Archives of Suicide Research

ISSN: 1381-1118 (Print) 1543-6136 (Online) Journal homepage: https://www.tandfonline.com/loi/usui20

Adolescent but Not Parent Report of Irritability Is Related to Suicidal Ideation in Psychiatrically Hospitalized Adolescents

Elisabeth A. Frazier, Richard T. Liu, Maya Massing-Schaffer, Jeffrey Hunt, Jennifer Wolff & Anthony Spirito

To cite this article: Elisabeth A. Frazier, Richard T. Liu, Maya Massing-Schaffer, Jeffrey Hunt, Jennifer Wolff & Anthony Spirito (2016) Adolescent but Not Parent Report of Irritability Is Related to Suicidal Ideation in Psychiatrically Hospitalized Adolescents, Archives of Suicide Research, 20:2, 280-289, DOI: 10.1080/13811118.2015.1004497

To link to this article: https://doi.org/10.1080/13811118.2015.1004497

Accepted author version posted online: 20 Jul 2015.
Published online: 19 Feb 2016.

Archives of Suicide Research, 20:280–289, 2016

ISSN: 1381-1118 print/1543-6136 online
DOI: 10.1080/13811118.2015.1004497

Routledge
Taylor & Francis Group

Adolescent but Not Parent Report of Irritability Is Related to Suicidal Ideation in Psychiatrically Hospitalized Adolescents

Elisabeth A. Frazier, Richard T. Liu, Maya Massing-Schaffer, Jeffrey Hunt, Jennifer Wolff, and Anthony Spirito

Objective: Identifying trans-diagnostic risk factors for suicidality may improve assessment and treatment. This study examined the degree to which clinician ratings of adolescent irritability, based on adolescent versus parent report, were associated with adolescent suicidal ideation beyond established risk factors (i.e., female gender, depressive, substance use, oppositional defiant, conduct, and post-traumatic stress disorders).

Methods: Hierarchical linear regression was used to analyze 322 adolescent inpatients (40.4% male) and 197 parents.

Results: Adolescent-rated irritability ($p<0.001$) and depression ($p<0.001$) were positively associated with adolescent suicidal ideation beyond all other factors. Parent-rated adolescent irritability was unrelated to adolescent suicidal ideation.

Conclusion: Results suggest irritability is an important factor in determining suicide risk, and adolescent report of irritability may be more important in gaging suicide risk than parent report.

Keywords adolescents, inpatient, suicidal ideation

INTRODUCTION

Adolescence is a critical developmental period for increased suicide risk (Kessler, Borges, & Walters, 1999), and rates of suicide attempts increase markedly in the transition from childhood to adolescence. For example, in 2006, rates increased from 1.3 in childhood to 8.6 per 100,000 in adolescence (Centers for Disease Control and Prevention, 2006). Recent data collected with the Youth Risk Behavior Surveillance Survey indicate that among high school students, 17.0% report suicidal ideation, 13.6% report having suicide plans, and 8.0% have made a suicide attempt, of which 2.7% required medical treatment (Centers for Disease Control and Prevention, 2013). Additionally, rates of suicide attempts among high school students in the United States increased from 6.3% in 2009 to 8.0% in 2011 (Centers for Disease Control and Prevention [CDC], 2013).

One of the strongest predictors of death by suicide is a history of suicidal ideation (Cooper et al., 2005; ten Have et al., 2009).

Thus, understanding clinical phenomena associated with suicidal ideation is important for informing intervention and prevention efforts for suicidal behavior. There is a well-established link between suicidal ideation and concurrent psychiatric disorders including depression, anxiety, conduct, and substance use disorders (Goldston et al., 2009), as well as related concerns such as poor problem solving and high family conflict (Thompson et al., 2012). Improving our understanding of the symptom level factors that confer risk for suicidal thoughts and behaviors may improve our ability to tailor treatment for suicidal youth.

