMT groups. This resulted in a total of eight groups (4 NMT and 4 TAU). The first facilitator had 5 participants in the NMT group (one participant was deleted from this group as they were an outlier on the mindfulness measure) and 6 in the TAU group. The second facilitator had 6 participants in the NMT group and 7 in the TAU group (one participant was deleted from the final analysis from this group as they appeared to answer at random). While the third facilitator had two NMT groups one with 3 participants and the other with 4 participants and two TAU group had 3 in one group and 3 in the other group (3 children were not used in the final sample in these last two TAU groups from facilitator 3, as they seemed to answer the questionnaire at random)

Chapter 3

METHOD

Demographic Information

Participants were asked to provide information about their gender, age, ethnicity, and grade.

Victimization Instrument

The Children's Self-Experiences Questionnaire–Self Report (CSEQ-SR; Crick & Grotpeter, 1996) is a 10-item scale assessing victimization of bullying on a 5-point Likert scale ("never" to "all the time"). The scale included two subscales: 1) Overt Victimization (e.g., "How often do you get hit by another kid at school," "How often does another kid yell at you and call you mean names?") and 2) Relational Victimization (e.g., "How often do other kids leave you out on purpose when it is time to play or do an activity," " How often does a kid who is mad at you try to get back at you by not letting you be in their group anymore?"). The Scores range from 5 to 50; higher score indicates greater frequency of victimization. This scale does not include a time frame for children to report on (e.g., week, month, year). Therefore, I asked participants to indicate how often each item has occurred during the past month, in order to be consistent with the time frame of the bullying scale (see below).

In a sample of 474 children grades three through sixth, Crick and Grotpeter (1996) found that the Cronbach alpha scores were .78 and .80 for overt and relational victimization, respectively. These authors found that boys tended to report significantly more overt victimization than girls. They found that overt victimization was significantly

related (positively) to loneliness, depression, social anxiety, and social avoidance and that relational victimization significantly added to prediction.

In this study this scale held together well as the pre-test reliability was α = .85 (M = 19.09; SD = 7.25), post-test reliability was α = .90 (M = 18.38; SD = 7.09), and follow-up reliability was α = .90 (M = 15.72; SD = 5.69).

Bullying Scale

In order to assess bullying I used Bosworth et al.'s (1999) Bullying Scale derived from an exploratory factor analysis that addressed verbal, relational and physical forms of bullying. These five items asked participants to rate how many times they engaged in this behavior over the past 30 days (0 = never, 1 = 1 or 2 times, 2 = 3 or 4 times, and 3 = 5 or more times). Example items include: "I pushed, shoved, slapped, or kicked other students," "I teased students," and " I said things about students to make other students laugh." The scores range from 0 to 15 with higher scores indicating more self-reported bullying perpetration behavior.

In a sample of 1,361 children between the grades of six and eight, the original Cronbach alpha was .83 for the full five-item scale. Bosworth et al. (1999) found that boys were more likely than girls to engage in higher amounts of bullying behavior. These authors found that the Bullying Scale was positively correlated with Misconduct, access to guns, anger, feelings of depression, impulsivity, and beliefs supportive of violence. The Bullying Scale was found to be negatively associated with feeling one belongs at school and confidence in using nonviolent strategies

The reliability in the current study at pre-test was α = .67 (M = 2.75; SD = 2.51), post-test was α = .79 (M = 2.13; SD = 2.35), and follow-up was α = .83 (M = 1.91; SD = 2.43).

Mindfulness Measure

In order to examine the participants' mindfulness skills, I used the Child and Adolescent Mindfulness Measure (CAMM; Greco et al., 2011). This is a 10-item measure that was designed by Greco and colleagues (2011) to assess the absence of mindfulness skills (i.e., present-centered awareness; non-judgment of internal experience). Investigators argue that this indirect assessment approach may be more "diagnostic" of mindfulness than other direct measurements (e.g., Brown & Ryan, 2003; Brown et al., 2011). Participants were asked to indicate "how often each sentence is true for you," which is measured on a 5-point Likert scale (i.e., "never true" to "always true"). Higher scores indicate lower mindfulness skills. Example items include: "I get upset with myself for having feelings that don't make sense," "At school, I walk from class to class without noticing what I'm doing," and "I keep myself busy so I don't notice my thoughts and feelings." Since the direction of these items is not consistent with other measures (i.e., higher scores indicate more of the construct of interest), this measure was reverse coded so that higher scores represent more self-reported mindfulness.

The CAMM was derived from the four facets of the KIMS (described above), which include acting with awareness, observing, accepting without judgment, and describing. However, due to disproportionate developmental levels in cognitive and verbal abilities of the target population (age 10 to 17), the authors excluded the describing facet when selecting the original 25 items. These items were then given to four

independent expert raters in child clinical psychology and mindfulness-based interventions. These raters helped revise the items for ease of reading and clarity. These 25 items were then factor analyzed in a sample of 334 children ages 10 to 17. An exploratory factor analysis revealed a one-factor solution that contains 10 items that span the concepts of lack of present-moment awareness, as well as judgmental and non-accepting responses to thoughts and feelings. The internal consistency of the final 10-item scale was $\alpha = .80$. Confirmatory factor analyses supported the use of a single-factor solution.

In a sample of 319 5th to 10th grade students, the internal consistency for the CAMM was $\alpha = .81$, with a total sample mean score of 22.73, *SD* = 7.33 (Greco et al., 2011). Greco and colleagues (2011) found that the CAMM was significantly negatively correlated with child-report of somatic complaints (e.g., headaches, stomachaches ,dizziness, fatigue), internalizing symptoms (e.g., depression, anxiety), thought suppression, psychological inflexibility (cognitive fusion – believe thoughts to be facts), and externalizing behavior problems (e.g., conduct problems, oppositional behavior, hyperactivity). The CAMM was positively correlated with overall quality of life, which includes a variety of domains such as personal and self-fulfillment, peer relationships, family, and school. The CAMM also correlated with teacher ratings of social skills (e.g., cooperation, assertiveness, self-control), problem behaviors (e.g., hyperactivity, oppositional behavior, internalizing symptoms), and academic competence (i.e., performance across different academic areas) "in the expected direction," (Greco et al., 2011, p. 611).

In the current study this scale's internal consistency ranged from moderately high to high, with internal consistency at pre-test of $\alpha = .72$ ($M = 27.06$; $SD = 6.66$), post-test of $\alpha = .76$ ($M = 25.96$; $SD = 7.35$), and follow-up reliability of $\alpha = .85$ ($M = 31.09$; $SD = 7.68$).

Treatment Groups

NMT Program

I developed a web-based school bullying victimization intervention that utilizes cognitive behavioral and mindfulness interventions. The intervention was named the Ninja Mind Training (NMT) Program and consisted of 35 to 47-minute long groups that met once per week for 4 weeks. The format of the intervention included pictures and slides with the author narrating to illustrate concepts and engage participants that highlight important points discussed. After a mindfulness exercise, participants were asked a series of questions on the computer screen and prompted to fill them out on a piece of paper. These questions were intended to help participants process their experience and were adapted from Segal et al. (2002). Participants were asked what their experience was like, how this experience was different from how they normally do that activity, and how they think this might help them in a bullying situation. NMT included two main components: 1) mindfulness meditation training, 2) cognitive-behavior/ psychoeduction. Additionally, participants were only allowed to miss one week of training in order to be considered as a completer. All participants, with the exception of one, attended at least three weeks of training and were considered completers.

