Naughty or Narc? The Frequency of Narcissistic Traits in Child Psychiatric Disorders

Kendall D. Moore

The University of North Carolina at Chapel Hill

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Committee Chair: Eric Youngstrom, Ph.D.
Committee Member: Jennifer Youngstrom, Ph.D.
Committee Member: Guillermo Perez-Algota, Ph.D.
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Abstract

Objective: The primary goal of the present study was to assess differing levels of narcissistic traits in children diagnosed with bipolar disorder, conduct disorder, and oppositional defiant disorder. Other variables taken into account were gender and socioeconomic background in order to evaluate any changes in participants’ narcissism scores due to these factors.

Method: Secondary analysis of de-identified data was performed from a preexisting research study (NIH R01MH066647). An original narcissism measure was derived from both the parent and self-report versions of the Antisocial Process Screening Device, focusing on items that pertained to narcissistic tendencies in psychopathic adolescents.

Results: Differences in narcissism due to gender and socioeconomic background were generally small and not statistically significant. Children diagnosed with conduct disorder scored significantly higher on the narcissism scales than children diagnosed with oppositional defiant disorder ($p < .0001$), but children diagnosed with bipolar disorder were not statistically different from children with conduct disorder. A regression analysis did indicate bipolar disorder as a possible predictor of narcissism when controlling for manic and depressive episodes ($p < .05$).

Conclusion: The construct of narcissism is seen at varying levels amongst children diagnosed with bipolar, conduct, and oppositional defiant disorder. Children with conduct disorder generally had the most prevalent narcissistic behaviors, possibly due to factors of age, bipolar disorder having more conceptually-based manic symptoms, and oppositional defiant disorder having higher rates of comorbid unipolar depression. These findings could alter practitioner therapeutic strategies where it should be of interest to screen for additional narcissistic behaviors in children diagnosed with bipolar and conduct disorder and to understand how these behaviors, if present, might affect therapy. Further research should focus on whether bipolar disorder is
indeed a significant predictor of increased narcissistic tendencies as well as whether socioeconomic background affects the development of narcissistic traits.

*Keywords*: Narcissism, Bipolar, Conduct, Oppositional Defiant, Child, Socioeconomic
Naughty or Narc? The Frequency of Narcissistic Traits in Child Psychiatric Disorders

Antisocial behavior in children continues to be an intriguing and pervasive topic in clinical psychology. Understanding the psychological and social constructs that influence the establishment of child antisocial behavior is important in determining why children develop undesirable conduct such as fighting, lying, and theft. For example, among youths (13 to 18 years old), more than 50% admit to theft, more than 35% confess to assault, and more than 60% report engaging in more than one type of antisocial behavior, such as aggressive acts, drug abuse, arson, and vandalism (Kazdin, 1987). More specifically, how is the antisocial construct of narcissism fostered in children?

Narcissism is often seen as simply having a grandiose sense of self-worth, or an inflated self-esteem. Though measures of narcissism and self-esteem are positively correlated, what distinguishes narcissism from other similar constructs such as grandiosity is the presence of behavioral symptoms (Barry et al., 2007). Narcissism has further been defined as not only focusing on an individual’s apparent inflated self-view but also on their motivation to be viewed positively, and as better than others (Campbell, 1999). Theoretical implications from a developmental psychopathological viewpoint will first be addressed to understand root causes and impacts of antisocial behavior, and specifically narcissism, in children. Secondly, the child psychiatric disorders of pediatric bipolar disorder, conduct disorder, and oppositional defiant disorder as well as life experiences will be analyzed to assess their effect on narcissism in children.

The main purpose of the present study is to demonstrate that trait narcissism is present in the three aforementioned psychiatric disorders, either due to previous childhood events, item and trait overlap, or due to narcissism being an inherent trait of the disorder. The second purpose of the present study is to develop an original narcissism measure that combines items from two
diagnostic measures, the Antisocial Process Screening Device (APSD) and the Kiddie Schedule for Affective Disorders and Schizophrenia (KSADS). In general, it will be made up of combining items that are designed to assess both cognitive and behavioral aspects of narcissism.

**Developmental Psychopathology**

Developmental psychopathology is an ever-changing scientific discipline whose primary focus is the interconnections between the biological, psychological, and social aspects of normal and abnormal development. Within this framework, Cicchetti and Valentino (2006) have looked at specific ecological-transactional factors and how they influence child development. One of the primary conclusions from their study was realizing that maltreated children are much more likely to exhibit deficits in neurobiological processes, physiological responsiveness, moral development, and peer relationships (Cicchetti and Valentino, 2006). Combining all of these biopsychosocial problems, it is not surprising that maltreated children show elevated internalizing and externalizing symptomatology, higher levels of depression, increased behavioral problems at home and at school, as well as juvenile delinquency than do non-maltreated children (Kim and Cicchetti, 2004). These characteristics of children in disadvantageous environments should therefore coincide with changes in trait narcissism, where children who have experienced difficult and even abusive environments should actually incur lower levels of trait narcissism, due to their being limited opportunities for success and no continuous, positive source for increasing self-esteem.

Dishion and Patterson (1997) suggest that the onset and severity of antisocial behavior is a function the child’s behavior within relationships and the child’s characteristics. They offered three interconnecting hypotheses that provide a theoretical framework for understanding this phenomenon. The first, the social interaction hypothesis, states that antisocial behavior has a
function within the individual’s immediate social environment. For example, family members, friends, and teachers are usually the most likely influence on antisocial behaviors within a child’s microsystem, or the groups that most immediately and directly impact a child’s development (Brofenbrenner, 1989). The second hypothesis is the individual variation hypothesis, which describes that the influence of characteristics of the child on antisocial behavior is mediated by social interactional processes. Thirdly, the contextual sensitivity hypothesis expresses how contexts largely define the form and function of antisocial behavior in relationships and potentially amplify characteristics of the individual that interplay with social interactional processes. An example for this hypothesis is when children who grow up in challenging environments, such as living in urban areas or economically disadvantaged areas, experience unique challenges that may impact antisocial behaviors. Similar to child abuse, all three of these hypotheses offer explanations for changes and differences in narcissistic behaviors in children diagnosed with psychiatric disorders.