Identifying additional risk factors for suicidal ideation that cut across diagnoses may improve our understanding and treatment of emotional disorders and suicidal behaviors. Irritability is gaining increasing research interest as a key factor cutting across psychiatric disorders and suicidality. Irritable mood, characterized by easy annoyance, touchiness, anger, and temper outbursts, is common in youth (Stringaris, 2011). Lifetime prevalence estimates range from 3.3% for severe irritability (operationalized as severe mood dysregulation; Leibenluft, Charney, Towbin, Bhangoo, & Pine, 2003) to 20% (endorsement of a single irritability item on the Eysenck Personality Questionnaire; Stringaris, 2011; Brotman et al., 2006; Pickles et al., 2010). Irritability occurs frequently in youth with mood (unipolar and bipolar depression), anxiety, attention deficit hyperactivity disorder (ADHD), and conduct disorders (Fowler & Szabó, 2013; Mick, Spencer, Wozniak, & Biederman, 2005; Stringaris, Maughan, Copeland, Costello, & Angold, 2013). Youth irritability has also been shown to significantly predict a range of psychopathology in adulthood, including major depression, generalized anxiety, and dysthymia at 20-year follow-up after controlling for emotional and behavioral disorders at baseline (Stringaris, Cohen, Pine, & Leibenluft, 2009).

Although youth irritability is a common symptom in disorders associated with increased suicide risk, few researchers have focused on this specific relationship. Though some evidence of the link between irritability and suicidal ideation has been found in adults (Balázs et al., 2006; Perlis et al., 2009), research with youth remains scarce. The adult literature suggests irritability is a marker for more severe depression and poorer quality of life compared to non-irritable depression, which may lead to suicidal ideation (Perlis et al., 2009). Irritability also accounts for the increased risk of suicidal ideation in adults with mixed depression compared to depression without mixed features (Balázs et al., 2006).

Research on irritable adolescent and young adult males (ages 15–20) indicates they are more likely than non-irritable youth to report suicidal ideation, even after controlling for aggression and alcohol dependence (Conner, Meldrum, Wieczorek, Duberstein, & Welte, 2004). The authors of this study suggest this link between irritability and suicidal ideation is related to reactive aggression and the associated emotion dysregulation due to interpersonal conflict and life stress, which may lead to suicidal ideation (Conner et al., 2004). Moreover, a recent 30-year follow-up showed that youth irritability was a significant predictor of suicidal ideation in adulthood independent of affect disorders and neuroticism (Pickles et al., 2010). The authors of this study suggest further investigation of the mechanisms linking irritability and suicidal ideation are necessary to help improve prevention and treatment. Additionally, while depression is a well-studied, traditional risk factor for suicidal ideation in youth, irritability is also a criterion A symptom of depression unique to youth (APA, 2000; APA, 2013). Therefore, it is important to see how much this association between depression and suicidal ideation is accounted for by irritability to fully understand the general risk factors for suicidal ideation in youth. This preliminary evidence

highlights irritability as an important treatment target; that is, reducing irritability in the course of treatment may decrease risk for both current and future suicidal ideation.

The assessment of irritability in youth is typically derived from parent report and clinician ratings. Although multi-informant approaches can provide a more complete picture of psychopathology in youth, there is consistent evidence that agreement between parent-based and adolescent-based clinician ratings is low (kappa = .20–.30; Achenbach, McConaughy, & Howell, 1987; Bird, Gould, & Staghezza, 1992; Ezpeleta, Osa, Domenech, Losilla, & Júdez, 1997; Grills & Ollendick, 2003; Jensen & Weisz, 2002). These findings suggest that parents and clinicians are interpreting adolescent behavior differently (Klein, 2010). However, there are varying opinions on whose report should be weighted more heavily, with some researchers pointing to adolescents (e.g., Weisz, McCarty, & Valeri, 2006) and others suggesting parents (e.g., Kahana, Youngstrom, Findling, & Calabrese, 2003) provide more accurate assessments of adolescent psychopathology. Parent report of their child's behavior may be biased by the parent's own mood disorder or other psychopathology. The potential for an adult's depressive symptoms to influence the description of their child's behavior has been supported in the literature (Richters, 1992), and there is evidence that negative mood states could increase parental ratings of negative child behaviors (Youngstrom et al., 1999). It is also possible that parents might be more frustrated (and therefore less objectively accurate) about their child's presenting problems. Alternatively, parents might have more opportunity to detect behaviors of which the adolescent might not be aware (e.g., facial expressions, nail biting). Finally, it is possible that parents' reports of their child's psychopathology may be more valuable for observable, externalizing behaviors, whereas adolescents might have more insight about internalizing symptoms (Achenbach et al., 1987; Duhig, Renk, Epstein & Phares, 2000). Since poor rater agreement about an adolescent's clinical presentation can have deleterious consequences, including disagreement over treatment targets, poor parental collaboration with treatment, and negative treatment outcomes (Hawley & Weisz, 2003; Jensen-Doss & Weisz, 2008; Yeh & Weisz, 2001), more information on the nature of these differences is important for improving clinical intervention.

