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When Boys Hurt: A Pilot Study on Adolescent Males with Nonsuicidal Self-Injury

Danessa Mayo
Loma Linda University

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When Boys Hurt: 
A Pilot Study on Adolescent Males with Nonsuicidal Self-Injury

by

Danessa Mayo

A Thesis submitted in partial satisfaction of 
the requirements for the degree of 
Doctor of Philosophy in Clinical Psychology

June 2013
Each person whose signature appears below certifies that this thesis in his/her opinion is adequate, in scope and quality, as a thesis for the degree Masters in Psychology.

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“The present moment is filled with joy and happiness. If you are attentive, you will see it.”
— Thich Nhat Hanh

I would like to dedicate this work to my relentless team of supporters. Dr. Kimberly Freeman, you have always believed in me; and I am eternally indebted to your guidance, compassion, and unwavering support. To my family and friends, thank you for keeping me motivated and never losing sight of my goals and aspirations. Lastly, I would like to dedicate this to my wonderful side-kick and pal, Shortie, my Pembroke Welsh Corgi who recently passed away. Thank you for keeping me company late at night while I did this thesis. You are the best girl ever, and I hope you are running rampant and jolly in Corgi land.
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<td>DBT</td>
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ABSTRACT

When Boys Hurt:
A Pilot Study on Adolescent Males with Nonsuicidal Self-Injury

by

Danessa Mayo

Doctor of Philosophy Graduate Program in Clinical Psychology
Loma Linda University, June 2013
Dr. Kimberly R. Freeman, Chairperson

The current literature on nonsuicidal self-injury among male adolescents is lacking in amount and level of understanding in comparison to females. The purpose of this study is to determine the gender differences in treatment outcomes for adolescents with nonsuicidal self-injury in a Dialectical Behavior Therapy outpatient program. A total of 65 adolescent males and females from ages 12-18 who successfully graduated from the program were available for this study. Results show that the overall group of male and female patients reported a significant improvement in their levels of distress from baseline to post-treatment. Quantitative analyses conducted between male and female patients showed no significant differences in the number of treatment days, age, number of inpatient admissions during the program, number of previous psychiatric hospitalizations, and levels of overall distress at baseline and post-treatment. A case study analysis showed that typical male patient graduates included in the case study largely differed from the typical female patient graduates on some key demographic information. These included sexual orientation, history of abuse, history of abandonment, academic functioning, family history of mental illness, and history of inpatient psychiatric hospitalizations. Lastly, post-treatment outcomes show that none of the males indicated
any psychiatric hospitalizations or outpatient treatment after being discharged from the program in comparison to 15.4% and 84.6% of females who reported post-treatment psychiatric hospitalization and outpatient treatment, respectively. The current study was able to provide preliminary support for the application of DBT for the adolescent male population. DBT is a powerful treatment approach that is able to successfully target both the male and the female adolescent population with NSSI. Future research should focus on the influence of group dynamics among patients in the program and gender differences in help-seeking behaviors.
CHAPTER ONE
INTRODUCTION

Nonsuicidal self-injury (NSSI) is the act of deliberately harming one’s body without the intention of death (Favazza, 1998) and is considered a maladaptive way of regulating one’s emotions. NSSI is a rising trend among adolescents and is recognized as one of the leading causes of adolescent death and injury (Nock, Borges, et al., 2008). The rising prevalence rates of NSSI among adolescents are of such significant concern that the American Psychiatric Association has considered it as a potential disorder to be added to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). It has been reported that the rate of NSSI has steadily increased by birth cohorts (Alderson, 1974; Garrison et al., 1993; Kessler, Borges, & Walters, 1999; Muehlenkamp & Gutierrez, 2004; Olfson, Gameroff, Marcus, Greenberg, & Shaffer, 2005). The current lifetime prevalence for cutting, the most common method of NSSI, is 11.4% (Laukannen et al., 2009). In the US, the prevalent age of onset for NSSI is around 12 to 14 years old (Jacobson & Gould, 2007). Despite rising prevalence rates and an emerging number of research studies on NSSI focusing on adolescents, most of the studies that have been conducted are based on predominantly female samples. Although females are thought to be at a higher risk for engaging in NSSI due to comorbid depression, eating disorders, and interpersonal problems (e.g., conflicted romantic relationships), little is know about their male counterparts (Wichstrom & Rossow, 2002).

There is ongoing interest in developing greater information on the forms and reasons for NSSI among adolescents. Findings show that NSSI is a coping strategy that offers immediate physical or emotional release, which is often the desired goal of those
who engage in this behavior. Some initial research findings have sought to examine the issue of gender in NSSI. In terms of similarities, males and females have been found to engage in similar forms of NSSI (i.e. cutting, self-hitting). Their purposes or functions and risk factors have also shown to be similar. Both males and females have endorsed engaging in NSSI for purposes of emotional regulation, avoidance, pain relief, and self-punishment (Claes, Vandereycken, & Vertommen, 2007). Preliminary findings also show that the main predictors for NSSI in males are similar to females. These findings consist of childhood experiences (i.e. neglect, physical abuse, emotional abuse, sexual abuse), coping mechanism problems (i.e. low self-esteem, self-loathing, emotional pain relief, self-punishment, control), and maladaptive communication (i.e., a cry for help or to get attention) (Claes et al., 2007).

However, some gender differences in NSSI have been noted. In contrast to females, males tend to injure at a more severe degree, are more likely to engage in NSSI in a more public manner, and have less concern about body disfigurement (Claes et al., 2007; Hawton, Fagg, Simkin, Bale, & Bond, 2000; Marchetto; Muehlenkamp & Gutierrez, 2004; Whitlock, Muehlenkamp, & Eckenrode, 2008). In terms of NSSI behaviors, males differ from females in their degree of NSSI severity. Such behaviors include burning one’s skin or engaging in high-risk behaviors to intentionally cause bodily harm (e.g., joy-riding, fights). Males also differ from females in their method of engaging in NSSI. While females prefer to engage in NSSI in a more secretive manner, males do not share such concerns about privacy. In fact, males have been reported to have a higher tendency to indicate that their NSSI behaviors were for attention-seeking purposes (Claes et al., 2007). Based on these initial findings that indicate some gender
variability in NSSI, it is to our advantage to learn more about the pathology of NSSI specifically for males and females.

While NSSI is a maladaptive behavior that has been associated with many psychiatric diagnoses (e.g., depression, anxiety disorder), it is a diagnostic criterion that is found in most patients with borderline personality disorder (BPD) (Favazza, 1998). It has been shown that most patients with a BPD diagnosis are characterized by a pervasive and persistent pattern of emotional dysregulation, impulsivity, disturbed cognition, difficulties with interpersonal relationships, and a negative self-image (Ascher, Farmer, Burns, & Angold, 1996; Burlingame et al., 2001). The reasons for engaging in NSSI given by patients with BPD and undiagnosed patients (adults and adolescents) who only have NSSI behaviors were found to be highly similar. Like patients with only NSSI behaviors, BPD patients were reported to engage in NSSI primarily for immediate tension relief from strong negative emotions and intrapersonal distress (Brown, Comtois, & Linehan, 2002; Busch & Horwitz, 2004; Nock & Prinstein, 2004). BPD patients were also reported to be at an increased risk for engaging in impulsive behaviors that tend to result in accidents, unsafe sexual behaviors, and substance abuse (Groves, Backer, van den Bosch, & Miller, 2012; You, Leung, Lai, & Fu, 2012). In addition, it has been reported that patients with BPD have significant difficulties with emotional dysregulation (Cappa, Abutalebi, Demonet, Fletcher, & Garrard, 2008; "National Institute of Mental Health. (2011). Depression,") and that affective instability was a strong and consistent predictor of BPD symptomology, which makes it a core feature of the disorder (Whitlock, Eckenrode, & Silverman, 2006).
Despite the development of research examining the role of emotional dysregulation and other functions of NSSI among females, the information currently available on males is scant. Some studies have reported that NSSI occurs primarily among the female population due to its shared symptomology with BPD (Graff & Mallin, 1967; Herpertz, 1995). However, current literature has shown that NSSI might be more common among males than previously thought (Laukkanen et al., 2009; Lloyd-Richardson, 2010). Hence, this study is primarily interested in developing a greater understanding of adolescents with NSSI in the areas of intrapersonal distress, emotional dysregulation, and high-risk behaviors.

Apart from the various modes of therapy applied to NSSI, such as Behavioral Activation Therapy for Depression (BATD) and Acceptance Commitment Therapy (ACT), Dialectical Behavior Therapy (DBT) is the treatment approach that has generated the most empirical evidence among the behavioral treatments for NSSI (A. Miller, Rathus, Linehan, Wetzler, & Leigh, 1997; Rathus & Miller, 2002). Further, DBT has been adapted for use with adolescents (Rathus & Miller, 2002), though it was originally developed to treat adult BPD patients with NSSI (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991). DBT is based on behavioral science, dialectics, and mindfulness, which highlight the importance of adaptation and change. It targets affective and behavioral dysregulation, which is a prominent area of deficit in most patients with BPD. Randomized controlled trials (RCT) have shown greater reductions of NSSI behavior and suicidal ideation among DBT-treated patients versus patients undergoing treatment as usual (Linehan et al., 1991; Linehan, Heard, & Armstrong, 1993; van den Bosch, Koeter, Stijnen, Verheul, & van den Brink, 2005). However, these RCTs were based on adult
populations, which leave the overall effectiveness of DBT on adolescents to be inconclusive at this time. Currently, there are some preliminary studies on DBT adapted for young children (Muehlenkamp, Ertelt, Miller, & Claes, 2011) and adolescents that have shown promising results (A. Miller, Wyman, Huppert, Glassman, & Rathus, 2000; Rathus & Miller, 2002). These studies have been implemented in a wide range of treatment settings (e.g., inpatient, outpatient, residential, day treatment, and juvenile detention centers) that generally demonstrate the effectiveness of DBT for various populations.

One consistent problem with the DBT studies on adolescents who engage in NSSI is that they are either based on a highly female or all-female sample (Bohus et al., 2004; James, Taylor, Winmill, & Alfoadari, 2008; Katz, Cox, Gunasekara, & Miller, 2004; Rathus & Miller, 2002; Woodberry & Popenoe, 2008). While there is no current evidence suggesting that DBT is not an effective treatment for adolescent males with NSSI, the generalization of such findings to males may be questionable given the gender differences that are left unexplored during treatment. Further, the current available research information about DBT application on a predominantly or all-male population are based on adult males in either correctional facilities or forensic treatment settings (Evershed et al., 2003; Shelton, Sampl, Kesten, Zhang, & Trestman, 2009; Tennant, 2010). The limited research that does focus on males with NSSI is even more restricted in that it is not specific to DBT and is also based on juvenile delinquents (Ireland, 2000), thereby ignoring non-delinquent adolescent males.
Given the above, the purpose of this study is to examine the effectiveness of DBT on adolescents with NSSI. In addition, we are interested in identifying the key differences between adolescent males and females on patient demographics. We are also interested in examining intrapersonal distress, high-risk behaviors, and NSSI presentation. As such, the specific aims of this study are as follows:

**Aims**

1. To determine the overall treatment effectiveness of a modified DBT program for adolescents with NSSI.
2. To examine possible gender differences in baseline and post-treatment outcomes.
3. To provide an analysis of treatment progress as shown by the trends of overall levels of distress among adolescent males and females. This information would identify critical periods in treatment that reflect important indicators of improvement in overall functioning.
4. To provide a descriptive case study profile of the typical male patient graduates from the program compared to females. This would include factors such as age ranges, ethnicity, family risk factors, and post-treatment functioning.
CHAPTER TWO

LITERATURE REVIEW

The following literature review will discuss important background information regarding NSSI and current research information in the field. Following this information, a focused examination of research on adolescent males who engage in NSSI as well as the relationship between NSSI and borderline personality disorder will be made. An overview of DBT, research findings on adolescents with NSSI and the male population, and current theoretical models on NSSI will be covered. Lastly, current limitations to the research on adolescent males with NSSI will be addressed in order to support this study’s research goals.

Nonsuicidal Self-Injury

Nonsuicidal self-injury (NSSI) is defined as a maladaptive coping mechanism used to regulate an overload of negative emotions and stress (Guertin, Lloyd-Richardson, Spirito, Donaldson, & Boergers, 2001). NSSI is distinct from suicide due to the lack of suicidal intent. NSSI is recognized as an intentional act to cause physical harm to one’s body without the intention of death (Borges, Anthony, & Garrison, 1995; Nock & Favazza, 2009; Nock, Wedig, Janis, & Deliberto, 2008). Of the ultimate objective of the behavior is to gain control over one’s emotions.