**Item and Trait Overlap**

The problem of item and trait overlap within diagnostic measures in psychopathological research has been investigated extensively. Frequent item overlap causes poor content and discriminatory validity among rating scales and can even lead to clinical misdiagnoses (Burns, 2000). In addition, this is an important issue because many psychiatric traits and disorders possess similar characteristics. Psychiatric disorders such as pediatric bipolar disorder (BD), conduct disorder (CD), and oppositional defiant disorder (ODD) share numerous common symptoms, and in particular, narcissistic traits. For example, several similarities in persons at risk for developing narcissistic and manic characteristics within BD have been explored, resulting in persons with either narcissism or mania having increased scores on measures of affective and
goal dysregulation (Fulford, Johnson, & Carver, 2008). Due to these similarities, it is no surprise that items from different diagnostic measures that assess either narcissism or mania are often congruent in their wording and ambiguous in their meaning.

The primary diagnostic scale that is utilized in the present study is the Antisocial Process Screening Device (APSD). Developed by Frick and Hare (2001) in order to assess psychopathy in adolescents, the APSD mirrors the gold standard of psychopathic diagnostic scales, the Psychopathy Checklist-Revised Version (Hare, 1991). The APSD contains three sub-sections: Callous/Unemotional traits, Impulsive/Conduct Problems, and Narcissism, totaling twenty items. Because the items are covering three broad antisocial scales, questions of item overlap within the measure have been raised.

Item overlap in diagnostic measures can occur in several different ways. One way is that items can essentially be identical across scales. For example, in the APSD, one item in the Impulsivity sub-section is “blames others for mistakes,” whereas an Oppositional Defiant Disorder (ODD) rating scale also contains the identical item “blames others for his or her mistakes or misbehavior” (Burns, 2000). The obvious problem in having this form of item overlap is that the former item is supposedly assessing impulsivity in adolescent psychopathy whereas the latter item is assessing ODD. A second manner where item overlap can occur is when items on one measure represent a broad category for more specific items on another measure. Taking another example from the APSD, the item “acts without thinking,” provides a generality for specific ADHD impulsivity symptoms (i.e. “impatience, blurting out answers before questions have been completed”) (Burns, 2000). Thirdly, another incident of item overlap occurs when the wording for an item from one measure is ambiguous enough to allow for similarity to items on other rating scales. Within the APSD, this can be seen in the item “engages
in risky activity,” which is similar to an associated feature of Conduct Disorder (CD), where CD is often correlated with reckless and risk-taking activities (APA, 1994, p. 87).

**Narcissism in Bipolar Disorder**

Bipolar disorder (BD) is a psychiatric mood disorder that involves transitioning between states of elevated mood, referred to as mania (or hypomania if mood is milder), and states of depressive episodes. One symptom that is often prevalent in BD is grandiosity, defined as having an unrealistic and sustained sense of superiority. Grandiosity has been shown to be present in all episodic forms in BD but is more noticeably apparent in manic and hypomanic episodes than in depressive episodes (Sato, et al., 2003). The reason for mentioning grandiosity here is that there are obvious similarities between the constructs of grandiosity and narcissism. Because grandiosity is actually a part of narcissism’s definition, this opens the door for ambiguity and overlap between these two different constructs. Relating this back to BD, Geller and colleagues posited grandiosity as being a cardinal symptom that is specific to BD (Geller et al., 1998; Geller et al., 2002). By “specific”, it is meant that grandiosity rarely or never occurs outside the context of BD. If this assertion is correct, one would also expect that children with BD would be significantly more narcissistic due to the presence of increased grandiosity in manic and depressive episodes. This, along with a similar finding described below, influenced the present study’s hypothesis concerning narcissism in pediatric BD.

Narcissism in and of itself is not a symptom for meeting diagnostic criteria for BD, but research has shown that narcissism and people diagnosed with BD share many commonalities. Stormberg et al. (1998) found large correlates of pathological narcissism in bipolar disorder patients who were currently experiencing manic or hypomanic episodes. As measured by the Diagnostic Interview for Narcissism, the bipolar disorder group was similar to the narcissistic
group in 12 out of the 14 identifying criteria for narcissistic personality disorder (Stormberg et al., 1998). Additionally, Fulford et al. (2008) researched comorbidity levels between narcissistic personality disorder (NPD) and BD. Sharing two key features, excessively high goals and impulsivity, bipolar disordered individuals have up to an eightfold elevation in developing NPD in both inpatient and outpatient samples (Brieger, Ehrt, & Marneros, 2003; Garno et al., 2005). Along these lines, it was further explained that NPD is most likely to be diagnosed during episodes of mania or hypomania, although NPD has still been seen during remission of mania, again mimicking grandiosity in its appearance in all episodes of BD (Fulford, et al., 2008).

**Narcissism in Conduct Disorder and Oppositional Defiant Disorder**

Conduct disorder (CD) is a psychiatric disorder defined as a repetitive and persistent pattern of behavior that violates the rights of others (i.e. aggression, theft) or that violates major age-appropriate social rules such as deceitfulness, truancy, and running away from home (DSM-IV-TR, 2000). Being one of the most studied populations in developmental psychopathology, children diagnosed with CD have several antisocial and psychosocial deficits similar to adolescent psychopathy (Frick & Dickens, 2001). For example, narcissism items from the APSD such as “uses or cons others” and “emotions seem shallow” are highly correlated with both conduct disordered children and adolescent psychopaths. It is for this reason why it is reasonable to suspect that trait narcissism would be highly prevalent in children with CD.

Likewise, oppositional defiant disorder (ODD) is defined as a recurring pattern of negative, hostile, disobedient, and defiant behavior in a child or adolescent, lasting for at least six months without serious violation of the basic rights of others (DSM-IV-TR, 2000). Sharing striking similarities with CD, ODD is often seen as a stepping-stone for meeting criteria for CD where children with a prior diagnosis of ODD are four times more likely to develop CD than
children who have had no prior history of ODD (Burke, Loeber, & Birmaher, 2002; Lahey et al., 1997). Loeber and colleagues (1993, 1997, and 1998) investigated developmental pathways of how children progress from ODD to CD. Their data suggested three pathways: (a) an Overt Pathway where the child progresses from minor aggression to physical fighting and then to violence; (b) a Covert Pathway which occurs before age 15, from minor covert behaviors to property damage (i.e. vandalism), and then to moderate to serious forms of delinquency; and (c) an Authority Conflict Pathway occurring before age 12, where the child progresses from stubborn behavior to defiance and authority avoidance (i.e. truancy, running away, staying out late at night) (Burke et al., 2002). Taking these pathways into account, ODD appears to contain more moderate and benign symptoms whereas, after a child has progressed into CD, the child begins to defy societal norms for their age. It is therefore conceivable that narcissism is also a part of this developmental progression. Children are typically diagnosed with ODD at earlier ages (average age of onset is 6 years) than CD (average age of onset is 9 years), and this difference in age could possibly affect increases in narcissism between ODD and CD children (Bloomquist & Schnell, 2002). As children come closer to their adolescent and teenage years, there is more of a psychological need for praise and acceptance from their peers and parents (Barry, Frick, & Killian, 2003). Having this need for attention as well as a sensitive self-image could influence more narcissistic behaviors in CD youth.