The purpose of the current study was to better understand the relationship between irritability and suicidal ideation in adolescents. Specifically, it was hypothesized that a significant relationship between irritability and suicidal ideation would remain even after accounting for diagnoses commonly associated with increased risk for suicidal ideation in adolescents. A secondary question was to examine parent and adolescent agreement in ratings of irritability. It was hypothesized that adolescent-based clinician ratings of irritability would be more strongly related to suicidal ideation than parent-based clinician ratings.

METHODS

Participants

Three hundred ninety-one consecutive admissions over a 1-year period to an adolescent psychiatric inpatient unit in the Northeastern United States were assessed upon admission to the hospital. This sample included 158 males (40.4%) and 233 females (59.6%) ages 12–18 years ($M = 14.91$, SD = 1.40). Patients admitted to the unit with developmental delays were excluded. The sample was mostly White (80.4%), with 8.8% African American, 7.5% Hispanic, and 4.0% designating the "Other" category. State census tract data

indicated that socioeconomic status (SES) ranged from high SES (16.3%), middle SES (39.3%), low SES (15.3%), and poverty conditions (12.2%). Patients were admitted to this inpatient unit regardless of insurance status.

Procedures

Semi-structured interviews were conducted by trained clinicians and a trained psychometrician as part of the inpatient unit standard admission evaluation. Adolescents completed self-report measures on their own. Socio-demographic data were gathered through chart review. The study was approved for research purposes by the hospital Institutional Review Board. Of the total sample of 391 adolescents, 332 adolescents and 197 parents completed the Washington University Kiddie Schedule for Affective Disorders and Schizophrenia for School-Aged Children: Mania Rating Scale (K-SADS-MRS; Geller et al., 1998) to screen for symptoms of mania, including irritability. Due to short length of stay or uncooperativeness, 59 adolescents were not rated on the K-SADS-MRS. Fewer parents completed the K-SADS-MRS due to problems scheduling visits when clinicians trained in administering study instruments were available and the absence of parents for children who were in state custody.

A clinical team completed consensus diagnoses based on DSM-IV-TR (American Psychiatric Association, 2000) criteria using all available clinical data, including results of the Childhood Inventory of Psychiatric Syndromes (ChIPS; Weller et al., 2000) which was administered as part of unit policy. Consensus diagnoses were completed in two steps. First, the clinical team reviewed diagnostic information from the K-SADS-MRS and ChIPS, as well as the clinical inpatient record and staff observations and interview material to identify appropriate DSM-IV diagnoses. Second, a trained research assistant reviewed all documents to ensure all diagnostic criteria were met for the given diagnoses.

Adolescents also completed self-report ratings of suicide risk using the Suicide Probability Scale (SPS; Cull & Gill, 1988). This measure was used to determine levels of suicidal ideation. It was completed as part of routine screening on the adolescent psychiatric inpatient unit.

Measures

Irritability. Clinician rated irritability was based on parent and child Washington University K-SADS-MRS, which includes questions to assess youth mania using age-appropriate symptoms, including irritability. Trained clinicians interviewed parents and adolescents and rated symptom severity on a scale from 0–6 (0 = no information; 1 = not at all; 2 = slight; 3 = mild; 4 = moderate; 5 = severe; 6 = extreme). Only the irritability item of this measure was used in the current investigation. Inter-rater reliability was obtained using a subset of 25 patients for parent interview (MRS-P; $r = 0.97$) and adolescent interview (MRS-T; $r = 0.94$). To obtain reliability scores, one clinician conducted the initial interview, while a second clinician, who was blind to the initial interviewer ratings, rated parent and child responses separately, which were later compared to the ratings of the initial interviewer.