Participants completed the trainings during the school day and met as a group. Each group watched the intervention on a projector screen with a facilitator present.

Participants were given access to each session after they completed that specific session. Likewise, they had access to the mindfulness exercise recordings and were encouraged to listen to the recording on days that they do not have a session.

Sessions varied in length from 35- to 47-minutes and began with a brief introduction of the exercises and materials that were presented that day. Each session began with a mindfulness exercise (MF) that ranged from 10 to 20-minutes in length, with the exception of the first session (mindfulness exercise occurred after 10-minute introduction). Each MF exercise was followed by a 3- to 5-minute personal processing that was intended to bridge material into participant's life (See below). Additionally, cognitive-behavioral (CB) exercises were intended to teach children about bullying, thoughts and feelings, and noticing their personal victim-cycle.

Processing: I followed the format of MBCT (Segal et al., 2000) by asking three questions intended to elicit critical thinking and application of material to specified behaviors and/or circumstances, such as, victimization of bullying. However, since MBCT is generally in-person and the facilitators help the participants to become aware and accepting of their experience, I divided up the three broad processing questions into more specific questions. For the current study, I did not be collect and analyze these responses. In addition, the following statements were given:

> "Now that you've finished the [insert name here] exercise, I'd like for you to reflect on your experience. Remember, whatever you noticed is perfectly fine. There are no wrong or right ways of feeling or thinking and on a sheet of paper, write down your answers to these questions."

The first set of questions were designed to help participants gain awareness into their experience and to notice their direct experience. Following each exercise, participants were asked how this experience was different than how they normally do that activity. This question was intended to help participants notice how doing things mindfully is different and can often be more enjoyable than how they normally do things on automatic pilot. Participants were asked what that activity was like for them and what they noticed in their mind and bodies. This set of questions was intended to help participants expand their awareness and be accepting of their internal experiences. The final set of questions related to how the activity can help them calm their body and mind. This final question was intended to help participants link/bridge the material from practice to a target behavioral outcome (i.e., staying calm in the presence of stressors – bullying). Minor variations were added to these questions to illicit a decentered response (i.e., instructions were given to participants to write down that they were **having** the thought, feeling, emotion of… rather than a more centered perspective that they are their thoughts, feelings, and emotions) and to aid in helping the participant process the activity. Therefore, a list of the mindfulness exercises and the process questions that followed are provided below:

Ninja Eating exercise: 1) "How was eating like this different than how you normally eat?" 2) "Was it more enjoyable? Did you notice things you have never noticed before? Did it taste differently?" and 3) "How do you think this exercise can help you to calm your body and mind down?"

Ninja Body exercise: 1) "How was observing your body different that how you normally observe your body?" 2) "Was it more enjoyable? Did you notice things you

never noticed before? Did you find it relaxing?" and 3) "How do you think this exercise could help you to calm your body and mind down?"

Ninja Walking exercise: 1) "What was it like for you to walk during this exercise, did it feel any different from the way you normally walk?" 2) "What did you notice about the thoughts that were present during this exercise? For this question, rather than writing down 'Tommy should have stuck up for me today…' try to answer this question by writing down, 'I had the thought that…' (For example: 'I had the thought that Tommy should have stuck up for me…'). 3) "What did you notice about the emotions and sensations in your body? For this question, try the following. Rather than saying you were an emotion (Example: 'I was sad,' 'I was bored,') try to say to yourself that there was an emotion in your body and locate where it was (For example: 'Sadness was in my body and it was in my throat…it felt like there was something in the left side of my throat…' or 'Boredom was in my body… I felt it in my head as a kind of pressure…'). 4) "Finally, how do you think this exercise can help you to calm your body and mind down?"

Ninja Breathing exercise: 1) "What did you notice about the thoughts that were present during this exercise? For this question, rather than writing down 'Tommy should have stuck up for me today…' try to answer this question by writing down, 'I had the thought that…' (Example: 'I had the thought that Tommy should have stuck up for me…')" 2) "What did you notice about the emotions and sensations in your body? For this question, try the following. Rather than saying you were an emotion (Example: 'I was sad,' 'I was bored,') try to say to yourself that there was an emotion in your body and locate where it was (Example: 'Sadness was in my body and it was in my throat…it felt

like there was something in the left side of my throat…' or 'Boredom was in my body… I felt it in my head as a kind of pressure…')" 3) "Were you better able to notice your thoughts and feelings during this exercise?" 4) "Finally, how do you think this exercise can help you to calm your body and mind down?"

Intervention

This section will outline the NMT intervention and explain whether the exercise is mindfulness (MF) or cognitive-behavioral (CB), as well as, denote the time intended for each portion of the session.

Week 1: Awareness of Self and Bullying

- Website log-in and participant assent (15:00)
- Introduction (CB – 10:04)
- Ninja Eating Exercise (MF – 10:25)
- Psychoeducation about different forms of bullying (CB – 6:38)

Week 2: Decentering from Thoughts/Emotions and Mindfulness in Daily Life

- Ninja Body Exercise (MF – 19:59)
- Learning about thoughts and feelings (CB – 4:35)
- Thoughts are not facts (CB – 8:51)
- Five Senses: staying present during daily life stressors (CB/MF – 7:42)

Week 3: Awareness of Bullying Cycle and Effective Responding

- Ninja Walking Exercise (MF – 11:42)
- Recognizing your own bullying cycle (CB – l9:23)
- Assertive and empathic responding (CB – 9:59)

Week 4: Ninja Mind Training Steps and Practicing What Has Been Learned

- Ninja Breathing Exercise (MF – 12:45)
- What to do after bullying situation (CB – 8:10)
- Virtual bully and wrap-up (CB – 9:25)

Control Group

Since previous studies (e.g., DeRosier, 2004; Fox & Boulton, 2003; Kimber et al., 2008) have used social skills training as the treatment of choice with bullying, I used the TAU in a school district that is a socio-emotional skills group as a comparison group. In doing so, the TAU control group followed much of the same procedural format as the NMT intervention (i.e. Met once per week for 4-weeks, 40- to 50- minutes in length). The main difference between the NMT and TAU is that TAU was taught directly to participants by a trained school facilitator. Curriculum experts got together and decided on the four best days of curriculum that they currently use to create a 4-week standardized, abbreviated version of a non-standardized 14-week intervention that the community agency has used as the TAU for victims of bullying. In doing so, they combined a social and emotional intelligence skills program known as "PATHS" (Promoting Alternative Thinking Strategies; Domitrovich, Cortes & Greenberg, 2007) with a world-renowned Olweus Bullying Prevention program (Kallestad & Olweus, 2003) in order to create a socio-emotional skills program that has a bullying pychoeducation component. The TAU group used discussion and experiential exercises to facilitate learning of material.

Week 1: Empathy for Strangers and Friends

- Define empathy

- Describe role empathy plays in bullying
- Identify ways to show empathy

Week 2: To Report or Not to Report

- Identify reasons that make it difficult to report bullying
- Create action plan about how to handle reporting

Week 3: Whom Do You Trust?

- Describe importance of trust
- Relationship between trust and bullying prevention
- Identify two people at school you can turn to if needed

Week 4: Respect – Who gets it?