**Narcissism, Youths, and Socioeconomic Status**

Because the present study is assessing pediatric bipolar disorder and two disorders that are defined as child psychiatric disorders, conduct disorder and oppositional defiant disorder, it is important to examine the stability of narcissism across childhood development. Likewise, because the majority of items contained in the present study’s narcissism measure are derived
from the APSD, an adolescent psychopathy scale, the construct of psychopathy needs to be investigated as a function of age.

Due to the fact that psychopaths are often characterized as not being able to learn from experience, it is reasonable to suspect that psychopathic behaviors would be consistent throughout the life span for this disorder. Generally speaking, it has been shown that the interpersonal characteristics of psychopathy such as narcissism and callous emotions are much more resistant to increases with age than psychopathic behaviors (Harpur & Hare, 1994). The caveat from this study’s finding is that the age range of the participants was 16-69 years old. This would exclude much of the present study’s participants and raises the question, would these findings be replicated in children younger than 16 years of age?

To answer this question, Lynam et al. (2009) further examined the stability of psychopathy specifically across adolescence. Across 6-month, 1-year, 2-year, and 5-year periods, there was no evidence found for changes in stability of psychopathy in participants who were 7-17 years of age. In fact, the levels of stability found are similar to those of general personality characteristics. Furthermore, this study also came to the conclusion that interpersonal characteristics of adolescent psychopathy are stable. For example, one criterion of narcissism is interpersonal exploitation, or taking advantage of others to achieve one’s own goal. This study states that the personality characteristics of interpersonal exploitation will remain the same throughout adolescence, even as its behavioral manifestations change from say getting a friend to do one’s homework to getting a parent to support you beyond one’s means as an adult (Lynam et al., 2009). Combining the findings of both of these studies, it can be hypothesized that age will not act as a cofounding factor in the present study’s attempt to measure narcissism in child psychiatric disorders.
A second important relationship is between narcissism and socioeconomic status (SES). It is often the stereotypical view that individuals with high social and economic status, such as a CEO of a large corporation, are amongst the most narcissistic people in the world because the personality construct of narcissism is seen as a requirement for effective leadership (Lubit, 2002). Moreover, empirical research has shown that individuals of low SES may experience stressors, negative events, and interpersonal situations characterized by conflict and low support, control, and status, leading to having low levels of narcissistic traits (Gallo et al., 2006). Having numerous experiences that would cause low levels of status-related personal characteristics, such as perceived control, self-efficacy, and self-esteem, it would be expected that these individuals would also have low levels of narcissistic traits. Research has actually been inconsistent in describing the relationship between narcissism and SES. Cai et al. (2012) looked at levels of narcissism of individuals from differing levels of SES through a large Internet sample in China. These researchers found that individuals who claimed higher SES did indeed have higher levels of narcissism, whereas individuals who claimed lower SES had lower levels of narcissism (Cai et al., 2012). On the other hand, Frick and Barry (2000) found that socioeconomic status was actually moderately and negatively correlated with the narcissism sub-scale on the APSD, reporting a correlation of \( r = -0.10, p < .01 \). This statistic means that as an individual’s SES increases, their narcissistic tendencies modestly decrease.

**Hypotheses**

There are two primary hypotheses for the present study. It is first predicted that narcissism, as measured by selected items from the Antisocial Process Screening Device (APSD), will have a higher average among children diagnosed with bipolar disorder than children diagnosed with conduct disorder. By using the term “average,” it is implied that
narcissism is a trait measured on a continuum instead of a state measured by a yes/no basis. Despite the fact that CD has many more inherent characteristics to adolescent psychopathy and that one might expect for narcissistic traits to be more prevalent in CD, the foundation of this hypothesis is structured around the aforementioned problem of item overlap. Because children with BD often have grandiose symptoms, relatable to narcissistic symptoms, items within the APSD intended to measure trait narcissism will in fact measure grandiose symptoms of bipolar disordered children as narcissistic symptoms.

The second primary hypothesis is that narcissism, as measured by selected items from the APSD, will have a higher average among children diagnosed with conduct disorder than with children diagnosed with oppositional defiant disorder. It was previously mentioned that ODD is more-or-less viewed as a stepping-stone towards the less benign CD, and therefore will be predicted to have a lesser average of antisocial characteristics, including trait narcissism.

In addition to these primary hypotheses, variables of interest such as gender and location of where the present study’s participants underwent the clinical interview process will be analyzed. It is predicted that there will be gender differences in averages of trait narcissism, where male participants will have higher averages than females. Support for the previous two hypotheses is derived from lifespan research which has found narcissistic tendencies to be much more common in males and progressive throughout childhood and adolescence (Foster, Campbell, & Twenge, 2003). Lastly, participants who were clinically interviewed at the outpatient academic medical center will have higher averages of trait narcissism than participants who were interviewed at the community mental health center. The reasoning for this specific hypothesis is twofold. The first is connected to Cicchetti’s (2010) and Dishion and Patterson’s (1997) hypotheses on how childhood social and environmental experiences influence antisocial
behaviors; the subjects seen at the two sites came from starkly different psychosocial backgrounds. The second is related to Twenge and Foster’s (2008) research on ethnic differences in narcissism where white Americans scored higher on the Narcissistic Personality Inventory than did African Americans. Participants clinically interviewed at the outpatient academic medical center where mostly white whereas participants at the community mental health center were mostly African American.

Method

Participants

For the present study, there was no active recruitment of participants. The youth participants \( N = 828 \) had previously been recruited and participated in the Assessing Bipolar Disorder: A Community-Academic Blend (ABACAB) study conducted by Youngstrom, et al. (2005) from 2002-2009. Overall, the age range for the youth participants in the study was 5-17 years, consisting of 496 (59.9%) males and 332 (40.1%) females. This clinical sample was diverse in nature and included 575 (69.4%) African Americans, 185 (22.3%) Caucasians, and 20 (2.4%) Hispanics. These participants were recruited from two separate clinical settings located in Cleveland, Ohio. The first setting was a community mental health center with four urban locations. A random sample of families that were outpatients at the center was invited to participate. The only exclusionary criteria were that the patient was required to be between the ages of 5 and 18, and that both the patient and caregiver were proficient in spoken English in order to complete the clinical interviews.