Types of NSSI

There are many forms of NSSI. These include cutting, scratching, burning, hitting, pulling out one’s hair, self-tattooing, picking at wounds to prevent from healing,
inserting objects under the nails or skin, biting, and drawing blood out. Of the various methods of NSSI, cutting has been cited as the most common type for females (Laukkanen et al., 2009; Laye-Gindhu & Schonert-Reichl, 2005). Apart from cutting, males have also been most often reported to engage in hitting, biting, punching, and burning themselves. This has often posed problems for assessment in some studies because violent and aggressive behavior in males are perceived as common and not necessarily as an indication of NSSI (Laye-Gindhu & Schonert-Reichl, 2005). The problem of only including cutting in some research studies on NSSI limits the identification of other behaviors reported as more common among males (Bowen & John, 2001). The scope of research on NSSI may have been limited in part because it has failed to incorporate the influence of gender role norms in the types of behaviors that males and females might more likely engage in.

The variety of NSSI methods available has made the identification of NSSI problematic and resulted in a lack of general consensus regarding the proper terminology and diagnostic criteria of NSSI. Multiple terminologies have been used in research. These include self-injury, deliberate self-harm, parasuicide, and self-mutilation. These multiple terminologies have caused discrepancy and slow growth in the literature. This has often led some studies to focus on certain self-injurious behaviors, predominantly cutting (Laukkanen et al., 2009), or exclude behaviors such as self-poisoning, substance use, or eating disorders. It is evident that in order to develop a more descriptive picture of NSSI among males and females, the first step is to determine a universal term that would be used in future research findings and develop a set criterion for NSSI behaviors. The
delineation of specific criteria, such as the types of NSSI, frequency, severity, and intentionality, will foster a more consistent and informed identification of the behavior.

**Reasons for NSSI**

For most individuals with NSSI, the intensity of the pain experienced functions as a distraction to one’s problems, and this causes a release of emotional stress. Previous assumptions indicated that NSSI behaviors were for “manipulative and attention-seeking” purposes (Graff & Mallin, 1967), but more recent studies have denoted that the act of NSSI was not a “cry for help”, but rather a “cry of pain” (Williams & Pollock, 2000). A study on a high school sample of Canadian students, ages 13-18, reported that 15% of the students surveyed had previously engaged in NSSI, (Laye-Gindhu & Schonert-Reichl, 2005) and described the act as a form of affect regulation. NSSI was also reported as a means to reduce stress, anxiety, feelings of depression, anger, self-punishment, loneliness, and to distract from problems (Nock, Prinstein, & Sterba, 2010). The most common problems cited by adolescent males with NSSI were related to family relationships, work, or school (Hawton et al., 2003). Problems associated with housing, alcohol and drugs, and finances were also found to be more common among adolescent males than female adolescents with NSSI.

Misconceptions regarding the purposes of NSSI has created a detrimental effect on its awareness and treatment development (Jeffery & Warm, 2002; Laye-Gindhu & Schonert-Reichl, 2005). Some clinicians have reported feeling unsympathetic to patients who come in to the hospital for NSSI because of the negative attributions associated with self-inflicted injuries. In comparison to other patients involved in accidents, those with
NSSI were seen to have chosen self-inflicted pain and were therefore responsible for their actions. The lack of intent to die made the clinicians question the underlying purposes of the behavior (i.e., attention-seeking) (Ramon, 1980; Skegg, 2005).

While NSSI might be helpful to some individuals who reportedly experience emotional relief directly after engaging in the behavior, it has also been reported to develop as a dangerous and addictive behavior (Nixon, Cloutier, & Aggarwal, 2002). A theory on the functions of NSSI has suggested that such behaviors can become habituated over time, and the increased tolerance for pain can result in more daring forms of NSSI behaviors (Selby, Bender, Gordon, Nock, & Joiner, 2012). In addition, NSSI among adolescents may be an initial attempt at a suicidal gesture, as NSSI has also been shown to be a significant predictor of future suicidal attempts (Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006). Constant bodily abuse might present an increased risk in future suicidal attempts or accidental death among individuals who underestimate the lethality of their NSSI behaviors. Recent studies have also shown that the number of methods for NSSI and the number of years engaged in NSSI are related to the number of lifetime suicide attempts (Andover & Gibb, 2010; Nock et al., 2006) thereby further emphasizing the need for treatment.

**Prevalence Rates of NSSI**

NSSI affects adolescents from diverse ethnic backgrounds (Hawton et al., 2003; Hilt, Nock, Lloyd-Richardson, & Prinstein, 2008; Laye-Gindhu & Schonert-Reichl, 2005), age (Hilt, Nock, et al., 2008), and socioeconomic status (Yates, Tracy, & Luthar, 2008). And, it is thought to be highly prevalent among females as compared to males in
clinical settings (Patton et al., 1997; Rodham, Hawton, Evans, Exist, & Animals, 2005; Ross & Heath, 2002). It has been shown in multiple treatment settings that a majority of individuals who engage in NSSI are more likely to be Caucasian (Gratz, 2006; Guertin et al., 2001). Although NSSI has been linked with clinical disorders such as depression, BPD, and bipolar disorder (Favazza, 1998; Ghaziuddin, Tsai, Naylor, & Ghaziuddin, 1992; Haavisto et al., 2005; Haw, Hawton, Houston, & Townsend, 2001; Rodham et al., 2005; Zlotnick, Mattia, & Zimmerman, 1999), it has also been common in non-diagnosed adolescent populations (Bjärehed & Lundh, 2008; Laye-Gindhu & Schonert-Reichl, 2005).

The lifetime prevalence rate of NSSI varies depending on the study, but it has been found to occur in approximately 7% of pre-adolescents (Lloyd-Richardson, 2010), and 13-23% of adolescents in North America (Jacobson & Gould, 2007). The lifetime prevalence for NSSI in high school populations outside of North America was 6.9% in the UK (Hawton et al., 2002), 6.2% in Australia (De Leo & Heller, 2004), and 7% in Sweden (Marklund, 2001). The slight variation in rates of NSSI brings up issues of culture, protective factors, and risk factors that might be unique to a society, such as religious beliefs and views on self-injury.

A meta-analysis of NSSI studies predominantly held in North America reported that while 13% of community samples of adolescents were reported to engage in NSSI (Evans, Hawton, Rodham, & Deeks, 2005), the rates among psychiatric inpatient adolescents in the US are reported be around 30% to 40% (Jacobson, Muehlenkamp, Miller, & Turner, 2008). This shows that most of the adolescents who engage in NSSI
behaviors might present themselves to psychiatric inpatient treatment, which is a costly issue for most hospitals and insurance providers.

In a US community sample, a study on the yearly rate of NSSI among adolescent males (6.8%) and females (8.1%) in a junior high school population reported no gender differences (Hilt, Nock, et al., 2008). This finding was supported by several other studies on adolescent community samples in different countries such as Sweden (Bjärehed & Lundh, 2008) and Finland (Laukkanen et al., 2009). However, gender differences among adolescents with NSSI have been shown to occur in psychiatric treatment settings. Based on two 11-year study periods (1985-1995, 1990-2000) by Hawton et al. (2000; 2003) in Oxford, England, the number of adolescent females who have been referred for treatment in an emergency psychiatric service have been consistently higher than males. According to the two study periods, females consisted of 73.1% of the patient population in 1985-1995 and 77.6% in 1990-2000, greatly outnumbering the total number of adolescent males aged 19 and under. The disparity in the number of males being referred to psychiatric treatment, despite the similar prevalence rates found between gender in community samples show that adolescent males do not receive the same level of identification and treatment that adolescent females do for NSSI behaviors. Furthermore, such prevalence rates among adolescents in psychiatric services have been supported in international studies such as Canada (Cloutier, Martin, Kennedy, Nixon, & Muehlenkamp, 2010) and Belgium (Claes et al., 2007).

A key finding in the Hawton et al. (2000; 2003) studies focused on the change in NSSI gender ratio over time. The gender ratio between male and female patients with NSSI behaviors under the age of 20 showed a significant decline as they reached young
adulthood (Hawton et al., 2000; 2003). This indicates that as adolescents age, the prevalence of NSSI among males and females in the psychiatric setting become more similar. While the Hawton et al. (2000; 2003) studies show increased likelihood of treatment-seeking among older adolescent males, some concern remains for those male adolescents who’s frequent NSSI might result in accidental death. These findings highlight a crucial concern regarding NSSI among the adolescent male population and the significant gap in its early identification and treatment.

**Current Research on Adolescent Males with NSSI**

Most of the existing literature today on male adolescents with NSSI are based on those in juvenile and detention centers (Claes et al., 2007; Ireland, 2000). A commentary by Bach-Y-Rita on the gender ratio proportions of males and females noted that while most of the research on NSSI among females are from clinical settings, most of the research on males with NSSI are found in police records (Chowanec, Josephson, Coleman, & Davis, 1991). A sample of incarcerated adolescent males has shown that NSSI mostly occurs in the early period of the juvenile male’s custody (Ireland, 2000). Those who committed multiple episodes of NSSI were found to be the group who served longer sentences, and had a higher percentage of committing violent acts and other crimes. In a study on adult male prison inmates with antisocial personality disorder and NSSI behaviors, NSSI frequently involved males with aggressive behaviors toward their own bodies (i.e. rage and outbursts, drug abuse, self-tattooing) (Virkkunen, 1976). Prison inmates who engaged in NSSI were more likely to report having an alcoholic father, had higher levels of anxiety, and showed a greater number of attempts to gain admission into
the psychiatric department. Most of the prison inmates with NSSI found the prison setting and its environment too confining, which was determined to be a predictive factor of NSSI within the sample (Virkkunen, 1976).

Several studies found support for the idea of impulsivity being associated with NSSI (Lacey & Evans, 1986; Matsumoto et al., 2005; Zlotnick et al., 1999). Male juvenile inmates with NSSI were found to have high impulsive tendencies as demonstrated by early-age onsets of smoking, drinking, and reported frequent use of illicit drugs (Matsumoto et al., 2005). A comparison of hospitalized forensic adolescent males with and without NSSI revealed that those with NSSI were more likely to engage in aggressive behaviors toward others (i.e. verbal aggression and physical aggression toward objects and people). This highlights a lack of behavioral regulation (Hillbrand, Krystal, Sharpe, & Foster, 1994) that is also seen in patients with BPD.

Treatment studies for adolescent males with NSSI and other related behavioral problems (i.e. conduct disorder, aggression among youth and antisocial behavior) have been suggested. These suggestions include mode deactivation therapy (Apsche & Bass, 2006), multisystemic therapy, cognitive behavior therapy, and dialectical behavior therapy (DBT; A. Miller et al., 1997; Rathus & Miller, 2002). This study will focus on the application of DBT for adolescents with NSSI.

**NSSI and Borderline Personality Disorder (BPD)**

NSSI is one of the diagnostic criteria for borderline personality disorder (BPD), and studies on adolescents with NSSI have shown a strong association for its comorbidity (Nock et al., 2006). BPD is a form of psychopathology that is typically characterized by
an individual’s pervasive pattern of emotional instability, problematic interpersonal relationships, negative self-image, and behavioral impulsivity (Ascher et al., 1996). Although not all individuals diagnosed with BPD engage in NSSI, studies have extensively reported on the similarities and prevalence of BPD characteristics among adolescents with NSSI (Crowell et al., 2008; Deykin, Hsieh, Joshi, & McNamarra, 1986; Hilt, Cha, & Nolen-Hoeksema, 2008; Sen, 2004). However, little is known about how these similar characteristics can distinctly explain NSSI. A growing number of studies (Selby et al., 2012; You et al., 2012) have been devoted to exploring the relationship between BPD and NSSI, as the distinction holds relative influence on the decision of whether or not NSSI warrants its own diagnostic category on the DSM-5.

While suicidal ideation is also a symptomatic behavior experienced by individuals with BPD diagnosis, it is considered distinctly separate from NSSI behaviors as it is thought to function under a different set of motivations that do not include the intention to die. BPD patients are thought to engage in NSSI for other various motivations, such as self-punishment, a way to control others, a way to reduce feelings of anxiety or pain, a way to distract oneself, and means of regulating their emotions and feelings of suicide (Freedenthal, 2010). Several studies have explored the idea of different BPD subtypes, as the symptomology presented by BPD patients tend to be highly heterogeneous (Dorland, 2011; Fleischhaker et al., 2011). This adds to the complexity of diagnosing BPD, which poses a significant roadblock to the development of effective therapeutic interventions that are applicable for most patients who present with such diagnostic features.