- Describe importance of treating others with respect
- Identify ways to show respect
- Discuss the relationship between respect and bullying prevention

Procedures

Selection of Participants

The selection process began 4 school weeks (accounting for holiday breaks) prior to the beginning of the intervention when the facilitators solicit participants at each of their schools. Facilitators were told to select participants based on teacher and facilitator referral (which is how the school currently selects participants). They were instructed to select 10 to 15 participants who have never participated in their program (i.e., socio-emotional skill training) and who are being bullied. These students could include children who are both a victim and perpetrator of bullying but were asked to leave out participants who only bullied others and were not victims themselves. These 48 students were then

assigned an identification number and given a parental consent form to have a parent sign. If the informed consent form was not received within two weeks of giving the students the letter, school facilitators were given permission to call the parents and use the "parental consent phone script" (please see appendix). The students were then randomly assigned to either the NMT or TAU group. In one school's case, groups that had been formed due to class schedule were randomly assigned to the two treatment conditions. In this school, there were four treatment groups containing between 3 to 4 participants, resulting in two NMT and two TAU groups. The other schools had between 6 to 8 participants in their groups and only had one NMT and one TAU group per school. The school facilitator at that school ran both the NMT and TAU groups. In the final sample, 31 participants (81.58%) attended all four sessions and seven (18.42%) attended three sessions.

The original sample consisted of approximately 49 participants in sixth (n = 13; 26.5%), seventh (n = 14; 28.6%), and eight grade (n = 22; 44.9%). The mean age was 12.51 (SD = 1.06) with a range of 11 – 14 years, The sample consisted of 63.3% boys (n = 31) and 36.7% girls (n = 18). There were 44.9% Mexican-Americans (n = 22), 22.4% identified as multiethnic or "other" (n = 11), 20.4% Caucasians (n = 10), 10.2% African Americans (n = 5), and one person identified as Indian-American. There were 26 participants enrolled in the NMT group and 22 in the TAU group.

The final sample consisted of 32 students because of multiple issues described below. There was one female from the TAU group who dropped out during the intervention due to personal stressors. Data were examined for extreme outliers, using scatter plots, which were determined by being over two standard deviations above or

below the mean. There was one participant who was an extreme outlier (4 standard deviations higher than the mean) on post-test bullying. This participant's scores were then examined and it appeared that this student filled out the survey at random. There were also two extreme outliers on post and follow-up mindfulness (2.5 to 4 standard deviations below the mean). Furthermore, there were three students, who were all from the same facilitator and were in the TAU group, who appeared to select only answers in the first column of each measure. Therefore, it was decided that these scores were random and did not represent true scores. The other 10 students continued with the intervention, however they missed more than 1 of the 4 weeks and were therefore not included in the study. Specifically, this group of nine students came from one school, which canceled the group multiple times due to a variety of reasons (school fights, field trips, etc…). Therefore, the above students were not included in any of the analyses

Implementation of Program

The program took place during the middle of the fall semester of 2012. The groups were run during the school day and students were excused from their classes to attend (standard school policy). There were three assessments, pre- and post-test, as well as, a 3-week follow-up (See Table 1 for more specific details regarding administration of measures). The students in the two treatment groups were excused from their class every week for 4-weeks for 50-minutes. Additionally, all participants were excused from class for 20-minutes, three weeks after the 4-week groups were completed in order to fill out the follow-up questionnaire.

Table 1.

Administration of measures during pre-test, post-test, and follow-up.

Measures	Pre-Test	Post-Test	Follow-up
Demographics	**Yes**	No	No
Victimization	**Yes**	**Yes**	**Yes**
Bullying	**Yes**	**Yes**	**Yes**
Mindfulness	**Yes**	**Yes**	**Yes**
Curiosity	**Yes**	No	No

Experimental Design

Each facilitator ran one NMT and TAU group at the same time so that the treatments were not nested or dependent on certain facilitators. Both conditions received the pre-test, post-test, and follow-up assessments at the same time (within the same week). These assessments took place on the first and 4th weeks of the intervention, as well as three weeks after the intervention ended. The follow-up survey was given at three rather than four weeks due to holidays and winter vacation.

Analysis

Preliminary statistics were run to determine the degree of participant attrition and report demographic information from my sample. I then examined any pre-test group differences on the demographic variables (i.e., age, gender, ethnicity). In order to see if any pre-test differences were present on victimization, bullying, mindfulness, and curiosity, I ran a an independent samples t-test.

There was only one participant who had missing data (1 item on pre-test mindfulness measure), therefore, regression substitution was used to calculate the "best guess" of the person's score (Schlomer, Bauman, & Card, 2010).

When dealing with nested data, the statistic of choice is Hierarhical Linear Modeling (HLM; Woltman, Feldstein, MacKay, & Rocchi, 2012). However, I did not obtain a large enough sample size to conduct HLM. Previous researchers have argued that sample size is one of the most critical elements in hierarchical analyses (e.g., Maas & Hox, 2005; Woltman et al., 2012). Woltman et al. (2012) explained that in order to examine hierarchical structures, the number of participants must be higher than one would use if conducting other parametric tests. They added that the biggest limitation of HLM is that it requires large sample sizes in order to achieve adequate power. Other researchers (e.g., Maas & Hox, 2005) found that the most important factor in determining whether to use HLM is in the sample size at the group level (i.e., level 2) rather than the actual number of participants that account for each group. In fact, Kreft (1996) developed what is known as the "30/30 rule," which means that in order to detect effects using HLM there should be at least 30 participants in 30 groups. Hox (1998) added that depending on what questions the researcher is asking they could amend this rule to "50/20" (i.e., 50 groups with 20 participants) or "20/10" (i.e., 20 groups with 10 participants). Other researchers (e.g., Hox & Maas, 2001; Maas & Hox, 2005) have discussed "small sample sizes" for HLM as being 50 groups (level 2 cluster), and even with that many groups it tends to lead to biased estimates of the second-level standard errors. Since the current study has only 6 groups at the level 2 cluster, it is likely that the error in accuracy of estimates of change in victimization and the standard errors associated with these estimates will be too high (e.g., Mass & Hox, 2005; Musca et al., 2011) to interpret results. Therefore, it was decided that hierarchical modeling was not appropriate for this study.

Therefore, in order to examine the first aim of comparing the NMT intervention to the TAU groups on the outcome of victimization at post-test and follow-up, I used a repeated measures ANOVA design. This was a 2(Treatment) X 3(Time) with the dependent variable being victimization. The posthoc tests conducted were paired-sample t-tests to examine main effects of Time with the dependent variable of Victimization.

In order to examine the second aim of comparing the NMT intervention to the TAU group on the outcome measure of mindfulness at pre-test, post-test, and follow-up assessments, I conducted a repeated measures ANOVA. This again was a 2x3 design with the within subjects variable being Time (pre-test, post-test, and follow-up), the between-subjects being Treatment (NMT and TAU), and the dependent variable being mindfulness. Posthoc analysis was then conducted for significant univariate terms.

Chapter 4

RESULTS

Examining Pre-test Group Differences

In order to determine if there were any group differences prior to treatment, univariate analysis of variance (ANOVA) was conducted for six variables (i.e., age, grade, pre-test victimization, pre-test bullying, and pre-test mindfulness). As seen in Table 2, univariate tests revealed no significant differences.