Psychiatric Diagnoses. The ChIPS was used in combination with medical record review and clinical case conference to determine consensus psychiatric diagnoses. The ChIPS is a structured diagnostic interview based on DSM-IV (APA, 2000) symptom criteria for 20 Axis-I disorders. It is designed for interviewing youth, 6–18 years old. Inter-rater reliability was not computed

for the ChIPS since it is a highly structured interview with all responses being either "yes" or "no," followed by quantitative tabulation of symptoms to identify diagnoses.

Suicidal Ideation. Adolescents completed the Suicide Probability Scale (SPS; Cull & Gill, 1988), a 36-item self-report measure of suicide risk in which teens report on a 4-point scale, ranging from *None or a little of the time* to *Most or all of the time*, how often items describing certain feelings and behaviors apply to them. This is a commonly used screening tool that has been empirically validated in adolescent psychiatric patients (Eltz et al., 2007). The current study used the eight-item SPS Suicidal Ideation scale, which has high internal consistency ($\alpha = .89$; Cull & Gill, 1982).

Data Analysis

Hierarchical linear regression analysis was conducted to assess the degree to which clinician ratings of adolescent irritability, whether rated using adolescent-only interview data or parent-only interview data, were associated with suicidal ideation at intake over and above several established risk factors for suicidal ideation (i.e., being female, consensus diagnoses of major depressive disorder, substance abuse, oppositional defiant disorder [ODD], conduct disorder, and post-traumatic stress disorder). In Step 1, the established risk factors for suicidal ideation were entered into the regression model with suicidal ideation as the criterion variable. In Step 2, adolescent- and parent-based clinician ratings of adolescent irritability were entered into the model to evaluate the degree to which each was uniquely associated with suicidal ideation. Of the three continuous variables included in our analyses: adolescent-reported irritability, parent-reported irritability, and suicidal ideation, all have acceptable skew (ranging from −.30 to .03) and kurtosis (ranging from −.99 to −.16).

Results

Table 1 presents bivariate correlations between the study variables. Adolescent- and parent-based clinician ratings of adolescent irritability were not significantly correlated with each other. Adolescent-based irritability ratings were positively correlated with ODD, conduct disorder, and suicidal ideation, while parent-based irritability ratings were positively correlated with ODD only. Of the remaining variables, sex (female), major depressive disorder, and post-traumatic stress disorder were positively correlated with suicidal ideation. The bivariate correlations examining the relationship between adolescent-reported irritability and suicidal ideation, as well as parent-reported irritability and suicidal ideation, are essentially the same data as running univariate analyses without including the covariates examined in the model below.

Results of the hierarchical regression can be seen in Table 2. Among the covariates entered in Step 1 of the hierarchical linear regression analysis with suicidal ideation as the criterion variable, major depression ($p < 0.001$) and post-traumatic stress disorder ($p < 0.01$) were both positively associated with suicidal ideation. When adolescent-based and parent-based clinician ratings of adolescent irritability were entered in Step 2 of the model, adolescent-based irritability ratings ($p < 0.001$) were positively associated with suicidal ideation severity at intake (see Table 2). In contrast, parent-based clinician ratings of adolescent irritability were not related to suicidal ideation severity. The observed effect sizes in this final model ranged from small to medium in the case of post-traumatic stress disorder, to medium in the case of adolescent-based irritability ratings and major depression (Cohen, 1988).

TABLE 1. **Descriptive Statistics and Correlations of Predictor and Dependent Variables**

Variable	1	2	3	4	5	6	7	8	9
1. Adolescent-based irritability ratings	–								
2. Parent-based irritability ratings	.16	–							
3. Sex (female)	.12	−.08	–						
4. Major depressive disorder	.14	−<.01	.27**	–					
5. Substance abuse	.02	.12	−.15	.11	–				
6. Oppositional defiant disorder	.38**	.22**	.10	.02	.25**	–			
7. Conduct disorder	.28**	.13	−.17*	−.06	.38**	.43**	–		
8. Post-traumatic stress disorder	.01	−.08	.27**	.26**	.07	.04	.09	–	
9. SPS Suicidal Ideation	.30**	−.07	.19*	.42**	.02	.02	.04	.32**	–
Mean	3.27	3.54	–	–	–	–	–	–	62.75
SD	1.11	1.23	–	–	–	–	–	–	12.22
	–	–	55.5%	62.0%	16.8%	54.7%	44.5%	16.1%	–

Note. SPS = Suicide Probability Scale; SD = Standard deviation; * = significant at $p \leq .05$; ** = significant at $p \leq .01$.