According to the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association, [APA], 2000), approximately
75% of patients diagnosed with BPD are females. However, the reported prevalence in the general population was considered similar for both males and females (Leichsenring et al., 2011). The disparate prevalence rates in the research literature on BPD are mostly attributed to the number of patients who often utilize mental health treatments for the disorder, which tends to be predominantly female. Adult males with BPD diagnoses reportedly drop out of treatment earlier and do not seek psychotherapy or pharmacotherapy at the same rate as adult females (Goodman et al., 2010).

**BPD in Adolescents**

The reported prevalence rate of BPD features or traits among the adolescent population has been questionable (Jacobson et al., 2008; Nock et al., 2006). While a strong body of literature has examined the occurrence of NSSI among adult BPD patients, an ongoing debate on the appropriateness of diagnosing personality disorders before adulthood (Nock et al., 2006) has impeded such substantive claims for an accompanying BPD diagnosis among adolescents with NSSI. Nonetheless, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000) has suggested that personality disorders may be diagnosed before adulthood when “maladaptive personality traits appear to be pervasive, persistent, and unlikely to be limited to a particular developmental stage or an episode of an Axis I disorder.” This has allowed for the diagnosis of BPD traits among adolescent patients in some clinical settings, and such decisions are mostly left to clinical judgment. Based on what is available in the literature, the prevalence rates among adults vary in terms of community samples (0.7% to 1.8%) (Torgensen, 2001), outpatient mental health (10% to 23%), and
psychiatric inpatients (20%) (DSM-IV-TR, 2000). In comparison, recent studies that have applied the BPD diagnostic criteria on children and adolescents reported a prevalence rate of 10% and 18% with adolescent males and females respectively (Wahlin & Deane, 2012), although their findings were interpreted as limited by study design (Heath, Baxter, Toste, & McLouth, 2010). The argument for diagnosis of BPD among adolescents may be helpful for early intervention and skill-building, but the controversial issue of possibly attributing normal child and adolescent developmental stages to psychopathology remains problematic for both researchers and clinicians (Gilat, Ezer, & Sagee, 2011).

**Dialectical Behavior Therapy (DBT)**

Dialectical Behavior Therapy (DBT) (1993a; Linehan et al., 1993) is a cognitive-based psychotherapy that was specifically constructed for patients diagnosed with BPD in an outpatient facility. Some patients with BPD have difficulty with regulating their emotions, which is supported by current theoretical models on NSSI, which mostly cite that self-harm behaviors are maladaptive forms of coping with high emotional distress. DBT focuses on the following skills and modules: (1) emotion regulation, (2) interpersonal effectiveness, (3) distress tolerance, (4) and mindfulness. A core principle of DBT asserts that if individuals can develop skills in managing the key symptoms of BPD, a reduction of life-threatening behaviors such as NSSI will be shown.

DBT is based on the biosocial theory (Linehan, 1993b), which assumes a transactional relationship between the individual and the environment. The biosocial theory asserts that personal problems specific to BPD traits are due to both biological and environmental factors. The two main areas where personality and cognitive disorders
originate are through emotional dysregulation and an invalidating environment. A person who is emotionally dysregulated is biologically wired to be highly sensitive to their surroundings, engages in intense emotional responses, and returns to homeostatic levels after a longer duration of time. An invalidating environment is a situation in which there is no acknowledgement of individual experiences, and there is a tendency to negate or devalue others’ feelings or opinions (A. Miller, Rathus, Linehan, & Charles, 2007).

Miller & Rathus (2002) created an adaptation of DBT for adolescents (DBT-A). Apart from the direct application of the major components of DBT, “Walking the Middle Path” is a module that was specifically developed for DBT-A (A. Miller et al., 2007). This module incorporates the ideas of validation of oneself and others, in order to help parents and adolescents communicate in a productive manner that does not involve power struggles. A dialectical stance is taken, where two people who have different opinions about a similar event or object can converse (rather than debate) and find a common ground in order to seek the greater truth.

**DBT Applied to Adolescents with NSSI**

The application of DBT to adolescents with NSSI is currently limited but growing. Inpatient studies on using DBT with suicidal adolescent inpatients with BPD resulted in a significant decrease in hospitalizations and a greater treatment completion rate than treatment as usual (TAU) (Rathus & Miller, 2002). They also found a marked decline in suicidal ideations in the DBT group, despite having higher severity of depression during baseline. In an evaluation of DBT on suicidal adolescent inpatients in
comparison to TAU, the DBT group had a significant decline in behavioral problems and a reduced number of incidents in the ward in comparison to TAU (Katz et al., 2004).

A pilot study of a modified DBT program in a community treatment setting was implemented for adolescents with NSSI, in which parents participated in family therapy (Nixon, McLagan, Landell, Carter, & Deshaw, 2004). The authors found that the treatment setup enabled parents to have a better understanding of their children’s behaviors and created effective communication among families and their children. Pre- and post-treatment evaluations of a community study on DBT with 16 female adolescents engaged in NSSI showed a significant decrease in depression, sense of hopelessness, and self-harm behaviors (James et al., 2008). Although the study was limited in its scope due to the small sample size, significant reductions of NSSI and an increase in adaptive behavioral and coping skills did occur.

An application of DBT to adolescent females in a residential treatment setting showed significant reductions in patients’ withdrawal from the program, in the number of inpatient days, and in the duration of physical restraints and seclusions (Sunseri, 2004). DBT was assumed to have increased participants’ motivation for treatment and to have effectively provided valuable coping skills to the participants for more adaptive emotional regulation.

A recent meta-analytic study by Quinn (2009) shed light on the effectiveness of DBT for adolescents with NSSI and suicidal ideation in comparison to other forms of treatment. DBT was determined to be an effective treatment approach for adolescents engaged in NSSI because it targeted the same maladaptive coping strategies that have been found in adults with BPD. By correcting the maladaptive coping strategies early on,
it was indicated that adolescents would have a greater chance of improvement and overall skill building.

**DBT on Males Only**

In regard to research on DBT specific to a predominantly male or all-male sample, the literature shows that there are no studies based specifically on adolescent males only at this time. The only available research information about DBT application to a predominantly or all-male population is currently based on adult males in either correctional facilities or forensic treatment settings (Evershed et al., 2003; Shelton et al., 2009; Tennant, 2010). A treatment comparison study on DBT \((n = 8)\) versus TAU \((n = 9)\) was reported for a group of adult male forensic patients in a high security hospital (Evershed et al., 2003). Following the 18-month treatment, the DBT group reported significantly greater improvements compared to TAU. Although the study was unable to detect significant group differences in the decrease of violence-related behaviors after treatment possibly because of the low sample size, they did report a significant reduction in the seriousness of violent behaviors in the DBT group in comparison to TAU. The DBT group also reported an increase in behavioral self-management skills learned, where five of the DBT participants decided to start their own self-help group using the DBT skills that they learned in treatment. This shows support for the post-treatment retention of DBT skills learned in treatment among the male population, which confirms that DBT may be appropriate and applicable for use by both male and female patients.

DBT has also been suggested as a possible intervention for partner abusive males, as a study showed some trait similarities between partner abuse males and patients with
BPD (e.g., anger outbursts, emotion dysregulation, and NSSI behaviors) (Waltz, 2003). Partner abusive males were also reported to have similar patterns of treatment compliance compared to BPD patients. These patterns included high treatment drop out rates (Daly & Pelowski, 2000), poor treatment compliance (Waltz, 2003), and high recidivism rates of behavioral dysfunction. Similar to BPD patients, partner abusive males were reported to be more likely to require multi-diagnostic treatment procedures due to comorbid depression, substance abuse, and Axis II disorders. All of these have been noted as specific concerns that are addressed in DBT (Waltz, 2003). Overall, the sparse amount of current studies that are specific to DBT in an all-male adolescent population shows that there is significant room for the development of more research information in this area.

**Current Theoretical Models on NSSI**

There are currently many theoretical models in the literature that have been developed to understand the functions of NSSI. One of the most prominent theoretical models suggested is the affect regulation model. The affect regulation model holds a psychodynamic and object-relations theory approach to the understanding of NSSI. The affect regulation model views NSSI as a form of expressing uncontrollable emotions of anger, anxiety, or pain. Individuals engage in NSSI because it alleviates their feelings of high arousal or negative affect (Favazza, 1992; Gratz, 2003). Feelings of anger or frustration impel the individual to regain internal balance, and upon engaging in NSSI, the individual experiences a sense of relief (Klonsky & Muehlenkamp, 2007). Literature shows that most of the reasons for NSSI (i.e., to reduce tension, to feel something, even pain) provide strong support for the affect regulation model as indicated by psychiatric
inpatient and outpatient studies (Briere & Gil, 1998; Herpertz, 1995; Klonsky, 2007; Laye-Gindhu & Schonert-Reichl, 2005; Nixon et al., 2002). However, while the affect-regulation model might be strongly supported in numerous studies on NSSI, it should be noted that most of these findings are based on predominantly female studies. Again, this brings up issues of external application to adolescent males. Also, the lack of studies specifically on adolescent males with NSSI does not rule out the possibility that different theoretical models might better explain males’ NSSI behaviors.

A recent addition to the growing interest in understanding NSSI is the four-function model (Lloyd-Richardson, Nock, & Prinstein, 2009). It is a model for adolescents with NSSI that attempts to explain the maladaptive behavior based on the behavioral/environmental model and the affect regulation model (Nock & Prinstein, 2004, 2005). According to the four-function model, NSSI behaviors are 1) either positive or negative reinforcement, and 2) the consequences it brings directly affects either the automatic (i.e. internal) or social (i.e. external) state. This results in four types of NSSI functions: 1) automatic-negative reinforcement, 2) automatic-positive reinforcement, 3) social-negative reinforcement, and 4) social-positive reinforcement (D. Miller, Brock, & Lieberman, 2010). For instance, an individual might engage in NSSI for automatic-negative reinforcement, which is commonly indicated as a way to “stop bad feelings” or “to relax”. In this manner, the four-function model suggests that an individuals’ reasons for engaging in NSSI could differ, despite using similar methods of self-injury. In comparison to the affect-regulation model, the four-function model accommodates for greater individual differences (i.e. gender), which could explain adolescent male NSSI better than the affect-regulation model.
A review of the theoretical models of NSSI has shown that there could be multiple co-occurring functions of the behavior (Klonsky, 2007). With adolescent males, it is likely that any of the theoretical models could explain why they engage in NSSI. A study on adolescents in a juvenile correctional facility found that males were more likely to indicate that they have engaged in NSSI to “stop bad feelings”, “feel something”, and to inflict a form of self-punishment (Penn, Esposito, Schaeffer, Fritz, & Spirito, 2003). This further strengthens the support for the affect regulation model. However, we refrain from making any conclusion remarks at this time, given the limited information available about adolescent males’ NSSI behaviors.

Most interventions that have been implemented for the treatment of NSSI are based on cognitive and behavioral therapy approaches, as they effectively address the maladaptive thoughts and behaviors that are characteristic of patients with NSSI. Through focus on emotional regulation and skill building, patients are taught more adaptive ways of coping with their problems.

**Current Research Limitations**

Although previous studies have shown the effectiveness of Dialectical Behavior Therapy (DBT) for adolescents, the gender discrepancy in research studies on NSSI; and treatment focusing on the female population remains to be the apparent norm (Bowen & John, 2001). There is a limited amount of research information on male adolescents with NSSI in comparison to females due to underrepresentation in clinical settings and the difficulty of identifying NSSI and related symptomology in males. DBT has been predominantly used on female adult outpatients, but there is a recent growth in research
on DBT treatment for adolescents (i.e., Miller et al., 2007). Although the application of DBT on adolescents with NSSI has been promising, the literature still warrants more evidence in the form of outpatient programs. The implementation of randomized controlled trials (RCTs) for DBT on adolescents would further support its evidence-based treatment for NSSI.

There are currently no DBT studies focusing on an all-male adolescent population, and there is only a small amount of information about adolescent males with NSSI, which is limited to juvenile and forensic patients. These findings indicate that there is a large gap in the literature of NSSI, and DBT treatment specific to males is warranted to provide further evidence of its effectiveness. Studies on DBT for adult male populations are the most relevant as of date, but they are very limited due to small sample sizes and issues regarding their generalization to non-forensic or correctional settings.