Table 2. *Means and standard deviations for pre-test victimization, bullying, and mindfulness for total sample and by treatment.*

	Total	NMT	TAU		
Variable	*M(SD)*	*M(SD)*	*M(SD)*	*F (df)*	*η2*
Age	12.25 (1.05)	12.00 (.94)	12.53 (1.13)	2.14 (31)	.07
Grade	7.03 (.86)	6.94 (.90)	7.13 (.83)	.40 (31)	.01
Victimization	19.09 (7.25)	17.88 (5.30)	20.47 (8.97)	1.01 (31)	.03
Bullying	2.75 (2.52)	2.00 (2.06)	3.60 (2.77)	3.49 (31)	.10
Mindfulness	27.07 (6.66)	26.44 (5.19)	27.73 (8.07)	.29 (31)	.01

*$p < .05$

Bivariate Correlations among Pre-test, Post-test, and Follow-up Scores

Correlations between pre-test, post-test, and follow-up scores on victimization, bullying, mindfulness, and curiosity can be found in Table 3. In general, correlations

were fairly small between these variables. The highest correlations existed among each variable for the three separate time points (e.g., pre-test, post-test, follow-up). Victimization and mindfulness were significantly, negatively correlated at follow-up, $r(32) = -.60$, $p < .001$, but not at pre- and post- test administrations. Bullying was negatively correlated with mindfulness on pre-test, $r(32) = -.38$, $p < .05$, and follow-up assessments, $r(32) = -.59$, $p < .001$, but not post-test assessment.

Table 3. *Correlations of victimization, bullying, and mindfulness, at pre-test, post-test, and follow-up for both treatment groups combined.*

	1.	2.	3.	4.	5.	6.	7.	8.
1. Pre-test Victimization	1							
2. Pre-test Bullying	.28	1						
3. Pre-test Mindfulness	-.24	-.38*	1					
4. Post-test Victimization	.59*	.06	-.15	1				
5. Post-test Bullying	.10	.74*	-.26	.07	1			
6. Post-test Mindfulness	-.03	.13	.61*	-.17	.07	1		
7. Follow-Up Victimization	.60*	.29	-.25	.50*	.30	-.07	1	
8. Follow-Up Bullying	.14	.50*	-.46	.19	.61*	-.18	.40*	1
9. Follow-Up Mindfulness	-.36	-.33	.58*	-.29	-.45*	.38*	-.60*	-.59*

*$p < .05$

Efficacy of NMT Versus TAU Groups

Victimization

A repeated measures analysis of variance (ANOVA) was conducted to evaluate the effect of Treatment Group and Time on Victimization. The dependent variable was Victimization. The within-subjects factor was assessment Time with three levels (pre-test, post-test, follow-up). The between-subjects factor was Treatment group with two levels (NMT and TAU). The Time main effect and Treatment X Time interaction effect were tested using the multivariate criteria of Wilks's lambda (Λ). The Time main effect was significant, $\Lambda = .71$, $F(2, 30) = 5.96$, $p < .01$), however the Treatment X Time interaction effect was not significant, $\Lambda = .91$, $F(2, 30) = 1.38$, $p = .27$).

Three paired samples t-tests were conducted to follow-up the significant main effect of Time. Pre-test to follow-up and post-test to follow-up victimization were significant controlling for Type I error across the three tests at the .05 level by using the Holm's sequential Bonferroni procedure. Difference in the mean ratings of victimization were significant for pre-test to follow-up, $t(31) = 2.32$, $p < .01$, and post-test to follow-up victimization, $t(31) = 3.21$, $p < .05$. Table 4 shows that the difference in mean victimization ratings decreased significantly from pre-test to follow-up and post-test to follow-up, but not for pre-test to post-test, $t(31) = .63$, $p = .54$. These results support the hypothesis that treatment in general led to lower victimization scores over time.

Table 4. *Means and standard deviations for pre-test, post-test, and follow-up victimization scores.*

Time	*Mean*	*SD*
Pre-test	19.09	7.25
Post-test	18.37	7.09
Follow-up	15.72	5.69

Mindfulness

A repeated measures analysis of variance (ANOVA) was conducted to evaluate the effect of Treatment Group and Time on Mindfulness. The dependent variable was Mindfulness. The within-subjects factor was assessment Time with three levels (pre-test, post-test, follow-up). The between-subjects factor was Treatment group with two levels (NMT and TAU). The Time main effect and Treatment X Time interaction effect were tested using the multivariate criteria of Wilks's lambda (Λ). The Time main effect was significant, $\Lambda = .71$, $F(2, 30) = 5.76$, $p < .01$), however the Treatment X Time interaction effect was not significant, $\Lambda = .95$, $F(2, 30) = .75$, $p = .48$).

Three paired samples t-tests were conducted to follow-up the significant main effect of Time. Pre-test to follow-up and post-test to follow-up mindfulness were significant controlling for Type I error across the three tests at the .05 level by using the Holm's sequential Bonferroni procedure. Difference in the mean ratings of mindfulness were significant for pre-test to follow-up, $t(30) = -2.81$, $p < .01$, and post-test to follow-up mindfulness, $t(31) = -3.49$, $p < .001$. Table 5 shows that the difference in mean mindfulness ratings increased significantly from pre-test to follow-up and post-test to follow-up, but not for pre-test to post-test, $t(31) = 1.28$, $p = .21$. These results support the hypothesis that treatment in general led to higher mindfulness scores.

Table 5. *Means and standard deviations for pre-test, post-test, and follow-up mindfulness scores.*

Time	*Mean*	*SD*
Pre-test	27.07	6.66

Post-test	25.65	7.32
Follow-up	30.94	7.75

Summary of Results

Overall, the biggest finding was that victimization scores significantly decreased from pre-test to follow-up and post-test to follow-up assessments, regardless of treatment. Additionally, mindfulness followed a similar pattern as mindfulness scores increased from pre-test to follow-up and from post-test to follow-up time points for both treatments. I did not find significant differences among treatments for either dependent variable (i.e., victimization, mindfulness). Therefore, no posthoc tests were conducted for dependent variables by treatment group.

Chapter 5

DISCUSSION

Investigators have commonly used social skills training to intervene in bullying, implying that victims of bullying are deficient in social skills (e.g., Andreou, et al., 2007; DeRosier, 2004; DeRosier & Marcus, 2005), which has resulted in mixed results. Scholars have also argued that victims of bullying might not actually be deficient in social skills (e.g., DeRosier, 2004; DeRosier & Marcus, 2005; Perry, Hodges, & Egan, 2001), instead they have difficulty regulating emotions and dealing with negative self-defeating thoughts (e.g., Wilton et al., 2000), which lead to an inability to access social skills (Fox & Boulton, 2003b). Therefore, the purpose of my study was to create an intervention at the individual level, rather than school level (please see Chapter 2 for more in-depth discussion), to help victims of bullying with negative thought patterns that lead to emotional dysregulation. Further, I wanted to use the cutting-edge clinical intervention of mindfulness meditation to achieve these aims. Thus, the Ninja Mind Training (NMT) program was developed and tested.

I have created the first intervention for 6th, 7th, and 8th grade children who are bullied that directly address negative thought patterns and emotional dysregulation by teaching participants mindfulness meditation. Mindfulness meditation leads to a different relationship with one's thoughts (e.g., deliteralization/decentered perspective, Segal et al., 2002; defused perspective, Hayes & Smith, 2005) and has been found to help with emotion regulation difficulties (e.g., Coffey & Hartman, 2008; Kashdan & Rottenberg, 2010; Kumar, et al., 2008; Leahey et al., 2008; Linehan, 1993). An additional aspect of this study was that the mindfulness-based intervention was delivered in a semi-online

format (i.e., online program presented to groups of children, rather than completely online and completed individually). Repeated measures ANOVAs revealed that both treatment groups led to positive outcomes on the dependent variables of victimization and mindfulness. However, there were no significant differences between NMT and TAU groups for these outcome variables.