TABLE 2. **Hierarchical Linear Regression Model of the Associations Between Child- and Parent-Based Clinician Ratings of Adolescents' Irritability and Suicidal Ideation Severity at Intake**

Variable	*B*	SE	p	*r*effect size
Step 1				
Sex (female)	1.102	2.111	.522	
Major depressive disorder	9.070	2.073	<.001	.358
Substance abuse	−1.819	2.787	.515	
Oppositional defiant disorder	−1.285	2.147	.551	
Conduct disorder	2.338	2.263	.303	
Post-traumatic stress disorder	7.139	2.737	.010	.223
Step 2				
Sex (female)	.319	2.032	.875	
Major depressive disorder	7.760	2.016	<.001	.322
Substance abuse	−.145	2.702	.957	
Oppositional defiant disorder	−3.252	2.169	.136	
Conduct disorder	.527	2.218	.813	
Post-traumatic stress disorder	7.847	2.633	.003	.255
Adolescent-based irritability ratings	3.572	.958	<.001	.313
Parent-based irritability ratings	−.704	.753	.352	

Note. For $r_{effect\ size}$, .1 = small, .3 = medium, .5 = large (Cohen, 1988).

Discussion

The current study adds to the sparse literature on the relationship between irritability and suicidal ideation by demonstrating a significant relationship between clinician ratings based on adolescent report of irritability and suicidal ideation, even after accounting for several diagnoses commonly associated with increased risk for suicidal ideation in adolescents. This finding supports the first hypothesis of this study; irritability is an important general factor in adolescent suicidal ideation independent of the diagnoses of which it is commonly a symptom (i.e., depression, ODD, conduct, and post-traumatic stress disorders). In fact, medium effect sizes (Cohen, 1988) were found for both the association between irritability and suicidal ideation and the association between major depression and suicidal ideation, findings which were consistent with and without controlling for covariates. This finding highlights the need to increase research to better understand the construct of irritability, the effect of irritability on psychopathology outcomes, and interventions to reduce irritability in youth.

In line with previous research (Mick et al., 2005; Stringaris et al., 2013), clinician-rated irritability was positively correlated with ODD based on adolescent- and parent-derived clinician ratings, and conduct disorder based on adolescent-derived clinician ratings. Clinician ratings of irritability, regardless of the source of information—parent or adolescent—were not related to MDD, PTSD, or substance use disorder. Although irritability is a symptom that cuts across all of the aforementioned disorders, perhaps clinician ratings in this study relied more on observable, externalizing representations of irritability (i.e., increased frequency and intensity of arguing, more easily set off into anger and yelling at others, snapping at people, etc.) rather than internalizing aspects of this construct despite the source of information (adolescent or parent). This may help explain the discrepancy of irritability being correlated with the externalizing (ODD and conduct) disorders yet not being significantly correlated with the more internalizing (MDD and PTSD) disorders.

More pertinent to this study, clinician ratings of irritability based on adolescent report were positively associated with suicidal ideation severity above and beyond the other factors in our model, while irritability rated by parent report showed no association with suicidal ideation severity, thus supporting our second hypothesis. In fact, adolescent-based and parent-based clinician ratings of irritability were not significantly correlated with each other. This suggests that adolescents and parents are rating different aspects of the same construct in this sample. Perhaps parent conceptualizations of their adolescent's irritability did not include internalized aspects, such as suicide-related cognitions and emotions, which adolescents may report but of which parents may be unaware. These differences in conceptualization of irritability and related factors based on the reporting source may explain the lack of relationship between parent-based and adolescent-based ratings of irritability in this study. In addition, these findings suggest that adolescent-derived clinician assessment of irritability may be more important in gauging suicidal ideation and suicide risk than reports provided by parental observations.