The second clinical setting was an outpatient academic medical center at Case Western Reserve University. There were several target diagnoses for recruitment from this clinical
setting: bipolar I, bipolar II, cyclothymia or bipolar not otherwise specified (NOS), unipolar depression, ADHD, conduct disorder, and aggressive behavior regardless of diagnosis. Youths, including normal controls, were recruited through advertising and referrals. In addition to the youth and parent being proficient in spoken English, the inclusion criteria were that 1) youths be between the ages of 5 and 17 years, 2) of either gender, 3) of any ethnicity, 4) the youth and the guardian provided written consent for participation, and 5) both the youth and the guardian were present for the assessment.

Participants were excluded from the academic medical center if a developmental disorder, as determined by psychiatric history (i.e. interview), or having an Autism Screening Questionnaire (ASQ) score of 15 or higher, was present. Furthermore, patients with suspected moderate to profound mental retardation determined by educational history or standardized cognitive ability test scores were also excluded. For the present study, only participants from the ABACAB data set who completed the Antisocial Process Screening Device (APSD) self-report (i.e. youth) or parent version were used for analysis. The following flow chart graphically represents the inclusion and exclusion criteria enacted in the ABACAB and present study:
Measures

*Antisocial Process Screening Device.* (APSD; Frick & Hare, 2001) The APSD is a psychological screening device that is used to measure the construct of psychopathy in both children and adolescents. The original version of the APSD measured two factors of psychopathy: Impulsive/Conduct Problems and Callous/Unemotional traits. A more recent version, and the version that was utilized in the present study, contains twenty items that instead measures three separate factors of psychopathy: 1) Impulsive/Conduct Problems (I/CP, 5 items), 2) Callous/Unemotional traits (C/U, 6 items), and 3) Narcissism (NAR, 7 items) as well as two
items that do not load on factors. There are three different sub-types of the current APSD including a self-report (APSD-SR), parent (APSD-P), and teacher version. In the present study, only items from the NAR section of the APSD-SR and APSD-P versions were taken. These items are consistent in which number they appear in all three versions and are similar in wording, only changing the phrasing to fit the person who is answering the questions. Examples of items from the narcissism section include, “You use or ‘con’ other people to get what you want” (APSD-SR) as well as “Can be charming at times, but in ways that seem insincere or superficial” (APSD-P). An additional item not originally found in the narcissism section, “Lies easily and skillfully,” was incorporated in this study’s overall narcissism scale. Within the ABACAB data set, Cronbach’s alpha reported for the APSD-SR was $\alpha = .994$ and for the APSD-P was $\alpha = .802$, indicating excellent internal consistency for the former measure and a strong internal consistency for the latter measure.

*Schedule for Affective Disorders and Schizophrenia for School-Age Children Present and Lifetime* (KSADS-PL; Kaufman et al., 1997) Modeled after the KSADS-P (Present Episode Version), the KSADS-PL is a semi-structured diagnostic interview designed to assess current and lifetime history of psychiatric disorders according to DSM-IV criteria, including all of the aforementioned primary target diagnoses in the ABACAB study. There are five diagnostic supplements within the KSADS-PL: 1) Affective disorders, 2) Psychotic disorders, 3) Anxiety disorders, 4) Behavioral disorders, and 5) Substance abuse and other disorders. Items of importance for the present study within the KSADS-PL are the sub-sections “Irritability and Anger,” “Elation, Expansive Mood,” and “Delusions.” These sub-sections will be utilized to assess related symptoms of bipolar disorder, conduct disorder, and oppositional defiant disorder.
Procedure

*Procedure for ABACAB.* All youths provided written assent for participation and the parent or guardian also provided written consent for the participation of their child. All participants and their families completed the KSADS-PL diagnostic interview, with the trained interviewer (n = 4 pre-doctoral interns, 3 PhDs, 1 MA, and 2 psychology BA raters) meeting the adolescent and parent or guardian separately. When the youth was completing the KSADS-PL interview, the parents were given other index tests used in the study such as the APSD and Parent General Behavior Inventory (P-GBI). On the other hand, when the parent was being interviewed, the youths ages 11-17 were completing the index tests. Youth younger than age 11 did not complete any of the self-report instruments, including the APSD-SR. This research method followed nationally standardized instruments that only begin using youth self-report information at age 11. The youths and their parents could not access each other’s responses and KSADS diagnoses and index test scores were blind to the content of the rating scales, which were scored after the completion of the interview.

*Procedure for the Present Study.* As previously mentioned, there was no active recruitment for this study. An Institutional Review Board (IRB) application to approve of this procedure was completed. The application stated that this study would be using secondary analysis of de-identified data, which obtained the response that this procedure would not need IRB approval (i.e. NHSR determination). After receiving this statement, permission to access the ABACAB data set was acquired by preparing a statement to the principal investigator, Dr. Eric Youngstrom, which specified that there would be no distribution, publishing, or presenting of the data from ABACAB without prior discussion and approval from him.
Items from the measures chosen for data analysis were selected by reading through all measures (i.e. APSD versions) and indicating which ones either fit the present study’s definition of narcissism or helped with diagnosing the target disorders for the present study. For reference, the items that were selected from the APSD-SR and APSD-P versions were numbers 5, 6, 8, 10, 11, 14, 15, and 16.

**Results**

**Demographics**

After inclusion and exclusion criteria in the ABACAB study, and utilizing only those participants who had data for answering all of the aforementioned APSD narcissism scale items, the number of participants for the present study was $N = 401$. Participants were 53% male, 67.3% African American, 25.7% Caucasian, and 2.2% Hispanic. Additionally, the average age for the participants was 13.5 (SD = 1.9) while the overall age range was 11-18.

**Missing Data and Bias**

Steps were taken to examine if the participants that were systematically excluded from the present study were not statistically different from those who met the inclusion criteria. Because the present study wanted to utilize the APSD-SR version, this automatically excluded any children under the age of 11 because the ABACAB study’s protocol required that only children above this age could complete this measure. These statistical checks are summarized in Table 1. According to these results, there is only one statistically significant discrepancy between children that were included in the present study and those that were not; this was seen in children diagnosed with ADHD or no comorbid ADHD. This possible source of bias can be controlled by the conservative Bonferroni Correction, one of the simplest methods used to counteract the
problem of multiple comparisons by avoiding false positives, or Type I Errors. Since there were five distinct comparisons being made (i.e. ODD, ADHD, CD, BD, and Unipolar Depression), the original significance level of $p < .05$ can statistically be rendered as $p < .01$, therefore making the Chi-square test for ADHD children not significant. After this correction, there are no statistically significant differences between the children who were included in the present study and those who were not on the basis of psychiatric disorders.