The finding that both treatment groups led to significantly lower scores on victimization from pre-test to follow-up and post-test to follow-up assessments is novel. This is especially important as other investigators examining bullying interventions have found that bullying victimization generally increases or shows no change at post-test and/or follow-up assessment (DeRosier, 2004; DeRosier & Marcus, 2005; Fox & Boulton, 2003a; Fox & Boulton, 2003b; Munthe & Roland, 1989; Pepler et al., 1994; Stevens et al., 2000).

Victimization

Contrary to the first hypothesis, treatment groups did not show significant change in victimization from pre-test to post-test assessments and the NMT group did not lead to significantly greater decreases on victimization when compared to the TAU group. As noted above, the lack of significance from pre-test to post-test is a common finding among investigators in the field of bullying (e.g., Stevens, et al., 2000). In addition, researchers have found that bullying generally increases over time (e.g., Kimber et al., 2008), therefore the findings that both treatments led to a decrease in victimization is very important to note. Additionally, these findings highlight how the NMT program, which was delivered via an online format, was just as efficacious as an in-person group where group processing took place. Hinsz, Tindale, and Vollrath (1997) found that group

processing leads to greater improvements on outcome measures and allow for information to be transferred among group members, resulting in greater understanding of material (e.g., Hinsz, Tindale, & Vollrath, 1997; Stasser, Taylor, & Hanna, 1989). Therefore, this study adds to the literature that there was no difference between the NMT program and the TAU group, even though the TAU group utilized group processing as part of the intervention.

Advantage of Online Intervention

The findings that a 4-week online bullying intervention program produced the same results as a 4-week in-person facilitator run socio-emotional skills program is very promising for the NMT program and the bullying intervention field in general. For example, most bullying intervention programs require the use of multiple school resources (e.g., finances, personnel). However, having an online intervention that has been shown to lead to the same improvements in victimization as an in-person intervention can save much needed resources, and school officials can invest resources in other areas. Additionally, most bullying interventions are at least 8-weeks long and have shown little if any decrease in victimization (DeRosier, 2004; DeRosier & Marcus, 2005; Fox & Boulton, 2003a; Fox & Boulton, 2003b). In fact, most have simply stopped these children from deteriorating by resulting in no changes at all in victimization (i.e., Kimber et al., 2008). Therefore, this study's results add to the literature that the NMT and TAU programs developed for use in this study are brief interventions that do, in fact, lead to significant decreases in victimization.

Mindfulness

The second hypothesis that the NMT group, and not TAU, would lead to significant increases in mindfulness was partially supported. In that, both groups led to significant improvement in this area. This can be explained in a variety of ways. First, it could be that both programs taught participants how to increase their awareness of the present moment and be non-judgmental toward thoughts, emotions, and behaviors. Although the NMT group taught these skills directly through mindfulness meditation, the TAU group may have taught these skills indirectly via facilitator modeling, lessons related to compassion (e.g., Neff, Kirkpatrick, & Rude, 2007) and understanding (e.g., empathy), and group processing. On the other hand, mean scores on mindfulness between the groups may not accurately reflect the true gains participants made. As mentioned above, there may have been the "sensitization effect" taking place for the NMT group (Salmilvalli, Kaukianinen, & Voeten, 2005; Smith, Ananiadou, & Cowie, 2003, p. 597). For instance, participants in the NMT group were taught what mindfulness is and participated in mindfulness exercises, which likely led to increased awareness (e.g., Segal et al., 2002) about the construct of mindfulness; leading to accurate reporting of mindfulness and/or a hyper-awareness of their personal mindfulness. On the other hand, the TAU group may not have led to this same level of awareness regarding the construct of mindfulness, and therefore, the participants may have over-reported how mindful they actually were due to a lack of awareness.

Limitations

Sample Issues

The current study has limitations that likely affected statistical analyses, interpretation, and treatment effectiveness. In order to recruit participants, I collected a quasi-convenience sample, in that facilitators at each school were given a definition of bullying and asked to collect 10 children per school. The collection of children was based upon the facilitators' knowledge of children as victims of bullying. A few facilitators asked for referrals from administrators. In both incidences, these children were selected in a subjective manner, rather than using procedures to reduce subjectivity. Therefore, the current study cannot claim random selection, even though children were randomly placed into each treatment group after they were conveniently sampled (i.e., random assignment). This resulted in having some students who did not endorse any bullying victimization/perpetration and others who only endorsed bullying perpetration (i.e., bully). One possible solution for this would have been to implement a stratified purposeful sampling technique (Sandelowski, 2000). With this technique all the students at each school would have been asked to get a signed parental consent. Then those students who have a signed parental consent could participate in teacher nominations and fill out criterion measures for participation in the treatment groups.

Peer nominations could have also been employed to reduce subjectivity in choosing participants, which have been referred to as "the method of choice in identifying bully behavior," (Gottheil & Dubow, 2001, p. 89). Those participants with a certain score on self-report measures, teacher nomination and/or peer nominations would

then be randomly assigned into different treatment groups, resulting in a more homogenous sample of victims. In this way the sample would not necessarily be representative of the actual population, but would be "informationally representative" as each participant would meet certain criteria on bullying victimization and perpetration for inclusion in groups (Sandelowski, 2000, p. 250).

An additional sampling issue that would have helped with interpretation of findings would be to have a no-treatment control group, either in a waitlist format or a group that did something innocuous (e.g., paint, watch movies). Although a waitlist control group was originally proposed in this study, the school officials would not allow children to be identified as having a problem with bullying and then placed into such a group. Therefore, this limitation is one that future researchers need to consider and make appropriate adjustments. For instance, the no-treatment control group could receive something like math or writing tutoring that has nothing to do with bullying intervention. This way the students would be getting help in an academic area rather than one that would overlap with the treatment conditions. If entire classrooms were asked to participate in the study, then the no-treatment control group could continue the original lesson plan and the only adjustments would be to include time for survey administration.

Similarly to the sampling procedures, a major limitation of this study was the number of participants and groups sampled from each school. Because of the nesting that takes place when doing group research, and because of the lack of random selection in the current study, it was important to account for hierarchical structures in the data by using statistical analyses that account for both hierarchical structures and do not need random selection as an assumption to run the analysis (e.g., HLM; Woltman et al., 2012).

In this study there was complex nesting, in that treatments were nested within facilitators, and students were nested within treatment groups. Because of the low sample size, in particular at the second cluster level (i.e., 6 groups total within 3 facilitators), I could not support the use of HLM.

Facilitator Bias

The facilitators who participated in this study were very familiar with the socio-emotional skills group that was used in this study (i.e., TAU treatment group). In fact, they were paid by the school to run these groups as a full-time job. Therefore, they were possibly biased toward the TAU treatment, which could have affected participants' engagement with each intervention. Therefore, it would have been ideal to select unbiased facilitators from the community to run both the NMT and TAU treatment groups. On the other hand, future researchers could address this limitation by adding in treatment validity checks. Unfortunately, the school district would not allow audio or video recording of the sessions, so I could not conduct a proper validity check of treatment adherence. If the NMT were given to individuals to do on their own computers in an individual format, electronic validity checks could be added to ensure participation.