Interpretation of these results should be made with the following study limitations in mind. First, this sample was limited to adolescents hospitalized on a psychiatric inpatient unit. Generalization of these results to other clinical populations should be made with caution. Second, the diagnoses and clinician ratings of irritability were made utilizing a consensus approach. This approach consisted of diagnosis results from the ChIPS, information from inpatient medical records including extensive intake information provided by parents upon admission

to the hospital, and notes from family meetings which included adolescent and parent reports on the adolescent's behaviors. Diagnoses may have been different if derived from structured diagnostic interviews completed with adolescents and/or parents. Irritability ratings may have been improved if structured observational ratings of the adolescent's behavior were available from inpatient unit staff rather than relying on the single irritability item from the K-SADS-MRS. While the continuum of scores on this irritability item is useful, future studies of irritability would benefit from additional measures of this construct, including interviews, self- and parent-report questionnaires, and coded observations.

Differences in the current results based on adolescent- versus parent-based clinician ratings of irritability emphasize the need for more objective methods for assessing the multifaceted construct of irritability that do not rely on parent and/or adolescent subjective report. Perhaps incorporating neurobehavioral measures in the assessment of psychopathology, and specifically irritability, will improve our understanding of this construct and how it relates to important outcomes, such as suicidal ideation. Future research examining the potentially complex relationship between irritability and suicidal ideation would be beneficial to determine if changes in irritability are a marker for imminent risk of suicide. Future studies could also improve understanding of the mechanisms underlying the link between irritability and increased risk in youth. Such investigations may improve our understanding of symptomatology across multiple disorders, which can inform novel treatment development and potentially decrease suicidal ideation in this population.

AUTHOR NOTE

Elisabeth A. Frazier, Department of Psychiatry and Human Behavior, The Alpert Medical School of Brown University, Bradley Hospital Research Unit, East Providence, RI.

Richard T. Liu, Department of Psychiatry and Human Behavior, The Alpert Medical School of Brown University, Bradley Hospital Research Unit, East Providence, RI,

Maya Massing-Schaffer, Department of Psychiatry and Human Behavior, The Alpert Medical School of Brown University, Bradley Hospital Research Unit, East Providence, RI.

Jeffrey Hunt, Department of Psychiatry and Human Behavior, The Alpert Medical School of Brown University, Bradley Hospital Research Unit, East Providence, RI.

Jennifer Wolff, Department of Psychiatry and Human Behavior, The Alpert Medical School of Brown University, Bradley Hospital Research Unit, East Providence, RI.

Anthony Spirito, Department of Psychiatry and Human Behavior, The Alpert Medical School of Brown University, Bradley Hospital Research Unit, East Providence, RI.

Correspondence concerning this article should be addressed to Elisabeth Frazier, Bradley Hospital Research Unit, 1011 Veterans Memorial Parkway, East Providence, RI 02915. E-mail: elisabeth_frazier@brown.edu

REFERENCES

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213–232. doi:10.1037/0033-2909.101.2.213

American Psychiatric Association [APA]. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: American Psychiatric Association.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).

Washington, DC: American Psychiatric Association.

Balázs, J., Benazzi, F., Rihmer, Z., Rihmer, A., Akiskal, K. K., & Akiskal, H. S. (2006). The close link between suicide attempts and mixed (bipolar) depression: Implications for suicide prevention. *Journal of Affective Disorders*, *91* (2–3), 133–138. doi:10.1016/j.jad.2005.12.049

Bird, H. R., Gould, M. S., & Staghezza, B. (1992). Aggregating data from multiple informants in child psychiatry and epidemiological research. *Journal of the American Academy of Child and Adolescent Psychiatry*, *31*, 78–85. doi:10.1097/00004583-199201000-00012

Brotman, M. A., Schmajuk, M., Rich, B. A., Dickstein, D. P., Guyer, A. E., Costello, E. J., . . . Leibenluft, E. (2006). Prevalence, clinical correlates, and longitudinal course of severe mood dysregulation in children. *Biological Psychiatry*, *60* (9), 991–997.

Centers for Disease Control and Prevention. (2006). Youth Risk Behavior Surveillance—United States, 2005. Morbidity and Mortality Weekly Report: Surveillance Summary (SS-5). Atlanta, GA: Centers for Disease Control and Prevention.

Centers for Disease Control and Prevention. (2013). *Youth risk behavior survey*. Retrieved from www.cdc.gov/yrbs/.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.