Moreover, amongst the excluded participants, there were 45 participants that received the APSD-SR index test despite them being younger than 11 years old. Between these particular participants and the ones included in the present study, there was indeed one statistically significant difference on the basis of their respective narcissism scores. This information is displayed in Figure 1. Specifically, on the present study’s total narcissism scale and not on the parent and self-report versions, the two groups had statistically different mean scores, $F = 4.04$, $p = .045$. The range of scores was generally the same for both groups of participants, but the included participants had several outlying, higher narcissism scores that most likely resulted in this difference.

**Diagnostic Efficiency Statistics**

Table 2 presents the internal consistency statistics for the present study’s total narcissism scale (i.e. NAR items from both APSD-SR and APSD-P) as well as for the parent narcissism scale and self-report narcissism scale. The internal consistency statistics for the self-report version were the lowest out of the three scales, consistent with other studies assessing the psychometric properties of this APSD version (Muñoz & Frick, 2007). Reported statistics do not include a grandiosity item from the KSADS-PL, which was to be originally utilized. This is due
to the fact that this item lowered internal consistency reliability for each of the narcissism scales by a significant margin, which would negatively affect the present study’s results.

**Hypotheses**

The first hypothesis in the present study was that children clinically diagnosed with bipolar disorder would score higher on the narcissism scales than children diagnosed with conduct disorder. The mean scores and standard deviations for each of the two groups are located in Table 3. Three independent-variable t-tests were performed to compare these means between the BD ($N = 80$) and CD ($N = 53$) groups. For the total narcissism scale, this hypothesis was not supported at the specified .05 level, $t(131) = -0.67, p = .503, d = 0.12$. This result means that children diagnosed with CD scored higher in levels of trait narcissism than children with BD and indicates a small effect size (i.e. small variance) for the t-test. For the parent narcissism scale, this hypothesis was not supported, $t(131) = -0.86, p = .389, d = 0.15$. Thirdly, for the self-report narcissism Scale, this hypothesis was again not supported, $t(131) = -0.10, p = .918, d = 0.02$. These two results also include exceedingly small effect sizes and signify that children diagnosed with CD are only slightly more narcissistic than children with BD, though not be a significant margin.

The second hypothesis predicted that children clinically diagnosed with CD would be significantly more narcissistic than children clinically diagnosed with ODD. The mean scores and standard deviations for this hypothesis are also located in Table 2. As before, three independent-variable t-tests were calculated to compare the means between the CD ($N = 74$) and ODD ($N = 138$) groups. For the total narcissism scale, this hypothesis was supported at the specified .05 level, $t(210) = 4.03, p < .0001, d = 0.55$. This result suggests that children with CD are significantly more narcissistic than children with ODD as well as shows a medium effect
size. For the parent narcissism scale, this hypothesis was supported, $t(210) = 3.99, p < .0001, d = 0.55$. For the self-report narcissism scale, this hypothesis was again supported at the .05 level, $t(210) = 1.80, p = .074, d = 0.25$. The former result indicates another medium effect size where children with CD are more narcissistic than ODD, while the latter result indicates a small effect size and suggests a trend of significantly more narcissistic behaviors in CD children than ODD children.

The third hypothesis suggested that there would be a significant difference of narcissism in gender, where males would score higher than females on the narcissism scales. The mean scores and standard deviations for this analysis are located in Table 2. Three independent-variable t-tests were also calculated to compare the means between male children ($N = 212$) and female children ($N = 189$) that participated in the ABACAB study. For the total narcissism scale, this hypothesis was not supported, $t(399) = -1.41, p = .160, d = 0.14$, indicating a trend where females are slightly more narcissistic than males. For the parent narcissism scale, this hypothesis was not supported, $t(399) = -1.42, p = .156, d = 0.14$, also showing a statistical trend for females scoring higher than males. For the self-report narcissism scale, this hypothesis was again not supported, $t(399) = -0.68, p = .499, d = 0.07$, suggesting that there was not any real statistical difference between male and female children in narcissism on this specific scale.

The fourth hypothesis predicted that patients seen at the Case Western Reserve University Academic Outpatient Medical Center would score higher on the narcissism scales than would participants who were interviewed at the Community Mental Health Center. Again, the mean and standard deviation scores for the academic outpatient medical center ($N = 112$) and community center ($N = 289$) are located in Table 2. For the total narcissism scale, this hypothesis was not supported at the specified .05 level, $t(399) = -1.03, p = .303, d = 0.10$, indicating that the
participants interviewed at the community mental health center were not statistically different than participants at the academic outpatient medical center. For the parent narcissism scale, this hypothesis was not supported, $t(399) = -0.20, p = .845, d = 0.02$, meaning that there was no statistical difference in narcissism levels between participants at either site. For the self-report narcissism scale, this hypothesis was again not supported, $t(399) = -2.23, p = .027, d = 0.22$. This result interestingly shows that for this specific narcissism scale, community center participants scored significantly higher than academic center participants.

**Regression Analysis**

In relation to the first hypothesis, where children diagnosed with BD were predicted to be more narcissistic than children with CD, a regression analysis was performed to determine if children with BD could possibly be more narcissistic when controlling for manic and depressive episodes. The data from the regression analysis are summarized in Table 4. The results from the Children Depression Rating Scale and the Youth Mania Rating Scale from the ABACAB dataset were used to measure their respective episodes in children with BD. Furthermore, two regression models were analyzed. Model 1 evaluated whether BD by itself would be a distinct predictor of narcissism, after controlling for mania and depression. The data reported in Table 3 suggest that BD is in fact a significant predictor of narcissism. Model 2, on the other hand, was designed to combine all three factors (i.e. BD, depression, and mania) to assess if narcissism could be better predicted than when only utilizing BD as the primary factor. The results indicated that narcissism can be predicted when employing all three of these factors, and again showed that BD by itself is a statistical predictor. Surprisingly, mania was shown to not be a predictor of narcissism despite their similarities and, instead, the factor of depression proved to have a statistical trend in predicting rates of narcissism.
Discussion

The purpose of this paper was to assess differences in levels of trait narcissism in children and adolescents diagnosed with psychiatric disorders that were expected to have moderate or high levels of the trait, for different possible reasons. It is of importance for the field of psychology as well as for society to understand the mechanisms behind antisocial behavior in children in order to develop and implement effective prevention and intervention programs. Factors that were assessed to possibly affect narcissism in the ABACAB study’s participants were differing disorders (i.e. BD, CD, ODD), possible item and trait overlap, gender, and socioeconomic background. The first two hypotheses compared the aforementioned three psychiatric disorders. The results did not support the prediction that children diagnosed with BD would be significantly more narcissistic than children with CD and only provided support for children diagnosed with CD scoring significantly higher on the present study’s narcissism measure than children with ODD.