Modes of Administration

Another limitation that could be addressed in future studies is the fact that the NMT and TAU treatments were administered differently (i.e., semi-online versus in-person). Online interventions allow for standardization of treatment, which is why I chose to use this form of delivering the intervention. However, the TAU group was administered in-person, which limited the standardization, and perhaps even allowed for more tailored treatment for each participant. Although the facilitators were all using the

same lesson plans, they did not use scripts to administer treatment. Additionally, they allowed time for processing within the group, which some researchers have found lead to greater improvements on outcome variables (e.g., Hinsz, Tindale, & Vollrath, 1997). One possible explanation for this is that the group helps with information processing (Hinsz et al., 1997), in that it allows other group members to ask questions and transfer information to one another (e.g., Stasser, Taylor, & Hanna, 1989; Hinsz et al., 1997).

Inconsistent Schedule of Treatment Delivery

Another limitation of the current study is the length of time for both the NMT and TAU groups. The 4-week 40- to 50-minute groups were designed in this fashion to fit school/district and facilitator limitations. For example there were days when students were not at school due to a variety of reasons (e.g., holidays, fall break, half-day of school), amount of time facilitators were willing to participate in the study, and ultimately the amount of time that administrators at the school district level set. While Huppert and Johson (2010) found significant improvements in self-reported psychological well-being in their 4-week mindfulness program, this length of time was much shorter than most mindfulness interventions (e.g., Beigel et al., 2009; Lovas & Barsky, 2010; Kabat-Zinn, 1990; Semple et al., 2005). For example, Beigel et al. (2009) who adapted MBSR for teens, conducted 8 weekly groups that were two hours each. On the other hand, Semple and colleagues (2005), who developed MBCT-C (Mindfulness Based Cognitive Therapy for Children), successfully shortened the 8-week MBCT format to 6-weekly 45-minute sessions. However, these mindfulness programs gave homework to their participants (e.g., Beigel et al., 2009; Semple et al., 2005), which further increased the amount of time spent practicing mindfulness exercises. Similarly, in order

to address the complexities of bullying, researchers who have developed social skills training have generally had 8-week-long groups that were 50- to 60-minutes in length (e.g., DeRosier and Marcus, 2005; Fox and Boulton, 2003a). Therefore, it appears that the brief 4-week intervention format may have limited the potential growth in both the NMT and TAU groups and therefore affected the results.

Future Directions

Future studies examining bullying interventions should examine whether the length of time groups meet (i.e., 4-weeks, 8-weeks, 12-weeks) has an impact on outcome scores (e.g., victimization). Furthermore, examining an 8-week version of the NMT program may yield more effective results than the current study in reducing bullying, as it would give participants more time to learn and grasp the material, as well as more time practicing mindfulness exercises.

The addition of homework to the brief 4-week NMT group may also increase its efficacy. Carmody and Baer (2008) found that the more one practices mindfulness at home, the more positive outcomes they generally show. Therefore, mindfulness appears to be dose dependent and adding homework as a way to further engage in the material may lead to more efficacious results. Based on this idea, the NMT program could show greater decreases in bullying and increases in mindfulness. This would include having children fill out homework logs and examining the amount of at-home mindfulness practice as a moderator of treatment effectiveness.

Increasing Sample Size

The sample size of 32 likely led to less power in this study, and, therefore, more of a chance for Type-2 error (i.e. failure to reject the null hypothesis when it should be

rejected; false negatives). Additionally, this small sample size made it difficult to meaningfully interpret results and have confidence that findings are more than random error. In fact, researchers suggest that at least 30 groups (Kreft, 1996) with a minimum of 2 children per group (Hox & Maas, 2001) would be an appropriate sample size. Thus, a minimum of 60 children would be needed to conduct appropriate analyses (e.g. HLM).

Increasing participants would also allow researchers to examine mindfulness as a mediator of treatment. This is important, as I have shown that a mindfulness-based program has the ability to reduce victimization. Examining mindfulness as a mediator would allow researchers to determine its role in change. As noted in chapter 2, mindfulness meditation leads to deliteralization of thoughts (e.g., the idea that thoughts are merely thoughts and nothing more; Hayes & Smith, 2005; Segal et al., 2002) and improvements in emotion regulation (Coffey and Hartman, 2008; Gratz & Tull, 2010; Kumar et al., 2008). When applied to bullying victimization, mindfulness likely addresses the self-defeating thoughts and debilitating emotional arousal that generally lead to ineffectual responding in bullying situations (e.g., Perry et al., 2001). Therefore, having more participants would also allow investigators to examine a path analysis looking at whether mindfulness leads to emotion regulation, and therefore influencing how victims of bullying respond to their bullies.

Curriculum Suggestions

Future interventions for victims should address the basic skills taught in the NMT program. In that, they should address the following areas: 1) teaching mindfulness to help victims gain awareness of aspects related to their victimization, 2) help them decenter (e.g., Hayes & Smith, 2005) from thoughts related to bullying (e.g., "I must fight back,"

"I can't handle this"), and 3) promote acceptance of thoughts and feelings to aid in emotional regulation. This is consistent with findings from previous investigators who found that the most efficacious current interventions have included both cognitive and emotional skills training (e.g., DeRosier & Marcus, 2005, Fox & Boulton, 2003a, Fox & Boulton 2003b

It is essential to continue to examine the NMT program, as it has shown promising results. A randomized control trial examining NMT, TAU, and a no-treatment control group is needed. Specifically, testing NMT against other socio-emotional skills programs that are currently being taught (e.g., DeRosier & Marcus, 2005, Fox & Boulton, 2003a, Fox & Boulton 2003b), and comparing it to a no-treatment control group would allow investigators to examine how the NMT program compares to other treatments and whether this is better than no treatment at all.

Other directions include examining the NMT program with and without mindfulness to see if mindfulness adds to the efficacy of the NMT program. Investigators could examine whether there is an additive affect of the NMT program when combined with current socio-emotional skills and/or the TAU material used in this training. Specifically, I could build in more modules consistent with the modules used in the TAU group. Then, compare the NMT plus social skills to the current version of NMT (without social skills). Additionally, creating more modules for the NMT program that address skills that other researchers have found to reduce bullying might increase its efficacy. For example, Holt and Espelage (2007) found that social support is inversely related to bullying victimization. Moreover, creating an online processing component that is standardized (i.e., pre-recorded processing of an in-person version of NMT) where

participants can listen to the responses of other children could also increase the efficacy of the NMT program. Finally, examining variables such as age, gender, and types of bullying/victimization (e.g., physical, verbal, relational), as they relate to improvements in victimization within the NMT program, is needed.

Conclusion

Overall, the results of the current study are promising for the NMT program as an efficacious treatment for victims of bullying. I found that the NMT treatment held up to the TAU group and that both groups resulted in decreases in victimization and increases in mindfulness. Additionally, the NMT program was the first to address victimization utilizing mindfulness meditation. It is essential to continue to improve, implement, and empirically examine the NMT program with more rigorous standards related to treatment validity, comparison groups, statistical analysis, and sample size.