Conner, K. R., Meldrum, S., Wieczorek, W. F., Duberstein, P. R., & Welte, J. W. (2004). The association of irritability and impulsivity with suicidal ideation among 15–20-year-old males. *Suicide and Life Threatening Behavior*, *34*(4), 363–373.

Cooper, J., Kapur, N., Webb, R., Lawlor, M., Guthrie, E., Mackway-Jones, K., & Appleby, L. (2005). Suicide after deliberate self-harm: A 4-year cohort study. *The American Journal of Psychiatry*, *162*(2), 297–303. doi:10.1176/appi.ajp.162.2.297

Cull, J. G., & Gill, W. (1982). *Suicide probability scale*. Los Angeles, CA: Western Psychological Services.

Cull, J. G., & Gill, W. S. (1988). *Suicide probability scale manual*. Los Angeles, CA: Western Psychological Services.

Duhig, A. M., Renk, K., Epstein, M. K., & Phares, V. (2000). Interparental agreement on internalizing, externalizing, and total behavior problems: A meta-analysis. *Clinical Psychology: Science & Practice*, *7*, 435–453. doi:10.1093/clipsy.7.4.435

Eltz, M., Evans, A. S., Celio, M., Dyl, J., Hunt, J., Armstrong, L., & Spirito, A. (2007). Suicide probability scale and its utility with adolescent psychiatric patients. *Child Psychiatry and Human Development*, *38*(1), 17–29.

Ezpeleta, L., Osa, N., Domenech, J. M., Losilla, J. M., & Júdez, J. (1997). Diagnostic agreement between clinicians and the Diagnostic Interview for Children and Adolescents—DICA-R—in an outpatient sample. *Journal of Child Psychology and Psychiatry*, *38*, 431–440. doi:10.1111/j.1469-7610.1997.tb01528.x

Fowler, S., & Szabó, M. (2013). The emotional experience associated with worrying in adolescents. *Journal of Psychopathology and Behavioral Assessment*, *35*(1), 65–75. doi:10.1007/s10862-012-9316-3

Geller, B., Warner, K., Williams, M., & Zimmerman, B. (1998). Prepubertal and young adolescent bipolarity versus ADHD: Assessment and validity using the WASH-U-KSADS, CBCL, and TRF. *J Affect Disord 51*(2), 93–100.

Goldston, D. B., Daniel, S. S., Erkanli, A., Reboussin, B. A., Mayfield, A., Frazier, P. H., & Treadway, S. L. (2009). Psychiatric diagnoses as contemporaneous risk factors for suicide attempts among adolescents and young adults: Developmental changes. *Journal of Consulting and Clinical Psychology*, *77*(2), 281–290. doi:10.1037/a0014732

Grills, A. E., & Ollendick, T. H. (2003). Multiple informant agreement and the anxiety disorders interview schedule for parents and children. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*(1), 30–40. doi:10.1097/00004583-200301000-00008

Hawley, K. M., & Weisz, J. R. (2003). Child, parent and therapist (dis)agreement on target problems in outpatient therapy: The therapist's dilemma and its implications. *Journal of Counseling and Clinical Psychology*, *71*, 62–70. doi:10.1037/0022-006x.71.1.62

Jensen, A. L., & Weisz, J. R. (2002). Assessing match and mismatch between practitioner-generated and standardized interview-generated diagnoses for clinic-referred children and adolescents. *Journal of Consulting and Clinical Psychology*, *70*, 158–168. doi:10.1037//0022-006x.70.1.158

Jensen-Doss, A., & Weisz, J. R. (2008). Diagnostic agreement predicts treatment process and outcomes in mental health clinics. *Journal of Consulting and Clinical Psychology*, *76*, 711–722. doi:10.1037/0022-006x.76.5.711

Kahana, S. Y., Youngstrom, E. A., Findling, R. L., & Calabrese, J. R. (2003). Employing parent, teacher, and youth self-report checklists in identifying pediatric bipolar spectrum disorders: An examination of diagnostic accuracy and clinical utility. *Journal*

of Child and Adolescent Psychopharmacology, *13*(4), 471–488. doi:10.1089/104454603322724869

Kessler, R. C., Borges, G., & Walters, E. E. (1999). Prevalence of and risk factors for lifetime suicide attempts in the national comorbidity survey. *Archives of General Psychiatry*, *56*(7), 617–626. doi:10.1001/archpsyc.56.7.617