The goals of this study are to focus on the treatment effectiveness of DBT-A on both male and female adolescents, explore possible gender differences, and present a case study profile of the typical adolescent males and females who have successfully graduated from the program. Doing so can help us become more informed about the demographic and treatment issues specific to the adolescent male population. It can also help us develop a more informed treatment approach for adolescent males and females with NSSI.
CHAPTER THREE

RESEARCH DESIGN

The purpose of this descriptive pilot study was to examine the treatment effectiveness of a Dialectical Behavior Therapy (DBT) program for adolescents with nonsuicidal self-injury (NSSI), explore possible gender differences in areas of interest, and create a case study profile of adolescent male and female patient graduates with NSSI. Given the overwhelming lack of research in this area, it is hoped that this study will be an initial step in identifying and understanding the needs of male adolescents with NSSI. Specific goals and hypotheses of this pilot study are as follows:

Objectives and Hypotheses

1. To determine the overall treatment effectiveness of using a DBT program for adolescents with NSSI. It is important to note that the hypothesis below is more fully addressed in another research study and is just presented here as a foundational means of showing the overall effectiveness of DBT.
   a. Hypothesis 1: There will be a significant improvement in the overall group of male and female graduates’ baseline and post-treatment scores, as measured by the Youth-Outcome Questionnaire—Self-Report (Y-OQ-SR) Total Score, Intrapersonal Distress (ID) and Critical Items (CI) subscale scores, and the Y-OQ-SR Self-Harm item (number 21).

2. To identify whether male and female patients treated in a DBT-based program demonstrate different treatment outcomes based on baseline and post-treatment ratings.
a. Hypothesis 2: There will be a significant difference in the baseline and post-treatment ratings of various distress indicators as measured by the Y-OQ-SR between male and female graduates of a DBT-A treatment program. Specific measures include the Y-OQ-SR Total Score, ID and CI subscale scores, and the Y-OQ-SR Self-Harm item (number 21).

3. To provide a descriptive analysis of patient weekly attendance and treatment progress as shown by the trends of overall distress levels among adolescent males and females.

4. To provide a descriptive case study profile of male patient graduates as compared to females. This includes factors such as age range, ethnicity, funding type, number of treatment days, and number of inpatient admissions during the program. It is thought that male and female graduates will show significant differences in the descriptive information provided by the case study groups. In addition to the above, qualitative information examining barriers to treatment and program satisfaction will be discussed in order to gain a better understanding of how to best treat adolescent male NSSI patients.

**Methods**

**Participants**

Participants were selected from a large de-identified dataset of 186 patients who attended a mental health outpatient treatment program for adolescents with NSSI at a major university treatment facility in Southern California. The inclusion criteria for the study consisted of adolescent patients who were no longer attending the program as of
January 30, 2012, had baseline and post-treatment scores on the Youth-Outcome Questionnaire-Self-Report (Y-OQ-SR), successfully graduated from the program, and scored in the clinical range (46 or higher) on their Y-OQ-SR Total Score at baseline. In order to descriptively examine the treatment outcomes of the program, the current study limited its analyses to the patient graduates. In this manner, the analyses can better understand what happens to individuals who were able to seek treatment and successfully utilize the program. A total of 65 patients met the eligibility criteria for this study.

*Treatment Protocol*

The current study is on a mental health outpatient treatment program for adolescent males and females with NSSI at a major university treatment facility in Southern California. The program incorporates a modified version of the Dialectical Behavior Therapy for adolescents (DBT-A) model by Miller and colleagues (2007). Patients attended the DBT program twice a week for 16 weeks (32 sessions). These sessions consisted of individual therapy for the adolescents, a parent group, an adolescent peer group, and a multi-family skills group. Patients had to complete approximately 32 sessions in order to graduate from the program. Weekly individual sessions with a therapist were aimed at helping the adolescent apply skills learned in group to their day-to-day life and to assess their ongoing treatment progress. A weekly parent group was utilized to provide parent support, skill-building, and education about how to alleviate their own emotional distress and frustrations. Adolescents also attended a twice-weekly peer group where they discussed DBT skills and participated in art and music therapy. Finally, in the biweekly multi-family skills group, the parents and adolescents together
learned the basic DBT skills such as emotion regulation, and distress tolerance. An aftercare group was offered to patients who had graduated from the program and wanted on-going maintenance treatment. Clinicians trained in DBT provided all aspects of the treatment.

It is important to note that the current program differed from Miller’s DBT-A model in three different ways. First, telephone consultations were not offered to the adolescents or their parents. This is an integral part of outpatient DBT-A, which serves as a way to coach patients or their family members on how to effectively regulate their emotions, and help remind them of the skills they have learned in treatment for crises intervention (A. Miller et al., 2007). Second, patients were not required to enter the program during the Mindfulness module, which is thought to be the foundation for treatment and a primary skill. The current program was not able to accommodate this practice due to the demands of the healthcare setting and patient referrals for expedient delivery of treatment. Finally, the parent and adolescent support groups, which are not considered a standard part of DBT-A, were added to the program because they were modeled after other adolescent outpatient programs within the same treatment facility.

In addition to the treatment components, adolescents and their parents met with clinicians for an intake assessment on their first day of the program. At this time, the Youth Outcome Questionnaire-Self-Report (Y-OQ-SR) along with other program-required assessments were administered to the adolescents and his/her parents. The Y-OQ-SR was also administered to the adolescent each week while in the program. Six-month, one-year and two-year follow-up questionnaires assessing the need for post-treatment care and satisfaction with the program were also administered.
Materials

Patient Chart

The patient chart was used to identify patients’ demographical information (i.e. ethnicity, gender, age, sexual orientation), reason for discharge (graduated or withdrew from program), number of program sessions attended, funding type (i.e. insurance or grant), and number of inpatient admissions during the program. The patient chart was also used to identify patients’ history of abuse, abandonment, academic functioning during admission, family history of substance use and mental illness, and patients’ history and current substance use. This information was previously collected by the clinicians as part of their program evaluation and was de-identified prior to use in the current study.

Youth-Outcome Questionnaire – Self-Report (Y-OQ-SR)

The Y-OQ-SR (Wells, Burlingame, & Rose, 2003) is a 64-item self-report of psychotherapy treatment progress for adolescents ages 12-18. The Y-OQ-SR was designed to assess treatment outcomes in youth. It targets socially adaptive and disruptive behaviors and is applicable to use in various fields of clinical research. The items on the Y-OQ-SR are reported on a five-point Likert scale, ranging from 0 (Never or Almost Never) to 4 (Almost Always or Always).

The Y-OQ-SR consists of six scales: Intrapersonal Distress (ID; 18 items), Somatic (S; 8 items), Interpersonal Relationships (IR; 10 items), Social Problems (SP; 8 items), Behavioral Dysfunction (BD; 11 items), and Critical Items (CI; 9 items). For the purposes of this study, only the Y-OQ-SR Total Score, the Intrapersonal Distress (ID) subtest, the Critical Items (CI) subtest, and one item specifically measuring NSSI (Item
21 were used. “I have hurt myself on purpose (for example cut, scratched, or attempted suicide)” were examined, as they were considered most theoretically relevant to adolescents who engage on NSSI (see Table 1).

Table 1

_Description of the Y-OQ-SR Total Score, Selected Subscales, and Self-Harm Item_

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Items</th>
<th>Outpatient Score Cutoff</th>
<th>High Score Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Score</strong></td>
<td>64</td>
<td>Overall distress score based on all six subscales; score ranges from -16 to 240</td>
<td>46</td>
</tr>
<tr>
<td><strong>Selected Subscales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Intrapersonal Distress (ID) | 18 | Emotional distress (i.e. anxiety, depression, fear, hopelessness)  
“I don’t participate in activities that used to be fun”; “I complain about things that are unfair” | 20 | High intrapersonal problems |
| Critical Items (CI) | 9 | Features found in inpatient youth (i.e. paranoid ideation, hallucinations, delusions, suicidal feelings)  
“I worry and can’t get thoughts out of my mind”; “I see, hear, or believe in things that are not real” | 9 | Need immediate help/serious attention |
| Self-Harm Item (Item 21) | 1 | Item measures patient’s NSSI behaviors in past week  
“I have hurt myself on purpose (for example cut, scratched, or attempted suicide)” | N/A | High NSSI behaviors, need immediate attention |
The total score of the scales (which ranges from -16 to 240) reflects the total distress in the adolescent’s life. A clinical cut-off score of 46 for the Y-OQ-SR’s total score and a reliable change index (RCI) of 18 are used to denote clinically significant change (Wells et al., 2003). The Y-OQ-SR has been reported to have high psychometric properties, with high internal consistency ($\alpha = .96$) for both clinical and community samples, test-retest reliability for the subscale scores ($r = .73$ to $.91$) and the total score ($r = .89$) (Ridge, Warren, Burlingame, Wells, & Tumblin, 2009). The comparison between the Y-OQ-SR total score outpatient norms with the sample was also used determine whether they were representative of the population of adolescent patients in a mental health outpatient program.

The ID scale measures emotional distress such as anxiety, fear, and self-harm; and a high score on this scale indicates high distress. The clinical cutoff for the adolescent outpatient population on the ID scale is 20 (Wells et al., 2003). The CI scale deals with clinical symptoms in adolescents such as paranoid ideation, hallucinations, and suicidal thoughts. A high score on the CI scale warrants immediate personal attention. The clinical cutoff for the adolescent outpatient population on the CI scale is 9 (Wells et al., 2003). The ID and CI scales were selected to tap into the emotion dysregulation issues that the current study is interested in exploring.

**Adapted Child and Adolescent Services Assessment**

For the purposes of the current study, an adaptation of the Child and Adolescent Services Assessment (CASA; Ascher, Farmer, Burns, & Angold, 1996) was made. The CASA is a self-report instrument that assesses the use of mental health services by
children and adolescents, ages 8 to 18 years. The CASA was developed as a face-to-face interview that takes approximately 20 minutes to complete. In addition, the CASA has good psychometric properties with reliability being the highest for reporting on the most restrictive settings (Ascher et al., 1996).

The adapted CASA was used to provide a qualitative, case study examination of the patients in the program and included questions regarding program satisfaction and current functioning. The questionnaire was administered as a telephone call follow-up to the primary parent of each patient who has been discharged from the program. In the event that the patient was 18 years old or older at the time of the follow-up, the patient was consulted instead of the primary parent. The questionnaire includes information such as the patient’s current living situation, mental health services received after discharge (i.e., inpatient, outpatient, emergency services), medications, and current functioning at the time of the follow-up. The follow-up questionnaires were done at six months, one year, and two years after the patient’s discharge from the program. An adapted version of the questionnaire was created with the addition of several descriptive items pertaining to program satisfaction, barriers to treatment, and mental health services the patient has received after discharge from the program.

**Statistical Analysis and Data Screening**

Prior to examining the hypotheses posed in this study, a data screening process was made on the variables of interest. Descriptive statistics on the patient demographic variables and Y-OQ-SR Total Score at baseline were examined to determine the level of
missingness in the dataset. As a result, no missing items were found for the patient
demographic and outcome variables.

All quantitative variables were analyzed for outliers and normality. Screening for
outliers through box plots revealed four cases that reported extremely high scores on their
Y-OQ-SR Total Score at baseline. However, an analysis of the adjusted normality when
the outliers were removed did not result in a significant change in the mean and
distribution of the scores. Therefore in order to preserve power, these cases were not
removed from the study.

Normality was assessed by examining skewness and kurtosis as well as visual
examination of histograms and normal probability plots of all continuous variables. The
level of skewness and kurtosis for all continuous variables were within the normal range
and therefore acceptable [ID_{baseline} (Skewness = .03, Kurtosis = .14), ID_{post-treatment}
(Skewness = .68, Kurtosis = .50), CI_{baseline} (Skewness = .65, Kurtosis = -.27), CI_{post-treatment}
(Skewness = 1.21, Kurtosis = 1.44), Y-OQ-SR Total Score at baseline (Skewness = .99,
Kurtosis = .41), and Y-OQ-SR Total Score at post-treatment (Skewness = .73, Kurtosis =
.60)]. Visual analyses of the histogram and the normal probability plots, indicated that the
Y-OQ-SR Total Score and subscales at post-treatment were generally normally
distributed. Some expected skewness was indicated on the Y-OQ-SR outcome variables,
but this was considered to be acceptable given the robust nature of this statistical test.
Given the above, no data modifications were made to the dataset.

In examining the first hypothesis that there would be a significant difference in
adolescent’s pre-treatment and post-treatment scores (Total Score, ID, CI) following a
DBT treatment program, three repeated measures t-tests were used. An a priori power
analysis showed that in order to attain a power of .80 with a small effect size \(d = .3\) and \(\alpha\) level of .05, a total sample size of 90 participants was recommended. Based on the current sample size \((n = 65)\), the achieved power with an effect size of .3 is at .82. Frequency analyses were used to examine whether the overall group of patients reduced their indication of the Self-Harm item from baseline to post-treatment.