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APPENDIX A

MEASURES

Demographic Information

Age (Drop down menu): 11 12 13 14 15

Grade: 6 7 8

Gender (Please Select One): Male or Female

Ethnicity (Please check all that apply for you):

_____White
_____African-American
_____Mexican-American/Latino
_____Pacific-Islander
_____European
_____Other (please describe below):
_____
_____

_____American Indian or Alaska Native
_____Asian/ Pacific Islander
_____Indian-American
_____African

Victimization Instrument

DIRECTIONS: Here is a list of things that sometimes happen to kids your age at school. How often did they happen to you at school over the last month 30 days? *Please circle the answer that best describes your experience.*

	Never	Almost Never	Some-times	Almost all the time	All the Time
1. How often do you get hit by another kid at school?	1	2	3	4	5
2. How often do other kids leave you out on purpose when it is time to play or do an activity?	1	2	3	4	5
3. How often does another kid yell at you and call you mean names?	1	2	3	4	5
4. How often does a kid who is mad at you try to get back at you by not letting you be in their group anymore?	1	2	3	4	5
5. How often do you get pushed or shoved by another kid at school?	1	2	3	4	5
6. How often does a classmate tell lies about you to make other kids not like you anymore?	1	2	3	4	5
7. How often does another kid kick you or pull your hair?	1	2	3	4	5
8. How often does another kid say they won't like you unless you do what they want you to do?	1	2	3	4	5
9. How often does a kid try to keep others from liking you by saying mean things about you?	1	2	3	4	5
10. How often does another kid say they will beat you up if you don't do what they want you to do?	1	2	3	4	5

Bullying Scale

DIRECTIONS: Here is a list of things that some kids do at school. How often did you do this at school over the last 30 days? *Please circle the answer that best describes your experience.*

	Never	1 or 2 times	3 or 4 times	5 or more times
1. I pushed, shoved, slapped, or kicked other students.	0	1	2	3
2. I called other students names.	0	1	2	3
3. I said things about students to make other students laugh.	0	1	2	3
4. I teased students.	0	1	2	3
5. I threatened to hit or hurt another student.	0	1	2	3

Mindfulness Measure

We want to know more about what you think, how you feel, and what you do. **Read** each sentence. Then, circle the number that tells **how often each sentence is true for you.**

	Never True	Rarely True	Some-times True	Often True	Always True
1. I get upset with myself for having feelings that don't make sense.	0	1	2	3	4
2. At school, I walk from class to class without noticing what I'm doing.	0	1	2	3	4
3. I keep myself busy so I don't notice my thoughts or feelings.	0	1	2	3	4
4. I tell myself that I shouldn't feel the way I'm feeling.	0	1	2	3	4
5. I push away thoughts that I don't like.	0	1	2	3	4
6. It's hard for me to pay attention to only one thing at a time.	0	1	2	3	4
7. I get upset with myself for having certain thoughts.	0	1	2	3	4
8. I think about things that have happened in the past instead of thinking about things that are happening right now.	0	1	2	3	4
9. I think that some of my feelings are bad and that I shouldn't have them.	0	1	2	3	4
10. I stop myself from having feelings that I don't like.	0	1	2	3	4

Thank you for taking our survey. Your response is very important to us. Please make sure you filled out all the questions. Once you have filled out all the questions, you may let your SEL coach know that you are finished with the survey.

APPENDIX B

PARENTAL CONSENT: WRITTEN

PARENTAL PERMISSION FORM FOR THE NINJA MIND TRAINING PROGRAM AT THE GLENDALE SCHOOL DISTRICT

INTRODUCTION:
The purposes of this form are to provide information that may affect decisions regarding your child's (ward's) participation and to record the consent of those who are willing for their child (ward) to participate in ***the Ninja Mind Training Program*** study. A study that teaches social and emotional skills training for bullying prevention and intervention.

RESEARCHERS:
Terence Tracey, Ph.D. ABPP, of the School of Letters and Sciences, and Brandon Yabko, M.Ed., at Arizona State University have invited your minor child's (ward's) participation in a research study being conducted in the Glendale School District.

DESCRIPTION OF RESEARCH STUDY:
If you decide to allow your child (ward) to participate in this study, your child (ward) will be asked to fill out questionnaires about their current experiences at school and will work in small groups with the school's Prevention Specialists for one period per week for the Fall semester. Your child's (ward) participation will take approximately 40 minutes once per week for 4 weeks. They will then be asked to fill out a brief 5 to 10 minute questionnaire at the start, end, and one-month after the 4-week program. The questions on the questionnaire ask about bullying at school, as well as questions aimed at social and emotional skills that may benefit them at school.

EXCLUSIONARY CRITERIA:
In order for your child (ward) to participate in this study, your child must have a signed written consent from (i.e., this letter) and a written assent (the child/ward will need to agree to participate in this study). He or she will also need to meet certain criteria that indicate a need for social and emotional skills training.

RISKS:
If you do decide to have your child (ward) participate in the study, he/she may face a risk of facing the stigma of someone who needs social skills. The researchers tried to reduce the risks by calling it by a non-stigmatized inducing name (i.e., Ninja Mind Training Program). Additionally, they may face the risk of being placed into the control group that does not receive the training right away. To reduce this risk, the school has agreed to continue to run the training into Spring of 2013, which means that those children placed in the control group will receive the training in the late Fall of 2012 and into Spring 2013.

BENEFITS:
The possible benefits of your child's (ward's) participation in the research are that he or she will develop social and emotional skills that can help them successfully navigate the school environment and reduce bullying they may be currently facing or will face in the future. Specifically, they may learn to focus their attention better in the classroom and at home, reduce stress, successfully navigate bullying situations, and gain friendships.

NEW INFORMATION:
You will be contacted if new information is discovered that would reasonably change your decision about your child's (ward's) participation in this study

CONFIDENTIALITY:
The results of the research study may be published but your child's (ward's) name or identity will not be revealed. In order to maintain confidentiality of your child's (ward's) records, the investigators will work with your child to create a confidential identification code so that your child's (ward's) name will not be linked in any way to the questionnaires they fill out during this study.

WITHDRAWAL PRIVILEGE:
If you choose not to have your child (ward) participate or to withdraw your child (ward) from the study at any time, there will be no penalty. It will not affect your child's (ward's) grades. Likewise, if your child (ward) chooses not to participate or to withdraw from the study at any time, there will be no penalty.

COSTS AND PAYMENTS: There are no costs to participate in this study.

COMPENSATION FOR ILLNESS AND INJURY:
Agreeing to your child's (ward's) participation does not waive any of your legal rights. However, no funds have been set aside to compensate you in the event of injury. In the event that your child (ward) suffers harm as a result of participation in this research project, you may contact (Terence J. G. Tracey, Ph.D., ABPP, at 480 - 965 - 6159).

VOLUNTARY CONSENT:
By signing this form, you are saying 1) that you have read this form or have had it read to you, and 2) that you are satisfied you understand this form, the research study, and its risks and benefits. The researchers will be happy to answer any questions you have about the research. If you have any questions, please feel free to contact Brandon Yabko, M.Ed., at (661) 312 – 9335.

If at any time you feel pressured to allow your child (ward) to participate, or if you have any questions about your rights or this form, please call the Chair of the Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

Note: By signing below, you are telling the researchers Yes, that you will allow your child (ward) to participate in this study. Please keep one copy of this form for your records.