Klein, J. B., Lavigne, J. V., & Seshadri, R. (2010). Clinician-assigned and parent-report questionnaire-derived child psychiatric diagnoses: Correlates and consequences of disagreement. *American Journal of Orthopsychiatry*, *80*(3), 375–385. doi:10.1111/j.1939-0025.2010.01041.x

Leibenluft, E., Charney, D. S, Towbin, K. E., Bhangoo, R. K., & Pine, D. S. (2003). Defining clinical phenotypes of juvenile mania. *American Journal of Psychiatry*, *160*, 430–437. doi:10.1176/appi.ajp.160.3.430

Mick, E., Spencer, T., Wozniak, J., & Biederman, J. (2005). Heterogeneity of irritability in attention-deficit/hyperactivity disorder subjects with and without mood disorders. *Biological Psychiatry*, *58*(7), 576–582. doi:10.1016/j.biopsych.2005.05.037

Perlis, R. H., Fava, M. M., Trivedi, M. H., Alpert, J., Luther, J. F., Wisniewski, S. R., & John Rush, A. (2009). Irritability is associated with anxiety and greater severity, but not bipolar spectrum features, in major depressive disorder. *Acta Psychiatrica Scandinavica*, *119*(4), 282–289. doi:10.1111/j.1600-0447.2008.01298.x

Pickles, A., Aglan, A., Collishaw, S., Messer, J., Rutter, M., & Maughan, B. (2010). Predictors of suicidality across the life span: The Isle of Wight study. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences*, *40*(9), 1453–1466. doi:10.1017/s0033291709991905

Richters, J. E. (1992). Depressed mothers as informants about their children: A critical review of the evidence for distortion. *Psychological Bulletin*, *112*(3), 485–499.

Stringaris, A. (2011). Irritability in children and adolescents: A challenge for DSM-5. *European Child & Adolescent Psychiatry*, *20*(2), 61–66. doi:10.1007/s00787-010-0150-4

Stringaris, A., Cohen, P., Pine, D. S., & Leibenluft, E. (2009). Adult outcomes of youth irritability: A 20-year prospective community-based study. *The American Journal of Psychiatry*, *166*(9), 1048–1054. doi:10.1176/appi.ajp.2009.08121849

Stringaris, A., Maughan, B., Copeland, W. S., Costello, E. J., & Angold, A. (2013). Irritable mood as a symptom of depression in youth: Prevalence, developmental, and clinical correlates in the Great Smoky Mountains study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *52*(8), 831–840. doi:10.1016/j.jaac.2013.05.017

ten Have, M., de Graaf, R., van Dorsselaer, S., & van't Land, H. (2009). Incidence and course of suicidal ideation and suicide attempts in the general population. *The Canadian Psychiatric Association Journal / La Revue De L'association Des Psychiatres Du Canada*, *54*(12), 824–833.

Thompson, R., Proctor, L. J., English, D. J., Dubowitz, H., Narasimhan, S., & Everson, M. D. (2012). Suicidal ideation in adolescence: Examining the role of recent adverse experiences. *Journal of Adolescence*, *35*(1), 175–186. doi:10.1016/j.adolescence.2011.03.003

Weisz, J. R., McCarty, C. A., & Valeri, S. M. (2006). Effects of psychotherapy for depression in children and adolescents: A meta-analysis. *Psychological Bulletin*, *132*(1), 132–149. doi:10.1037/0033-2909.132.1.132

Weller, E. B., Weller, R. A., Fristad, M. A., Rooney, M. J., & Schecter, J. (2000). Children's interview for psychiatric syndromes (ChIPS). *J Am Acad Child Adolesc Psychiatry 39*, 76–84.

Yeh, M., & Weisz, J. R. (2001). Why are we here at the clinic? Parent-child (dis)agreement on referral problems at outpatient treatment entry. *Journal of Consulting and Clinical Psychology*, *69*, 1018–1025. doi:10.1037//0022-006x.69.6.1018

Youngstrom, E., Izard, C., & Ackerman, B. (1999). Dysphoria-related bias in maternal ratings of children. *Journal of consulting and clinical psychology*, *67*(6), 905–916.