The data analyses for hypotheses specific to gender differences in treatment outcomes are discussed individually. First, three repeated measures analyses of variances (ANOVAs) with between-subjects factors were used to determine the effect of gender on Y-OQ-SR scores (Total Score, ID, CI). The effect sizes were measured using \(\omega^2\). An a priori power analysis for a small effect size, \(d = .3\) indicated that the estimated total sample size necessary with two groups and two time points of testing (baseline and post-treatment) is 24. With the current sample size for the patient graduates \((n = 65)\), the computed power for each repeated measures ANOVA with between-subjects factors is at .96-.98. A chi-square was used to examine differences between male and female graduates in their responses on the Self-Harm item from baseline to post-treatment.

For the third hypothesis, the patients’ charts were used to extract information regarding weekly attendance rates. A descriptive trend analysis of the Y-OQ-SR Total Score over time from baseline to post-treatment (16 weeks) was used to show the trends in overall distress between males and females in the study. In order to determine clinically significant change on the Y-OQ-SR, the post-treatment subscale scores must satisfy the Y-OQ-SR clinical cutoff score of 46 for the Total Score and the Relative Change Index of 18.
For the last hypothesis, a case study profile of the average male and female patients in the program was created using an approach developed by Yin (2008). The case study groups were selected based on the average age of male and female patients who have graduated from the program (±1sd) and the majority ethnic group. The variables examined were based on patient background information prior to treatment, individual and family risk factors, and post-treatment functioning in order to create a more descriptive profile of the typical male and female adolescent patients who graduate from the program. Variables included in the case study consisted of sexual orientation, abuse history, academic functioning, history or current substance abuse, and overall functioning at treatment follow-up.

Additional one-sample t-tests were also used to determine whether the current overall group of adolescent patients was significantly different from the population norm of community mental health adolescent outpatients as measured by the Y-OQ-SR (Total Score, ID, CI). Using a two-tailed (α = .05) assumption for a small effect size, $d = .3$, the required total sample size for each t-test at a power level of .8 is at .9. Given the current sample size, the achieved power for the one-sample t-tests was reported at .83.
CHAPTER FOUR

RESULTS

Patient Demographics

A total of 65 adolescents were involved in this study. There were 8 males and 57 females, with a mean age of 14.78 years of age ($SD = 1.38$). Descriptive analyses show that of the 65 patients in the study, 25 were grant funded while 40 patients paid for treatment with their insurance providers. Table 2 provides further information regarding patient demographics for the overall group and for both genders. This information includes funding type, ethnicity, age, number of inpatient admissions during the program, and number of previous psychiatric hospitalizations. Significant differences in the number of patients in each ethnic group was reported, with a majority of the patients identified as Caucasian, $\chi^2 (4) = 70.31, p < .001, \phi = .98$. No significant differences in type of funding were reported for the overall group, $\chi^2 (1) = 3.46, p = .06$. However, repeated t-tests showed a significant difference between overall patients’ number of inpatient admissions during the program with their previous psychiatric hospitalizations, $t (64) = -5.15, p < .001$. Patients reported a significantly lower average number of inpatient admissions during the program.
Independent t-tests conducted between male and female patients also reflected no significant differences in age, $t(63) = .47, p = .64$, number of inpatient admissions during the program, $t(63) = .25, p = .8$, and number of previous psychiatric hospitalizations, $t(63) = -.28, p = .78$. Chi square analyses showed no significant differences between the genders on funding type, $\chi^2(1) = .004, p = .95$, and ethnicity, $\chi^2(4) = 3.55, p = .47$. 

Table 2

*Demographic Information on Overall Sample of Adolescent Patients with NSSI*

<table>
<thead>
<tr>
<th>Demographic Information</th>
<th>Overall (N = 65)</th>
<th>Males (N = 8)</th>
<th>Females (N = 57)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant</td>
<td>25 (38.5)</td>
<td>3 (37.5)</td>
<td>22 (38.6)</td>
</tr>
<tr>
<td>Insurance</td>
<td>40 (61.5)</td>
<td>5 (62.5)</td>
<td>35 (61.4)</td>
</tr>
<tr>
<td>Ethnicity***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>39 (60)</td>
<td>6 (75)</td>
<td>33 (57.9)</td>
</tr>
<tr>
<td>African-American</td>
<td>9 (13.8)</td>
<td>1 (12.5)</td>
<td>8 (14)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12 (18.5)</td>
<td>--</td>
<td>12 (21.1)</td>
</tr>
<tr>
<td>Asian</td>
<td>3 (4.6)</td>
<td>1 (12.5)</td>
<td>2 (3.5)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (3.1)</td>
<td>--</td>
<td>2 (3.5)</td>
</tr>
<tr>
<td>Age (M (SD))</td>
<td>14.78 (1.38)</td>
<td>15 (1.51)</td>
<td>14.8 (1.37)</td>
</tr>
<tr>
<td>Number of inpatient admissions</td>
<td>0.3 (0.62)</td>
<td>0.38 (0.74)</td>
<td>0.32 (0.6)</td>
</tr>
<tr>
<td>Number of previous psychiatric</td>
<td>1.12 (1.33)</td>
<td>1 (1.41)</td>
<td>1.14 (1.33)</td>
</tr>
<tr>
<td>hospitalizations†, ***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: ***p <.001 † Significant overall group differences at post-treatment*
Overall Group Baseline and Post-treatment Levels of Distress

Repeated measures t-tests were performed to determine the relationship between the baseline and post-treatment ratings for the overall group on the Y-OQ-SR Total Score, subscales (ID and CI). Significant differences between baseline and post-treatment ratings were reported for patients’ Y-OQ-SR Total Score and the selected subscales (see Table 3). The overall group of patients showed a significant decrease in overall distress and a decline in negative symptoms in the specific areas examined by the Y-OQ-SR Total Score, ID subscale, and CI subscale. There was a 38.61-point difference in scores from baseline to post-treatment on the Y-OQ-SR Total Score, which satisfied the clinical significant change requirements of having a minimum of an 18-point difference.

Frequency analyses on the overall group indicated a reduction of endorsement on the Self-Harm item, where a majority of the patients reported having engaged in NSSI “Almost Always or Always” at baseline (n = 17, 26.2%) to “Never or Almost Never” at post-treatment (n = 45, 69.2%).

Table 3

Overall Sample Means and Standard Deviation on Y-OQ-SR during Baseline and Post-Treatment (N = 65)

<table>
<thead>
<tr>
<th>Y-OQ-SR</th>
<th>Baseline</th>
<th>Post-Tx</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$ ($SD$)</td>
<td>$M$ ($SD$)</td>
</tr>
<tr>
<td>Total Score</td>
<td>87.83 (31.18)</td>
<td>49.22 (31.7)</td>
</tr>
<tr>
<td>Intrapersonal Distress</td>
<td>33.31 (13.26)</td>
<td>19.55 (12.54)</td>
</tr>
<tr>
<td>Critical Items</td>
<td>13.17 (7.18)</td>
<td>7.22 (5.64)</td>
</tr>
</tbody>
</table>

Note. ***$p < .001.$
Treatment Outcomes between Genders

Descriptive statistical analyses were conducted in order to explore possible gender differences. As shown in Table 4, independent samples t-tests showed no significant gender differences on the Y-OQ-SR Total Score, ID, and CI subscales at baseline. Chi square analysis also reported no significant group differences on the Self-Harm item at baseline, $\chi^2 (4) = 1.71, p = .79$, or at post-treatment, $\chi^2 (3) = 1.74, p = .63$ (see Figures 1 and 2).

Table 4

Means and Standard Deviation of Y-OQ-SR between Male and Female Patients during Baseline and Post-Treatment

<table>
<thead>
<tr>
<th>Y-OQ-SR</th>
<th>Baseline</th>
<th>Post-Tx</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td>(n = 8)</td>
<td>(n = 57)</td>
</tr>
<tr>
<td>Total Score</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td></td>
<td>76 (20.27)</td>
<td>89.49 (32.21)</td>
</tr>
<tr>
<td>Intrapersonal Distress</td>
<td>28.38 (13.9)</td>
<td>34 (13.15)</td>
</tr>
<tr>
<td>Critical Items</td>
<td>11.63 (5.61)</td>
<td>13.39 (7.39)</td>
</tr>
</tbody>
</table>
Figure 1. Y-OQ-SR responses on the Self-Harm item by patients during baseline.
Figure 2. Y-OQ-SR responses on the Self-Harm item by patients during post-treatment.
In order to test the second hypothesis, data were analyzed using three repeated measures analyses of variance (ANOVAs) with between-subjects factors. Patient gender was the between-subjects variable, while the time of testing (baseline and post-treatment) on patient graduates’ scores on the Y-OQ-SR (Total Score, ID, CI) was the within-subjects variable. There was a significant main effect of time of testing for the Y-OQ-SR Total Score, $F(1,63) = 18.44, p < .001, \omega^2 = .27$; ID subscale, $F(1,63) = 15.57, p < .001, \omega^2 = .23$; and CI subscale, $F(1,63) = 10.40, p = .002, \omega^2 = .15$. This indicates that for all three analyses, patients’ reported scores at baseline were significantly higher than their scores at post-treatment. However, there was no significant main effect of gender for the Y-OQ-SR Total Score, $F(1,63) = .23, p = .64$; ID subscale, $F(1, 63) = .89, p = .35$; and CI subscale, $F(1,63) = .03, p = .86$. In general, this indicates that ratings of overall distress and functioning from the male and female patient graduates were highly similar. Although Figures 3 to 5 depict that there may be an interaction in the three repeated measures ANOVAs with between-subjects factors, the error bars representing the variability of males’ scores on the Y-OQ-SR Total Score, ID, and CI subscales may have weakened our findings. No significant interactions were reported for all three repeated measures ANOVA with between-subjects factors. This indicates that there is no interaction effect of gender on patients’ scores at baseline and post-treatment.
Figure 3. Y-OQ-SR Total Score by patients during baseline and post-treatment.
Figure 4. Y-OQ-SR ID subscale score by patients during baseline and post-treatment.
Figure 5. Y-OQ-SR CI subscale score by patients during baseline and post-treatment.
The attendance rates were examined for male and female patient graduates ($N = 65$) in the program. Twenty-five percent of males ($n = 2$) were discharged from the program prior to the 16th session of the program at Weeks 14 and 15 due to treatment costs or psychosocial factors but were considered to have successfully graduated the program (see Figure 6). Approximately 62.5% ($n = 5$) of the males completed the full 32 sessions of the 16-week program. One other male completed two additional sessions based on patient case severity.
In the female group, 77.2\% (n = 44) successfully completed the full 32 sessions.

Nine females completed additional treatment sessions (range = 1 to 9 days) due to either higher patient case severity or readmission to the program after previous termination. In addition, four females who were anywhere from one to four treatment days short of the full 32 sessions were considered to have graduated from the program due to similar reasons previously mentioned for males.
A preliminary trend analysis was conducted with the male and female patients’ Y-OQ-SR Total Score in the study. The measurements ranged from baseline (Week 1) to post-treatment ratings of the program (Week 16). Due to the low sample size of the male patients in the study, caution was taken when analyzing the following results. In addition, despite the treatment program’s formal 16-week treatment, some patients who were considered program graduates surpassed the 16-week mark due to additional sessions taken. Hence, two versions of the trend analysis are provided: 1) program graduates who ended treatment before or at the 16-week (32 sessions) treatment \((n = 55)\); and 2) another

*Figure 7.* Number of treatment days attended by adolescent females with NSSI.
that explores treatment outcomes for all program graduates by the 21-week mark (\(N = 65\)). As shown in Figure 8, male and female patients’ Y-OQ-SR Total Scores showed an overall negative trend, which demonstrates that their reported overall distress level evidenced a consistent decline over time as they went through the program (see Figure 8). However, during the recommended end of treatment (Week 16), both males’ and females’ reported Y-OQ-SR Total Scores that were still above the clinical cutoff score of 46. Therefore, partial fulfillment of the requirements for significant clinical change was reported at post-treatment, as patients’ scores were able to demonstrate at least an 18-point difference from baseline but not the clinical cut-off score of 46 for the Y-OQ-SR Total Score (Wells et al., 2003).