Your child's (ward's) name (please print): _____

Parent: Your name (please print): _____

Your Signature: _____

Date: _____

INVESTIGATOR'S STATEMENT:
I certify that this form includes all information concerning the study relevant to the protection of the rights of the participants, including the nature and purpose of this research, benefits, risks, costs, and any experimental procedures.

I have described the rights and protections afforded to human research participants and have done nothing to pressure, coerce, or falsely entice the parent to allowing this child (ward) to participate. I am available to answer the parent's questions and have encouraged him/her to ask additional questions at any time during the course of the study.

Investigator's Signature: _____

Date: _____

APPENDIX C

PARENTAL CONSENT: VERBAL

Phone Script

Hello, can I speak to (parent's name here)

Hello, My name is (school official's name) and I am calling about getting your permission for your son/daughter (student's name here) to participate in the Ninja Mind Training program. This is part of a research study that teaches social and emotional skills for the purposes of bullying prevention and intervention.

In order for your child to participate in the study, we need to get your verbal permission that they can participate. This is completely voluntary and is up to you whether your child can participate in the study at this time.

In order to allow your child to participate in this program, I have to read the parental permission form. Can I read this to you now?

> If response is "no": Okay, is there a better time to reach you or would you like your son/daughter to not take part in this study?
>
> If response from parent is an indication that they would not like for their child to take part in the study: Thank you for your time and have a nice day.
>
> If response is "yes" or any other indication that this is a good time: proceed to read the parental permission script.

This study is being conducted by Dr. Terence Tracey and his student, Brandon Yabko at Arizona State University and they have invited your child (ward) to participate in a research study they are conducting in the Glendale School District.

If you decide to allow your child (ward) to participate in this study, your child (ward) will be asked to fill out questionnaires about their current experiences at school and will work in small groups with the school's Prevention Specialists for one period per week for the Fall semester. Your child's (ward) participation will take approximately 40 minutes once per week for 4 weeks. They will then be asked to fill out a brief 5 to 10 minute questionnaire at the beginning and end of the 4 weeks, as well as one-month after the 4-week program. The questions on the questionnaire ask about bullying at school, as well as questions aimed at social and emotional skills that may benefit them at school.

In order for your child (ward) to participate in this study, your child must have either a signed written consent from (i.e., this letter) or your verbal consent over the phone, as well as your child/ward will need to agree to participate in this study. He or she will also need to meet certain criteria that indicate a need for social and emotional skills training.

If you do decide to have your child (ward) participate in the study, he/she may face a risk of facing the stigma of someone who needs social skills. The researchers tried to reduce the risks by calling it by a non-stigmatized inducing name (i.e., Ninja Mind Training

Program). Additionally, they may face the risk of being placed into the control group that not receive the training right away. To reduce this risk, the school has agreed to continue to run the training into Spring of 2013, which means that those children placed in the control group will receive the training in the late Fall of 2012 and into Spring 2013.

The possible benefits of your child's (ward's) participation in the research are that he or she will develop social and emotional skills that can help them successfully navigate the school environment and reduce bullying they may be currently facing or will face in the future. Specifically, they may learn to focus their attention better in the classroom and at home, reduce stress, successfully navigate bullying situations, and gain friendships.

You will be contacted if new information is discovered that would reasonably change your decision about your child's (ward's) participation in this study

The results of the research study may be published but your child's (ward's) name or identity will not be revealed. In order to maintain confidentiality of your child's (ward's) records, the investigators will work with your child to create a confidential identification code so that your child's (ward's) name will not be linked in any way to the questionnaires they fill out during this study.

If you choose not to have your child (ward) participate or to withdraw your child (ward) from the study at any time, there will be no penalty. It will not affect your child's (ward's) grades. Likewise, if your child (ward) chooses not to participate or to withdraw from the study at any time, there will be no penalty.

Additionally, there are no costs to participate in this study.

Agreeing to your child's (ward's) participation does not waive any of your legal rights. However, no funds have been set aside to compensate you in the event of injury. In the event that your child (ward) suffers harm as a result of participation in this research project, you may contact (Terence J. G. Tracey, Ph.D., ABPP, at 480 - 965 - 6159).

By giving your verbal consent and saying "Yes," you are saying 1) that you have had this form read to you, and 2) that you are satisfied you understand what was said about the research study, and its risks and benefits. The researchers will be happy to answer any questions you have about the research. If you have any questions, please feel free to contact Brandon Yabko, M.Ed.,. If you have a paper and something to write with handy I can give you his number: at (661) 312 – 9335.

If at any time you feel pressured to allow your child (ward) to participate, or if you have any questions about your rights or this form, please call the Chair of the Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance. Again, if you have a piece of paper and something to write with, I can give you the Chair's number: (480) 965-6788.

I want to be clear, by saying "yes," you are telling the researchers Yes, that you will allow your child (ward) to participate in this study.

So, here is where I need a “yes” or a “no” from you. Do your verbal consent for your child (insert name of child here) to participate in the Ninja Mind Training program? (instructions for school administrator, please circle one of the following answers)

Yes

No

(If parent would like to see the paper form of the parental consent, then the school administrator will collect their information to send the consent to their house)

If you would like, I can send a copy of this form directly to you for your records and/or further review.

Thank you for your time and I hope that you have a nice day.

APPENDIX D

PARTICIPANT INFORMED ASSENT

Participant Assent

Ninja Mind Training Program Study

My name is Brandon Yabko. I work at Arizona State University.

I want you to be part of a research study. I am trying to learn more about what kinds of skills kids your age can use to deal with bullies. I want to try to help kids deal with bullies by learning the right things to say and staying calm.

If you want to be part of the study, you need to fill out a short list of questions that will take 5 to 10 minutes. You would fill them out three times: one time at the beginning of the study, one time at the end of the study, and one time one month after the study is over. You would also go to the Ninja Mind Training group at your school **one time each week for the next four weeks.** During the group, you will watch a video and participate in an activity each day. The group will take 30 to 40 minutes each time you go.

You do not have to be in this study. No one will be mad at you if you decide not to do this study. Even if you start the study, you can stop later if you want. You can ask questions about the study at any time by emailing me at Brandon.Yabko@asu.edu.

If you decide to be in the study, I will not tell anyone else what you say or do in the study. Even if your parents or teachers ask, I will not tell them about what you say or do in the study.

Clicking on the "agree" button below means that:

- **You read this page**
- **You understand what this page says**
- **You want to participate**

If you do not want to be in this study, please click on the "disagree" button.

○ **Agree**

○ **Disagree**

APPENDIX E

IRB APPROVAL

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Terence Tracey EDB
From:	Mark Roosa, Chair Soc Beh IRB
Date:	07/26/2012
Committee Action:	**Expedited Approval**
Approval Date:	07/26/2012
Review Type:	Expedited F7
IRB Protocol #:	1207008038
Study Title:	Examining the Efficacy of the Ninja Mind Training (NMT) Program
Expiration Date:	07/25/2013

The above-referenced protocol was approved following expedited review by the Institutional Review Board.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date. You may not continue any research activity beyond the expiration date without approval by the Institutional Review Board.

Adverse Reactions: If any untoward incidents or severe reactions should develop as a result of this study, you are required to notify the Soc Beh IRB immediately. If necessary a member of the IRB will be assigned to look into the matter. If the problem is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your requested changes to the Soc Beh IRB. The new procedure is not to be initiated until the IRB approval has been given.

Please retain a copy of this letter with your approved protocol.