An integral component for why it was anticipated that children with BD would score noticeably higher on the narcissism scales than children with CD was due to close similarities between mania and narcissism, with mania being a primary feature of BD. Similarities between these two constructs include similar approach-related affects (i.e. positive emotions following rewards or favorable outcomes), low levels of agreeableness, and constant experiences of anger that is generally expressed in physical and/or verbal aggression (Fulford et al., 2008). Despite these similarities, research has also found important differences between narcissism and mania. Examples of these differences include: (a) those with narcissistic tendencies report significantly more positive self-focus after good events, (b) manic tendencies correlated significantly more strongly with dampening of affect following positive outcomes as well as both positive and
negative affect intensity, (c) narcissistic tendencies correlated more highly with self-reports of behavioral drive and financial goal-setting, and (d) mania tendencies correlated more strongly with fun seeking than did those with narcissistic tendencies (Fulford et al., 2008). Given these conceptual and empirical differences, it is evident that in the present study, these two constructs’ similarities were not related enough to allow for children with BD to be considered more narcissistic than children with CD.

A second part in the analysis of this hypothesis is the possibility that when specifically experiencing a manic episode, BD children may then become more narcissistic than children with CD. As previously mentioned, Stormberg et al. (1998) found that BD inpatients and outpatients who are currently undergoing a manic episode are similar to those diagnosed with narcissistic personality disorder (NPD) in 12 out of 14 unique factors. In the present study, though the statistical results indicated that children diagnosed with BD were no different than children with CD on the narcissism variable, the supplementary regression analysis provided inclinations that, when controlling for mania and depression, BD can possibly act as a significant predictor of narcissistic tendencies. More precisely, the aspect of depression actually had a stronger connection of predicting decreased narcissism than mania. Though these findings do not specifically support the study’s hypothesis, they have two important implications. The first implication provides more evidence between the conceptual differences of mania and narcissism due to the fact that mania was not a significant predictor of elevated narcissism. Furthermore, it was formerly believed that conceptual and empirical similarities would actually produce item overlap on the narcissism measure. Several examples were given to show that multiple items on the APSD were similar to ODD and mania items on similar measures, fueling the idea that possible item overlap may also cause manic symptoms in BD children to be measured as
narcissistic behaviors in the present study’s scales. It appeared, though, that since mania was the weakest predictor of narcissism out of the three regression factors (i.e. BD, mania, depression), the present study’s narcissism measure accurately separated the construct of mania from the construct of narcissism. Moreover, despite there being no statistical support for this hypothesis, these findings actually offer evidence against the theory that grandiosity is diagnostically specific to BD, a conclusion which Geller and colleagues (1998 and 2002) had originally posited. If grandiosity (a DSM-IV-TR criterion for narcissism) was indeed a specific cardinal symptom of BD, then these results should have shown significant elevations in narcissism scores only for BD children and not for children diagnosed with CD. The present study’s findings indicated the opposite, providing evidence for grandiosity not being a specific symptom limited to only BD.

The second implication is clinical in nature, where these outcomes could possibly affect practitioner therapeutic strategies. If BD is indeed a statistical predictor of narcissistic behaviors, it may be of interest for the practitioner to screen for NPD. A possible strategy, for example, could be that the practitioner assesses for NPD during both manic and non-manic episodes in BD patient in order to see (a) if NPD is actually evident and comorbid and (b) the severity of NPD, if present. More clinical research will need to be conducted to accumulate a reliable finding that BD is indeed a predictor of either full-scale NPD or simply of noticeable increases of narcissistic tendencies. Additionally, the clinician will need to determine whether the patient is currently experiencing a depressive episode. The current findings showed a statistical trend of a negative relationship between depression and narcissism, meaning that the more depressed a patient is, the less narcissistic they are, and vice versa. Therefore, if the client is currently feeling depressed or experiencing an episode of depression, it is likely that narcissistic behaviors will be absent or diminished, again possibly affecting therapeutic strategies and implications.
As was formerly stated, ODD is a significant predictor of developing CD later in life and has been described as a milder, more benign manifestation of CD (Burke, Loeber, & Birmaher, 2002; Lahey et al., 1997). Despite these assertions, mounting evidence has shown that ODD and CD simply share more environmental commonalities than psychological risk factors, where ODD is unique in predicting not only antisocial behavior, but also comorbid internalizing disorders (Loeber, Burke, & Pardini, 2009). Another research study goes on to suggest that comorbid rates of depression, an internalizing disorder, are significantly high in children with ODD as well as that ODD is indeed a risk factor and/or a prodrome for developing an internalizing disorder, after controlling for gender, age, and environmental factors (Boylan et al., 2007). The integral connection to the present study here is that in the regression analysis, the factor of depression showed a statistical trend of predicting narcissism. This trend was again a negative correlation; meaning that the more depressed a child is the less narcissistic they will be. Within the present study’s dataset, close to 35% of all children diagnosed with ODD were also diagnosed with comorbid unipolar depression. Comparatively, only 29% of children with CD were diagnosed with comorbid unipolar depression. The fact that children with ODD had a higher frequency of this comorbid internalizing disorder might help explain why they were considerably less narcissistic than children with CD.

A second reason for why a significant difference was seen between ODD and CD children could simply be due to age differences. After inclusion criteria were met, the mean age for children diagnosed with ODD in the present study is 11.2 years, and the average age for CD children is 14.1 years. In addition, the age gap between ODD and CD children was similar in the full ABACAB dataset (i.e. before the present study’s inclusion criteria were met), averaging 10.2 years for ODD children and 12.8 years for CD children. It is important to remember here that the
present study did not specifically assess children below the age of 11. Despite this, noticeable age differences were both seen in participants that were and were not used in the present study’s methodology. These age differences are important because it is commonly accepted that as children grow into their adolescent years, there is an increasing importance to be accepted and recognized by one’s peers and other individuals in one’s life (Barry, Frick, & Killian, 2003). Therefore, narcissistic tendencies should possibly be expected to be much more prevalent in children with CD because they are at the age where they crave acceptance and recognition from their surrounding peers and authoritative individuals.