In Figure 9, male and female patients who graduated from the program and completed treatment (\(range = 14\) to 21 weeks) were included in the analysis (\(N = 65\)). While the males showed a lower level of overall distress reported at baseline, their reported Y-OQ-SR Total Scores show a more tumultuous shift with each week. For most of the program, males’ average Y-OQ-SR Total Score per week tend to be higher in comparison to females’ reported scores, and their scores only began to show a noticeable decrease from baseline after Week 9, but fluctuated up and down in the following weeks. In reference to Figure 9, several key observations were noted. Specifically, it appeared that males and females’ average Y-OQ-SR Total Scores each week were trending toward a similar direction and appeared to decrease over time. Males and females were reported to show a clinically significant change of their average Y-OQ-SR Total Scores after Week 21 and Week 19 of the program, respectively, after passing the Y-OQ-SR clinical cutoff score of 46 (see Figure 9). At Week 21, both males and females satisfied the
criteria of having an average Y-OQ-SR Total Score that is under the clinical cutoff, and the RCI of 18 points between their baseline and current measure.

Figure 8. Course of average Y-OQ-SR Total Scores for patients from Week 1 to 16 (n = 55).
Figure 9. Course of average Y-OQ-SR Total Scores for patients from Week 1 to 21 (N = 65)

Case Study: A Profile of Adolescent Males and Females with NSSI

A case study examination was created in order to determine a profile of the typical male and female patients who have graduated from the current program. It is expected that this case study approach will facilitate our understanding of how adolescent male and female patient graduates with NSSI in this program are similar and different from each other, and why they experienced successful outcomes after the program. In order to facilitate a rigorous but flexible case study, the case study research design and methodology created by Yin (2008) was followed. The current case study consisted of a
multiple-case study design. The case study groups were selected based on the average age of male and female patients who have graduated from the program (±1sd) and the majority ethnic group represented for each gender. As such, the inclusion criteria included 15- (±1sd) year-old Caucasian male and female patient graduates, resulting in a total of 34 patients (males \( n = 5 \), females \( n = 29 \)). Given the amount of missing information on patients’ adapted CASA, the case study sample size was further delimited to those who provided complete information on this measure. This resulted in a total of 15 patients (males \( n = 2 \), females \( n = 13 \)) for our current case study.

**Case Study Group: Adolescent Males**

There were a total of two adolescent males available for the case study group. In terms of sexual orientation, one of the male patients identified as heterosexual while the other identified as gay or bisexual. None of the males reported any history of abuse or history of abandonment. One of the males reported an academic functioning in the below average range, while the other was in the average range. Both of the males reported a family history of substance use, such as alcohol abuse. None of the males reported any family history of mental illness, however one of them reported a family history of substance abuse (i.e., alcohol). None of the males indicated any history or current substance abuse. Lastly, one of the males had previous psychiatric hospitalizations before entering the program due to suicidal ideation and plan, interpersonal problems in the school setting, and grief issues.

According to the adapted CASA, neither of the two adolescent males’ parents indicated that they have been admitted to a psychiatric inpatient hospital nor that they
have received further outpatient mental health treatment after their program discharge. Both of the males’ parents responded positively about the program’s treatment effectiveness, and that they would recommend the program to others who had NSSI behaviors. Lastly, the parents indicated that, to the best of their knowledge, none of the males were engaging in any current NSSI behaviors. Some of the barriers to treatment that parents had indicated were the program’s distance from their homes, work schedule conflict, and transportation issues (e.g., picking up child from school after work).

**Case Study Group: Adolescent Females**

There were a total of 13 adolescent female patients in the case study group. In terms of sexual orientation, 12 of the female patients identified as heterosexual, while one identified as gay or bisexual. Those who indicated a history of abuse \( (n = 5, 38.5\%) \) reported physical and sexual abuse by an immediate family member. Three (23.1\%) of the females reported a history of abandonment due to parents’ separation or divorce at an early age and minimal contact with parent. A majority of the females reported an above average level of academic functioning \( (n = 6, 46.2\%) \). A majority of the females reported a family history of substance abuse \( (n = 7, 53.8\%) \) (i.e., alcohol, drug use) and a significant family history of mental illness \( (n = 10, 76.9\%) \), (i.e., depression, anxiety, bipolar disorder). A majority reported no history \( (n = 10, 76.9\%) \) of or current substance use \( (n = 10, 76.9\%) \). The females who indicated either past or present substance use reported using alcohol, marijuana, and tobacco. A majority of the females \( (n = 9, 69.2\%) \) indicated previous psychiatric hospitalizations before entering the program. The primary reason indicated greatly varied with each female patient. The reasons included expressed
suicidal ideation and plan, anger outbursts, family conflict, and depressed feelings.

Two (15.4%) of the female patients’ parents indicated one subsequent psychiatric inpatient hospitalization following their discharge from the program. A substantial number of the females received further outpatient mental health treatment after program discharge ($n = 11, 84.6\%$). A majority of the females’ parents attested to the program’s treatment effectiveness in a positive manner ($n = 11, 84.6\%$), and all of the 13 females’ parents indicated that they would recommend the program to others who had NSSI behaviors. A majority of the females’ parents reported that to their knowledge, their child was no longer engaging in any NSSI behaviors ($n = 10, 76.9\%$). Lastly, the barriers to treatment that were indicated by parents consisted of the program’s distance from their home, transportation issues (e.g., money for gas), schedule conflicts with work, and babysitting. Table 5 shows the summative findings of the case study analyses for the typical male and female patients who successfully graduated from the program.
Table 5

*Case Study Comparisons between Adolescent Males and Females with NSSI*

<table>
<thead>
<tr>
<th></th>
<th>Males (n = 2)</th>
<th>Females (n = 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation§</td>
<td>1 (50%) heterosexual; 1 (50%) LGBT</td>
<td>12 (92.3%) heterosexual; 1 (7.7%) LGBT</td>
</tr>
<tr>
<td>Abuse Hx§</td>
<td>--</td>
<td>5 (38.5%) physical or sexual abuse</td>
</tr>
<tr>
<td>Abandonment Hx§</td>
<td>--</td>
<td>3 (23.1%) parents separated or divorced, minimal contact with one parent</td>
</tr>
<tr>
<td>Academic Functioning§</td>
<td>1 (50%) Below Avg; 1 (50%) Avg</td>
<td>6 (46.2%) Above Avg</td>
</tr>
<tr>
<td>Family Hx of Substance Abuse</td>
<td>1 (50%) reported family hx of alcohol abuse</td>
<td>7 (53.8%) i.e., alcohol &amp; drug use</td>
</tr>
<tr>
<td>Family Hx of Mental Illness§</td>
<td>--</td>
<td>10 (76.9%) i.e., anxiety, depression, and bipolar disorder</td>
</tr>
<tr>
<td>Patient Hx or Current Substance Abuse</td>
<td>--</td>
<td>2 (15.4%) i.e., alcohol, tobacco, marijuana</td>
</tr>
<tr>
<td>Hx Psychiatric Hospitalization§</td>
<td>1 (50%) suicidal ideation and plan, interpersonal problems at school, grief</td>
<td>9 (69.2%) i.e., expressed suicidal ideation and plan, family conflict, and depressed feelings</td>
</tr>
<tr>
<td><strong>Adapted CASA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatric Hospitalization After Program?</td>
<td>--</td>
<td>2 (15.4%) inpatient once after program</td>
</tr>
<tr>
<td>Outpatient Treatment After Program? §</td>
<td>--</td>
<td>11 (84.6%) had subsequent outpatient treatment</td>
</tr>
<tr>
<td>Treatment Effectiveness</td>
<td>100% rated positively and would recommend to others with NSSI</td>
<td>11 (84.6%) rated positively and would recommend to others with NSSI</td>
</tr>
<tr>
<td>Current NSSI behaviors?</td>
<td>--</td>
<td>2 (15.4%) current NSSI during follow-up</td>
</tr>
<tr>
<td>Barriers to Treatment</td>
<td>Distance from home, transportation issues, work schedule conflict</td>
<td>Distance from home, transportation issues, work schedule conflict, babysitting</td>
</tr>
</tbody>
</table>

*Note.* § Highlighted differences in findings between males and females in case study.
Additional Analyses

One-sample t-tests were conducted to compare the overall sample of patients’ baseline scores on the Y-OQ-SR Total Score, ID and CI subscales with the measure’s outpatient normative group. Patients’ baseline ratings on the Y-OQ-SR reflected significant differences when compared to the outpatient normative group (see Table 6). Patients’ scores tended to have significantly greater levels of distress on the Y-OQ-SR Total Score, ID and CI subscales, when compared to the normative group, suggest that the overall group of patients in the current study tend to have higher reported ratings of distress in the three areas examined.

Table 6

*Overall Group Baseline Comparisons with Y-OQ-SR Outpatient Normative Group*

<table>
<thead>
<tr>
<th>Y-OQ-SR</th>
<th>Group Baseline</th>
<th>Outpatient Norm</th>
<th>t (64)</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score</td>
<td>87.83 (31.18)</td>
<td>67</td>
<td>5.39***</td>
<td>1.35</td>
</tr>
<tr>
<td>Intrapersonal Distress</td>
<td>33.31 (13.26)</td>
<td>20</td>
<td>8.09***</td>
<td>2.02</td>
</tr>
<tr>
<td>Critical Items</td>
<td>13.17 (7.18)</td>
<td>9</td>
<td>4.68***</td>
<td>1.17</td>
</tr>
</tbody>
</table>

*Note.***p < .001.*
CHAPTER FIVE

DISCUSSION

The findings indicated similar prevalence rates between the adolescent males and females on nearly all of the patient demographics such as type of funding, age, number of inpatient admissions during the program, and number of previous psychiatric hospitalizations. Most of the males and females in the program typically reported an average age of 15 years old and were primarily Caucasian. This information is in line with current research on adolescents with NSSI (Gratz, 2006; Guertin et al., 2001). There were similar prevalence rates of grant and insurance-funded patients, thereby indicating no significant group differences in types of funding among patients who graduated from the program. Of interest, the patients’ average number of inpatient admissions during the program was reportedly lower in comparison to the number of previous psychiatric hospitalizations. This indicates that the program was able to successfully target some of the key problems associated with NSSI among its adolescent patients during treatment (e.g., unintentional overdose, NSSI that warrants emergency medical care, expressed suicidal intent). These findings highlight that the current study has examined male and female patients with similar levels of distress at baseline, and that the current treatment is appropriate for both groups.

Overall Group Baseline and Post-treatment Levels of Distress

The overall group of male and female patients reported a significant improvement of their levels of distress in the multiple areas examined in the Y-OQ-SR (Total Score, ID and CI subscales). Our findings echo support for previous studies on adolescents with
NSSI in a DBT program, reflecting significant decreases in inpatient hospitalizations, NSSI, and improved emotional regulation (Katz et al., 2004; Rathus & Miller, 2002). This demonstrates that the null hypothesis was rejected, and that the modified DBT-A program was able to bring about a significant improvement of emotional and behavioral symptoms from the adolescent patient’s perspective. It also attests to the appropriate level of treatment for adolescent male and female patients who presented with various NSSI behaviors (e.g., hitting self, biting, and cutting).

**Treatment Outcomes between Genders**

Comparisons of male and female patients showed no significant differences between genders on the demographic information presented (e.g., age, number of treatment days). Similar to the earlier analyses performed in the current study, male and female patients were either grant or insurance-funded, were approximately 15 years old, and primarily of Caucasian descent. Further, the patients reported no significant differences between genders on their baseline and post-treatment Y-OQ-SR scores, which resulted in the failure to reject the null hypothesis for both results. Time of testing had a significant main effect on patients’ Y-OQ-SR scores, which signifies that both male and female patients’ distress scores in the areas examined tend to be higher at the baseline than post-treatment. When gender was examined, the analyses did not yield any significant main effects, despite the figures shown (see Figures 3 to 5). No interaction effect was reported between gender and time of testing for the Y-OQ-SR scores. This indicates that in general, most males and females in the program tend to begin and end treatment at a similar level of functioning. Previous studies on adolescents with NSSI in a
DBT-A program did not examine gender differences in their outcomes and primarily focused on group differences (i.e., DBT v. TAU) (Katz et al., 2004; Rathus & Miller, 2002). Hence, no comparative results can be made at this time to assess the external validity of our findings. These findings currently demonstrate a failure to reject the null hypothesis of gender differences in the treatment effectiveness of a modified DBT-A for adolescents. This analysis can be improved, as some of the figures (i.e., Figures 3 to 5) show a trending toward an interaction effect on some of the areas examined. Future replication studies should seek to improve the power by using a larger male sample size.

Preliminary Trend Analysis of Treatment Attendance and Overall Distress

A preliminary examination of the attendance rates of male and female patient graduates showed that both males and females reported greater than 62% compliance with the 16-week (32 session) time frame. However, males had less variance in the number of treatment days attended, which may have been due to the sample size differences. Therefore, our findings show that the males who successfully graduated from the program tend to show strong commitment to the 16-week and 32-session timeframe. While this may indicate that males who successfully complete treatment have high compliance ratings, what is left to be determined in future studies is the plight of the males who did not successfully complete the program. This brings up issues of help-seeking and males’ willingness for treatment.