The third hypothesis in the present study predicted that males would score significantly higher on the narcissism scale than females, a prediction that was not statistically supported. For the total version and parent version, there was a perceptible trend for the female child participants being more narcissistic than their male counterparts. Conversely, for the self-report measure, there was no statistical difference between the two groups. This is perhaps one of the more intriguing findings due to the fact that little research has been completed on antisocial behaviors in female children and adults, although that pattern is fortunately changing (Odgers & Moretti, 2002).

It has also been commonly shown in clinical research populations that males tend to exhibit many more antisocial behaviors than females. One difference to realize here is that males are characterized by overt (i.e. conscious grandiosity and unconscious shame) forms of antisocial behaviors, such as physical aggression and committing unlawful crimes (Ryan, Weikel, & Sprechni, 2008). These behaviors are much more noticeable in the public eye, partly causing the reason for why male antisocial tendencies are so extensively studied. Females, on the other hand, may possibly meet the definition of narcissism through more covert (i.e. unconscious grandiosity
and conscious shame) pathways, or more “subtle, indirect, and affiliative means that conform to expectations of their sex role” (Morf & Rhodewalt, 2001; Ryan et al., 2008). These covert behaviors could possibly be part of the reason for why the female participants in the present study, on average, had just as high or even higher scores on the narcissism scale as the male participants. Whereas these behaviors are indeed less noticeable in the public’s eye, it appeared that the narcissism measures in the present study were able to account for them. Continued research on gender differences in antisocial behaviors would greatly benefit the field and should be at the forefront of future research studies.

As previously mentioned, there are several research studies that have found that people from higher income families or higher career statuses often tend to be overtly narcissistic (Cai et al., 2012; Lubit, 2002). These individuals have usually experienced copious amounts of success and are in positions where high self-esteem and demanding leadership qualities are required. On the other hand, since people from low socioeconomic backgrounds often experience numerous stressors and negative life events, as well as interpersonal situations characterized by conflict, low support, and control, these may directly cause lower levels of self-confidence and narcissistic tendencies (Gallo et al., 2006). Similarly, research has also shown that white Americans have scored higher on narcissism scales than African Americans and other ethnic groups (Twenge & Foster, 2008). These points of view motivated the hypothesis in the present study where participants from the Case Western Reserve University outpatient academic center, who were mostly white Americans from middle or high SES backgrounds, would score significantly higher on the narcissism scales than participants interviewed at the community mental health center, who were mostly African American and from lower SES backgrounds. The statistical analyses actually indicated the opposite. Specifically, there were no statistical
differences between these two groups on the total and parent-narcissism scales, whereas on the self-report scale, community mental health center participants were actually significantly more narcissistic than those from the outpatient academic center.

This interesting finding brings into question how different environmental factors affect narcissistic tendencies in humans. Because people from low SES backgrounds often have few opportunities for self-advancement and success, their environmental situation may not allow for the development of the chauvinistic and callous actions narcissists display. On the other hand, it is also plausible to contemplate that the construct of narcissism could actually be utilized as a psychological defense mechanism to counteract the constant negative and demeaning environments which a socially and economically disadvantaged life might provide. These defense mechanisms are used to alter internalizing psychological states, such as emotions or thoughts, as well as to change the meaning or significance of perceived threats, create a sense of control, and thus protect and enhance the self, a mental aspect that narcissists crave (Presniak, Olson, & MacGregor, 2010). Furthermore, one theoretical concept that attempts to explain this phenomenon is termed splitting. People with antisocial disorders such as narcissistic personality disorder have been shown to split their identity into two parts, a grandiose self and a devalued self, of which only the grandiose identity is typically evident (Presniak et al., 2010). This defense mechanism, also known as idealization, can work to influence one’s self esteem by simultaneously increasing internal grandiosity and devaluing other people in one’s environment. In the dog-eat-dog world of urban America, having the ability to safeguard against numerous environmental obstacles is vital for mental and physical health; developing a narcissistic personality could bolster this ability.
There are several important strengths of the present study. The methodological approach was based on secondary analysis of de-identified data from the ABACAB study, which was based on two heterogeneous clinical cohorts (Youngstrom et al., 2005). The procedure employed in ABACAB ensured emphasis on clinically complex samples (i.e. high rates of comorbidity), a realistic approach which allowed the findings to become more generalizable to real-world clinical practice. For the present study, this is also the case for the specific population subset that was assessed. A second strength is the ethnic and economic diversity seen in the participant sample. African-Americans and people from low socioeconomic backgrounds are often underrepresented in psychological research, a confounding fact that was corrected for in the ABACAB study. This procedural improvement broadened the generalizability of the present study’s results to a wider group of individuals, and not to only middle-class Caucasian children. A third strength is that the findings may provide guidance on evidence-based treatment of ODD and CD. Due to the significant differences in narcissism levels between these two disorders, it is important for the clinician to understand how this may moderate psychotherapy.

There are also two primary limitations of the present study that should be addressed. Although the included participants are racially diverse, it would still be beneficial to have additional Hispanic participants to provide a broader clinical context. Despite the Hispanic population being the second largest racial group in the United States, they are generally underrepresented in research studies (Delgado-Romero et al., 2005). The second limitation refers to the clinical implications of this study. Because the methodological approach incorporated the APSD-SR measure, children under the age of 11 were excluded. Therefore, these findings should only be used to generalize for children ranging from 11-17 years of age, and not for younger
children because of differences in psychopathological outlook (i.e. as you get older, there is less of a chance to be diagnosed with either ODD or ADHD).

Based on the results of the present study, there are several suggestions for the direction of future research. As aforementioned, the first suggestion would be to close the gap between research on male and female antisocial behaviors. A reason for why male children antisocial behaviors have been studied much more extensively is because they are overt in nature, and can often have a direct impact on the safety of others. Although female children are not indicted in violent behaviors to the extent males are, it is of interest to understand the power that gender roles and other psychosocial factors may affect this difference. In addition to this suggestion, a second recommendation would be to continue research on narcissism as a defense mechanism. A potential study could assess the differences in the actual utilization of narcissism in people from low SES and high SES backgrounds to provide more evidence if environmental stressors or successes have an impact on people in developing a narcissistic personality.

In conclusion, the present study attempted to assess differing levels of narcissism in children diagnosed with various psychiatric disorders and who are from diverse socioeconomic backgrounds. An original narcissism measure consisting of various items from the APSD was employed for secondary analysis of de-identified data from the ABACAB research study. The findings are important to the current state of the literature because it furthers clinical-child research, an area in psychology along with child psychotherapy, which has developed into a multi-billion dollar investment that currently involves nearly 13% of children in the United States (Eyberg, Nelson, & Boggs, 2008). The hope is that in understanding various aspects of antisocial behaviors in youths, the field and society in general can initiate the move into
providing solely prevention therapy and programs instead of relying more on intervention techniques after these troublesome behaviors have fully manifested.
References


Prepubertal and early adolescent bipolarity differentiate from ADHD by manic symptoms, grandiose delusions, ultra-rapid or ultradian cycling. *Journal of Affective Disorders, 51*(2), 81-91. doi:10.1016/S0165-0327(98)00175-X


Table 1

*Missing Data Analyses for Included and Excluded Participants*

<table>
<thead>
<tr>
<th></th>
<th>$N$ used</th>
<th>$N$ not used</th>
<th>$\chi^2$</th>
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<tbody>
<tr>
<td>ODD</td>
<td>138</td>
<td>19</td>
<td>0.16</td>
</tr>
<tr>
<td>No comorbid ODD</td>
<td>263</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>214</td>
<td>21</td>
<td>3.99$^{*}$</td>
</tr>
<tr>
<td>No comorbid ADHD</td>
<td>187</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>74</td>
<td>7</td>
<td>0.88</td>
</tr>
<tr>
<td>No comorbid CD</td>
<td>327</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>BD</td>
<td>80</td>
<td>10</td>
<td>0.29</td>
</tr>
<tr>
<td>No comorbid BD</td>
<td>321</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Unipolar</td>
<td>134</td>
<td>25</td>
<td>1.82</td>
</tr>
<tr>
<td>No comorbid Unipolar</td>
<td>267</td>
<td>34</td>
<td></td>
</tr>
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</table>

$^{*}$This value is not statistically significant when controlling for Type I Error with Bonferroni’s Correction.

$^{*}p < .05.$
Table 2

*Internal Consistency Reliability of Narcissism Scales*

<table>
<thead>
<tr>
<th>Present Study Scales</th>
<th>Number of Items in Scale</th>
<th>Cronbach’s Alpha$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Narcissism Scale</td>
<td>16</td>
<td>$\alpha = .76$</td>
</tr>
<tr>
<td>Parent Narcissism Scale</td>
<td>8</td>
<td>$\alpha = .80$</td>
</tr>
<tr>
<td>Self-Report Narcissism Scale</td>
<td>8</td>
<td>$\alpha = .68$</td>
</tr>
</tbody>
</table>

$^a$Cronbach’s Alpha: Adequate $0.6 \leq \alpha < 0.7$, Good $0.7 \leq \alpha < 0.8$, Very Good $0.8 \leq \alpha < 0.9$. 
Table 3

*Means and Standard Deviations of Hypotheses’ Variables*

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis 1</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Narcissism Scale</td>
<td>0.48 / 0.50</td>
<td>.1643 / .1485</td>
</tr>
<tr>
<td>Parent Narcissism Scale</td>
<td>0.58 / 0.61</td>
<td>.2237 / .2216</td>
</tr>
<tr>
<td>Self-Report Narcissism Scale</td>
<td>0.37 / 0.38</td>
<td>.1995 / .1804</td>
</tr>
<tr>
<td><strong>Hypothesis 2</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Narcissism Scale</td>
<td>0.53 / 0.45**</td>
<td>.1589 / .1340</td>
</tr>
<tr>
<td>Parent Narcissism Scale</td>
<td>0.65 / 0.53**</td>
<td>.2117 / .1997</td>
</tr>
<tr>
<td>Self-Report Narcissism Scale</td>
<td>0.41 / 0.36†</td>
<td>.2049 / .1793</td>
</tr>
<tr>
<td><strong>Hypothesis 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Narcissism Scale</td>
<td>12.7099 / 13.4339</td>
<td>5.1526 / 5.1252</td>
</tr>
<tr>
<td>Parent Narcissism Scale</td>
<td>7.4528 / 7.9788</td>
<td>3.5983 / 3.8064</td>
</tr>
<tr>
<td>Self-Report Narcissism Scale</td>
<td>5.2571 / 5.4550</td>
<td>2.9891 / 2.8517</td>
</tr>
<tr>
<td><strong>Hypothesis 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Narcissism Scale</td>
<td>12.6250 / 13.2163</td>
<td>4.8859 / 5.2423</td>
</tr>
<tr>
<td>Parent Narcissism Scale</td>
<td>7.7589 / 7.6782</td>
<td>3.7272 / 3.6992</td>
</tr>
<tr>
<td>Self-Report Narcissism Scale</td>
<td>4.8661 / 5.5381*</td>
<td>2.5802 / 3.0291</td>
</tr>
</tbody>
</table>

*Note.* Hypothesis 1 means are reported (BD/CD). Hypothesis 2 means are reported (CD/ODD). Hypothesis 3 means are reported (Male/Female). Hypothesis 4 means are reported (Academic/Community).

<sup>a</sup>Mean scores are calculated through percent of maximum possible.

†p < .10. *p < .05. **p < .0001.
Table 4

Regression Analysis for Hypothesis 1 (BD > CD)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R / R^2$</td>
<td>.21 / .04</td>
<td>.23 / .06</td>
</tr>
<tr>
<td>$F$</td>
<td>16.92**</td>
<td>7.23**</td>
</tr>
<tr>
<td>$B$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD</td>
<td>0.84</td>
<td>.061</td>
</tr>
<tr>
<td>Mania</td>
<td>.002</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>-.001</td>
<td></td>
</tr>
<tr>
<td>t-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BD</td>
<td>4.11**</td>
<td>2.03*</td>
</tr>
<tr>
<td>Mania</td>
<td>1.54</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>-1.83†</td>
<td></td>
</tr>
</tbody>
</table>

Note. Mania was measured by the Young Mania Rating Scale. Depression was measured by the Child Depression Rating Scale. Degrees of freedom for Model 1 $df = 375$. Degrees of freedom for Model 2 $df = 273$.  †$p < .01$. *$p < .05$. **$p < .0001$. 
Figure 1

Comparison of Distributions for Missing and Complete Cases on the Primary Measure of Narcissistic Traits

Figure 1. Comparison of narcissism scores between completed cases ($N = 401$; right side of figure) and excluded cases ($N = 45$; left side of figure). The excluded cases had filled out the APSD-SR during the ABACAB study despite them not meeting age criteria ($\geq 11$). Generally, the range of scores is similar for both groups of cases but a statistical difference occurred due to several outlying, higher narcissism scores amongst the completed cases.