According to the literature on help seeking, males are less likely to seek informal or professional health care services and to share their feelings. This has proven consistent
for all ages in a male’s life (Addis & Mahalik, 2003). Males may feel constricted by gender-role conflict, which tells them to be self-reliant and physically tough and to appear confident. Despite experiencing similar levels of emotional problems, males have been found to seek less psychiatric help than females (Kessler, Brown, & Broman, 1981; Mansfield, Addis, & Mahalik, 2003). A study on males’ help-seeking behaviors showed that the perception of a problem as “normal” was associated with a decrease in help-seeking (Nadler, 1990). In addition, males were found to have less help-seeking behaviors when the problem was perceived to be non-normative, and its disclosure was considered a threat to their self-esteem. For adolescent males with NSSI, this can be detrimental to their health, because not only do they feel that they have to hide their problems because it seems unusual, but they also have to deal with the effect of the gender role conflict of help-seeking.

The preliminary trend analysis between male and female patients on the Y-OQ-SR Total Score reported a unique finding on the progression of the overall distress in both groups. Since the reported information was based on a small male sample size, the direct application and interpretation of the current findings should be taken with caution. The overall distress scores on the Figure 8 for patients from Week 1 to Week 16 showed a negative trend for both males and females from baseline to post-treatment. While the scores did not reach below the clinical cutoff score of 46 at Week 16 for both males and females, a comparison of patients’ baseline and post-treatment scores did reflect a reduction of overall distress. This satisfies the minimum of at least an 18-point difference. This indicates that patients experienced significant improvement during the 16-week program, however, the amount of change was not adequate in reflecting strong
maintenance over time. This information is important to the current program as it shows that perhaps more weeks of treatment may be more effective in strengthening patients’ DBT skills. Miller’s DBT-A model (2007) rationale for decreasing the standardized DBT program length from 52 weeks to 16 weeks was due to the concern that adolescents would not be able to commit to treatment for a long period of time. Thus, the 16-week modification was created in order to address the issue of adolescent patient dropout from treatment. Based on our findings in the current study, it appears that while the modified length of treatment of 16 weeks was able to address some of the adolescent patients’ level of treatment willingness, the effects of psychosocial factors such as other family stressors, transportation issues, parents’ work schedule conflicts, funding availability, and other commitments have not been accounted for. A way to address these issues of patient dropout rate in the future would be to offer some means of support to low-income families, such as gas cards to alleviate the cost of driving to the treatment facility, and to ensure higher levels of commitment from both parents and the patients for the entire 16-week program prior to the beginning of treatment.

In addition, our findings may also support the full implementation of DBT maintenance programs for patients who have graduated. Miller et al.’s DBT-A model (2007) suggested the implementation of a graduate program for adolescent patients who have successfully completed the 16-week DBT-A treatment to improve their DBT skills. In this setting, patient graduates are asked to participate in the second phase of the DBT-A treatment, which also spans a total of 16 weeks and largely focuses on the same clinical goals but in a less intensive manner. While the current program in this study does offer an aftercare group for patient graduates, attendance in this group is not enforced. It
may be to their benefit to reassess the importance of this facet of DBT-A in order to show better retention of DBT skills among patients at post-treatment.

An exploratory analysis of patients’ treatment outcomes ending at Week 21 show a strong negative progression of female patients’ overall distress scores from Week 1 to Week 21. With the male patients, however, their overall distress scores tended to be lower in comparison to females at Week 1, but did not appear to show any substantial decrease or clinical improvement until at Week 21. However, this overall distress score reported at Week 21 was based on only one male patient. This information is relatively unique and specific to the current study, as the male patients in the current sample tend to consistently report high symptom severity with each passing week. It may be that male patients are more cautious or wary about sharing the extent of their overall distress throughout the treatment process. This highlights the importance of establishing quality patient-therapist relationships in order to resolve some of the gender role conflicts that may hinder males from expressing a more accurate picture of their overall distress.

In addition, the group therapy format of the DBT-A treatment may have been a contributing factor to their level of openness. With a majority of the patients in the group being females, it is highly likely that most of the males were either uncomfortable sharing their experiences and problems with the opposite gender. Miller et al. (2007) touched upon the issue of group dynamics in a DBT-A program, and raised positive and negative views regarding mixed gender groups. The availability of both adolescent males and females in a group allowed for skill building, forming friendships, and the development of insight about the opposite gender. Mixed gender groups also reinforced the generalization of the DBT skills that adolescents have learned during treatment, which
would inevitably contribute to greater self-efficacy. However, it might be argued that single gender groups foster greater homogeneity and greater self-disclosure among its members. In addition, single gender groups were more likely to minimize treatment interference such as physical attraction, or anxiety about interacting with members of the opposite sex. Some DBT-A studies (Rathus & Miller, 2002) have used the mixed group setting simply due to the lack of adolescent male referrals for group treatment. To address this issue, Miller et al. (2007) asserted that mixed gender groups for DBT-A programs were acceptable, however, patients of the treatment group should be reminded that the group is available to both males and females. The findings of the current study should push for the development of a more in-depth understanding of group dynamics in DBT-A treatment settings and an understanding of how gender distribution in the group setting impacts patients’ experiences during treatment from the perspectives of both clinicians and patients.

The current program format is based on an adaptation of Miller et al.’s (2007) DBT-A program model, which has shown promising outcomes. However, the key difference with the current program and Miller et al.’s (2007) DBT-A model is the availability of support to the patients and their families outside of the sessions and the stronger emphasis of graduated patients attending a DBT group for skills maintenance. It may be noteworthy to explore the possibility of implementing assistance to low-income families and highlighting the importance of commitment to the entire 16-week program as part of the treatment inclusion criteria. Addressing these areas are important for ensuring that the patient has successfully demonstrated clinically significant change and a substantial reduction of symptomology in a brief period of time in an intensive outpatient
clinical setting.

**Case Study Conceptualization**

The case study was based on the typical 15-year-old, Caucasian, male and female patients who successfully completed the program, and were able to provide follow-up information after treatment. Based on the information obtained, the typical male patient graduates included in the case study largely differed from the typical female patient graduates on some key demographic information. These included sexual orientation, history of abuse, history of abandonment, academic functioning, family history of mental illness, and patient history and current substance abuse. With sexual orientation, 50% of the males identified as heterosexual compared to 92.3% of the females. This information is interesting, as it may indicate that adolescents’ plight with sexual identity and orientation at their age may be a more prevalent contributing factor to risks of NSSI in adolescent male graduates than in adolescent female graduates. While there is limited information on studies with sexual minority youth and young adults with NSSI (Walls, Laser, Nickels, & Wisneski, 2010; Whitlock et al., 2006), it has been shown that sexual victimization, identifying as bisexual, or questioning one’s gender identity may be risk factors for NSSI development.

In terms of abuse and abandonment history, none of the males reported any previous instances, however a few females did indicate a history of either physical or sexual abuse and some issues of abandonment with their parents. These stark differences in males and females’ patient histories show us that, between genders, developmental factors contribute differently to the development of adolescent NSSI. Despite males
having no history of abuse or abandonment, they still engaged in maladaptive coping behaviors. The findings of this case study garner some support for the biosocial theory, as the interplay between patients’ biological and environmental factors may have largely played a key role in their NSSI development. While males may not have indicated any abuse history, neither may they have indicated any instances related to bullying and sexual victimization in the school setting, which can be considered an invalidating environment (Linehan, 1993a). Such pervasive invalidation from one’s environment coupled with a biological predisposition to emotional distress can ultimately lead to NSSI and other impulsive behaviors.

In terms of academic functioning, the typical adolescent female graduates reported relatively higher academic performance in comparison to the males. A majority of the females reported an above average to average level of academic functioning, while the males reported an average to below average range. This information is limited and is interpreted with caution, as patients’ self-report of their academic functioning may not have been accurately documented during treatment. In addition, not much information was gathered on their academic functioning, such as their performance in specific courses (e.g., English, Math).

Both males and females reported a family history of substance use, while females also reported a significant family history of mental illness. This sheds light on some possible biological factors that could have contributed to patients’ susceptibility to experiencing emotional dysregulation and engaging in NSSI behaviors. This finding is of key interest, and further attests to the biosocial theory. With over 50% of both males and females in the case study reporting a significant family history of either substance abuse
or mental illness, it is very likely that the biosocial theory is able to explain the biological factors and the invalidating environment that begins at an early age to be a strong risk factor for the development of NSSI among adolescents.

Nine of the females were likely to have had prior inpatient psychiatric hospitalizations compared to one male. We find this compelling, as it shows that females are more likely to receive the attention of others (e.g., parents, school teachers, school counselors) when they demonstrate NSSI behaviors that are deemed necessary for mental health treatment/intervention. With males, the attention is not always gained, and the reasons for not gaining such are still to be determined. It may be that their NSSI behaviors are mistaken or misunderstood as a form of rebellion and “male-ness.” On the other hand, this may also tell us something about the influence of help-seeking behaviors between genders. Prior studies have shown that help-seeking behaviors tend to be higher for females, who usually predominate the health care setting from birth to old age (Addis & Mahalik, 2003; Mansfield et al., 2003; Schonert-Reichl & Muller, 1996). Perhaps the rarity of males who present in treatment speaks for itself, meaning that those who are able to express their distress tend to have better help-seeking behaviors than other males who do not seek treatment for NSSI.

Lastly, the follow-up services survey revealed that the typical male and female graduates in the case study also show differences in their post-treatment outcomes. While none of the males indicated any psychiatric hospitalizations or outpatient treatment after being discharged from the program, 15.4% of females in the case study reportedly went inpatient once, and a majority of the females (84.6%) enrolled in subsequent outpatient treatment. These findings highlight that it may be helpful to have continued DBT
aftercare for adolescents with NSSI, with female graduates in particular. It appears that
the DBT skills need to be revitalized and the patients themselves need to be reminded
about their effectiveness. However, the lack of males in the case study who indicated
further mental health treatment after program discharge still leave us to wonder why they
may not be in need of subsequent treatment. We hesitate to imply that the current DBT
program significantly improved both the male graduates to the point of normative
emotion regulation and distress tolerance, because studies have shown that NSSI is a
“natural, effective, and readily available strategy” for quick emotion regulation and
distraction from other forms of distress (Nock, 2009). Also, no other studies have been
conducted that examine adolescent male NSSI and its post-treatment trajectory. Future
studies should consider the influence of gender role norms and help-seeking behaviors
among males, as it may be likely that males who successfully graduate from the program
and still warrant further care are less likely to admit to needing additional care.

Yin (2008) has suggested that case studies condense their findings to create a mini
theoretical analysis that addresses the research questions posed. Based on this case study,
we believe that there is much support for the biosocial theory, however we think that
there may be gender implications. The typical male adolescent graduate with NSSI is
around 15 years old and Caucasian, has little or no history of abuse or abandonment, but
may be likely to have issues with his sexual identity or sexual orientation. He is most
likely to be performing in the average to below average level in his academics, and may
report some family history of substance abuse and an instance of psychiatric
hospitalization prior to seeking treatment. He is a compliant person in treatment and is
able to successfully complete treatment with improved functioning. While he may no
longer present in further inpatient or outpatient mental health settings after a successful 16-week intervention, he may still be presenting difficulties in emotion regulation and distress tolerance, but is less likely to seek further treatment. We believe that the role of male socialization and gender role norms have some influence in his further help-seeking behaviors. While our profile for adolescent male graduates with NSSI is preliminary, we suspect that because the biosocial theory affirms the role of biological and environmental influences on NSSI, these males are not likely to be completely adjusted to better coping in such a short amount of time. It would be to our benefit to explore pre-treatment help-seeking behaviors, sexual identity, and beliefs of gender role norms among males with NSSI in future studies.

In comparison, the typical adolescent female graduate with NSSI is also 15 years old and Caucasian but presents a more loaded psychosocial history. She is most likely to be heterosexual, has some history of physical or sexual abuse, and has a history of abandonment from her parents’ separation or divorce typically during early childhood. While she is most likely to be doing exceptionally well in the academic setting, she is also likely to have a strong family history of both substance abuse and mental illness. In addition, she is likely to have a significant history of psychiatric hospitalization prior to treatment. The typical adolescent female graduate is reported to have subsequent inpatient and outpatient treatment encounters and some lingering NSSI after successfully graduating from the program, which shows that the 16-week DBT intervention is not a one-dose panacea. This finding further strengthens our belief that the males may also be experiencing some signs of distress but may be underreporting at follow-up. Future
studies on adolescent females with NSSI should also examine their level of help-seeking behaviors in order to comparatively determine gender differences on this issue.

**Additional Analyses**

The comparison of Y-OQ-SR baseline scores with the measure’s outpatient norms showed that, as a whole, the current sample in the study reported significantly different levels of distress at baseline compared to the outpatient population. The current sample also reported significantly higher levels of distress in the two subscales examined (ID and CI). An explanation for the findings may be attributed to the uneven sample sizes between the two genders in the current study. Since the Y-OQ-SR norms are based on the mean scores for both genders combined, the current study’s sample might not be applicable for comparison with the measurement norms. As a side note, the development of the Y-OQ-SR should be taken into account when examining these norm differences. This is because the measure does not provide separate gender norms for males and females. A review of the Y-OQ-SR (Kush, 2007) indicated that female respondents tend to report higher scores on the ID subscale. This information is of relevance to the current study’s outcomes, as a discrepancy in scores related to gender may have been attributed to the low psychometric properties and limitations of the Y-OQ-SR (Kush, 2007). Nonetheless, no significant gender differences were reported for male and female patients on the Y-OQ-SR Total Score, ID, and CI subscales. It may be worthwhile to explore other weekly treatment outcome measures that may be more applicable to the current group of patients who demonstrate significant difficulties with emotion regulation and high-risk behaviors.
Limitations of the Data

A critical limitation of the study was the male patients’ sample size. This study was fairly limited due to the unequal sample sizes between males and females. The number of males who have attended the program and satisfied the inclusion criteria was small in comparison to the females. This may have affected the power of our statistical tests, which might have resulted in a greater likelihood of Type II error.

Due to the nature of the study, we were limited to the collected information available for each patient who attended the program and had both baseline and post-treatment ratings. Some patients who have attended the program dropped out of treatment after the first day, thereby having no post-treatment ratings available for comparison. This currently limited our total male sample size to 8 who have completed the program and have both baseline and post-treatment ratings.

Lastly, this study was largely limited due to the nature of the clinical treatment facility used. While the findings reflect a real-life clinical setting that provides a modified DBT-A treatment in an outpatient format, the generalization of this study is minimal. No definitive claims can be put forth given the several study limitations mentioned. Such claims may be put forth when further replication studies with a larger male sample size, more complete baseline and post-treatment reports, and more qualitative information is gathered regarding patient willingness for treatment and help-seeking behaviors.

However, given that the current study was based on a real-life clinical outpatient program, the findings substantially reflect real-world treatment settings. The study was able to provide a rich view of patient and clinical factors (e.g., psychosocial barriers to treatment, program cost) in a DBT treatment for adolescent NSSI. Therefore, the current
study’s limitations could also be considered as a useful reference to other or prospective treatment programs for adolescents with NSSI, provided that the problems or situations encountered in treatment (e.g., low male sample size) give a good overview of what to expect with patients and their families in the clinical setting.

**Implications of Research**

This study provides an informative preliminary perspective on the treatment of adolescent males with NSSI in comparison to females. While most of the current studies on adolescent NSSI have garnered support for the application and treatment effectiveness of DBT for adolescents, this study is unique in its focus on adolescent males with NSSI. It is also unique in its comparing the experiences of these adolescent males in before, during and after treatment with their female counterparts. Based on the findings of this study, it is apparent that more extensive and qualitative studies need to be made in order to make more definitive claims about the treatment effectiveness of DBT for adolescent males with NSSI. The current study was largely limited in its findings due to a low male sample size and to a low number of complete baseline and post-treatment scores provided by males. However, two areas of interest have been suggested as possible avenues for further exploration. These include a comparison of help-seeking behaviors between adolescent males and females with NSSI and the influence of group dynamics and gender among adolescent patients in a DBT-A program.

**Gender and Help-Seeking Behaviors among Adolescents with NSSI**

Society’s standards permit males to learn from a young age that, to be masculine,
one has to be tough, aggressive, and reckless (Feder, Levant, & Dean, 2010). The male normative role consists of restricting one’s emotional expressions, and males are reinforced by paternal figures and male peers to restrict their emotional expressions (Levant, 1992, 2001; Shea, 1993). The lack of available constructive outlets for sharing males’ thoughts and feelings result in the heightened need to look for other socially accepted ways to deal with their problems.

Research on help-seeking behaviors of adolescents shows that females were more likely than males to seek help from others such as their mothers, friends, and health professionals (Schonert-Reichl & Muller, 1996). The decline in help seeking in males as they reach adolescence and young adulthood is worthy of concern as peer support has been found to be a protective factor against stress among adolescent males (Walker & Greene, 1987 in Schonert-Reichl & Muller, 1996). Having a strong emotional support system could decrease the risk of NSSI among adolescent males. The lower help-seeking behavior found among males could in part explain why there are more female patients in clinical settings. This is problematic for adolescent males with NSSI because they do not receive the same level of care as females do for similar behavioral problems. Research on adolescent males with NSSI deserve the same priority as their female counterparts. The reason for this is that, while adolescent females are utilizing the many forms of social support, coping skills, and mental health resources available to them, social conformity to gender norms may delude males with the impression that such social support is not equally accessible to them.
Group Dynamics and Gender Influences in DBT-A

Studies on group dynamics in treatment settings have shown inconclusive results regarding what type of group was more suitable for males or for females. Inpatient and outpatient programs that deal with adolescents with NSSI serve a larger number of female patients in general, hence, adolescent males that do warrant treatment would have to join a mostly all-female group. Some have argued that an all-female therapy group was more appropriate for treatment with women, because they focused more on emotional communication, provided higher group cohesiveness, and facilitated a positive environment in building healthy interpersonal relations with other women (Walker, 1981).

With males, mixed gender groups were found to be more beneficial in therapy than all-male groups. The gender role conflict among males presented a huge disadvantage to an all-male therapy group because participants were more likely to feel uncomfortable sharing their emotions with other males. The relationships males tended to have with other males were based on shared activities (e.g., hobbies), unlike females who were more likely to have friendships based on interpersonal support (Brooks, 2010). Gender role conflicted males were less likely to have positive reactions to traditional therapy formats because it implied emotional disclosure to another person and a lack of self-sufficiency in taking charge of one’s life. Alternative forms of therapy have been suggested for use with male clients where the gender differences in help-seeking was less present. One alternative form suggested was coaching (McKelley & Rochlen, 2007). The process of coaching is more focused on skill building and goal-directed assistance.
Further, coaching is more accepted by males due to the treatment format’s less stigmatized association with help-seeking.

A mixed group with an even number of males and females was found to be most favorable in a therapy setting (Currat & Michel, 2006). It has also been shown that males tend to rely on females for emotional support due to factors such as homophobia and fear of appearing vulnerable to other males (Kilmartin, 2007). There were both positive and negative aspects of utilizing a mixed group for therapy. However, the gender differences served as a balance of the masculine and feminine qualities of the group experience, providing equal levels of a task-oriented and emotional-oriented treatment setting (Currat & Michel, 2006; Strassberg, 1986). It would be noteworthy to pursue the topic of group dynamics with adolescents with NSSI in the DBT-A program. Doing so could address the clinical issues that affect treatment trajectory. These issues include patient attrition rates, willingness, and openness to share in the group.

Concluding Remarks

Overall, the current study was able to provide preliminary support for the application of DBT for adolescent males with NSSI. Findings demonstrate that DBT is a powerful treatment approach that is able to successfully target both male and female adolescents with NSSI in an outpatient setting. However, replication studies need to be conducted in order to be able to make more definitive claims about the effectiveness of DBT for adolescents and their NSSI behaviors.
REFERENCES


consulting and clinical psychology, 76(1), 63-71. doi: 10.1037/0022-006X.76.1.63


# APPENDIX 1

## YOUTH-OUTCOME QUESTIONNAIRE-SELF-REPORT

<table>
<thead>
<tr>
<th>Youth Outcome Questionnaire (Y-OQ Self)</th>
<th>Date</th>
<th>Never or Almost</th>
<th>Rarely</th>
<th>Sometimes Frequently</th>
<th>Almost or Always</th>
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<tbody>
<tr>
<td>PURPOSE: The Y-OQ Self is designed to describe a wide range of troublesome situations, behaviors, and moods that are common in adolescent behavior. You may discover that some of the items do not apply to your current situation. If so, please do not have them filled in. Instead, check the &quot;never or almost never&quot; category. When you begin to complete the Y-OQ Self, you will see that you can easily make yourself feel better or healthier or at least as you wish. Please do not do that. If you are as accurate as possible it is more likely that you will be able to receive the help that you are seeking.</td>
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<td><strong>DIRECTIONS:</strong></td>
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<td>1. I want to be alone more than other children of the same age</td>
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<td>2. I have headaches or feel dizzy</td>
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<td>3. I don't participate in activities that used to be fun</td>
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<td>4. I argue or speak rudely to others</td>
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<td>5. I have more fears than other my age</td>
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<td>6. I cut classes or skip school altogether</td>
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<td>7. I cooperate with rules and expectations of adults</td>
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<td>8. I have a hard time finishing assignments, or I do them carelessly</td>
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<td>9. I complain about things that are unfair</td>
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<td>10. I have trouble with concentration or distractibility</td>
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<td>11. I have physical fights (hitting, kicking, throwing, or scratching)</td>
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<td>12. I worry and can't get thoughts out of my mind</td>
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<td>13. I feel or act</td>
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<td>14. I have a hard time setting self (or I have too much energy)</td>
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<td>15. I feel anxious or nervous</td>
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<td>16. I talk with others in a friendly way</td>
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<td>17. I can't explain why it makes me feel this way</td>
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<td>18. I have trouble with writing or reading my parts or bed</td>
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<td>19. I physically fight with adults</td>
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<td>20. I feel, hear, or believe things that are not real</td>
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<td>21. I hurt myself on purpose (for example, cut, scratched, or attempted suicide)</td>
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<td>22. I use alcohol or drugs</td>
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<td>23. I am organized (or I can't seem to get organized)</td>
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<td>24. I enjoy my relationships with family and friends</td>
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<td>25. I am sad or unhappy</td>
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<td>26. I have fear or weakness in muscles or joints</td>
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<td>27. I have a hard time trusting friends</td>
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<td>28. I think that others are trying to hurt me even when they are not</td>
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<td>29. I have threatened to, or have run away from home</td>
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<td>30. My emotions are strong and change quickly</td>
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Developed by

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Gary M. Berlinger, Ph.D.,
Michael J. Leathers, Ph.D.

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1 of 2
<table>
<thead>
<tr>
<th>Statement</th>
<th>Never or Almost Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always or Always</th>
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<tbody>
<tr>
<td>31. I break rules, laws, or don't meet others' expectations on purpose</td>
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<td>32. I am happy with myself</td>
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<td>33. I feel guilty for myself more than others my age</td>
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<td>34. I withdraw from my family and friends</td>
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<td>35. My stomach hurts or I feel sick more than others my age</td>
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<td>36. I don't have friends or keep friends very long</td>
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<td>37. My parents or guardians don't approve of my friends</td>
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<td>38. I think I can hear other people's thoughts</td>
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<td>39. I am involved in sexual behavior that my family would not approve of</td>
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<td>40. I have a hard time waiting for my turn to participate in activities</td>
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<td>41. I think about suicide or feel I would be better off dead</td>
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<td>42. I have nightmares, trouble getting to sleep, starting or waking up from sleep too early</td>
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<td>43. I complain about or question rules, expectations, or responsibilities</td>
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<td>44. I have some signs of sexual attraction or excessive energy</td>
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<td>45. I'm generally okay with frustration or boredom</td>
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<td>46. I am afraid I am going crazy</td>
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<td>47. I feel guilty when I do something wrong</td>
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<td>48. I drop a lot from others or I am pushing people away</td>
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<td>49. I feel irritated</td>
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<td>50. I throw up or feel sick to my stomach more than others my age</td>
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<td>51. I get angry enough to threaten others</td>
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<td>52. I get into trouble when bored</td>
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<td>53. I'm hopeful and optimistic</td>
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<td>54. Molest me or my actions</td>
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<td>55. Muscles in my face, arms, or body tense or jerk</td>
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<td>56. I have a hard time concentrating, finding clarity, or thinking clearly</td>
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<td>57. I get down on myself and blame myself for things that go wrong</td>
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<td>58. I have lost a lot of weights without being sick</td>
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<td>59. I act without thinking and don't worry about what will happen</td>
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<td>60. I am calm</td>
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<td>61. I don't forgive myself for things I've done wrong</td>
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<td>62. I don't have much energy</td>
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<td>63. I feel like I don't have any friends or that no one likes me</td>
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<td>64. I get frustrated or upset easily and give up</td>
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