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Adolescent Suicide Risk Screening: The Effect of Communication about Type of Follow-Up on Adolescents' Screening Responses

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Abstract

Objective—This experimental study examined the effect of communication about type of screening follow-up (in-person follow-up versus no in-person follow-up) on adolescents' responses to a self-report suicide risk screen.

Method—Participants were 245 adolescents (131 girls, 114 boys; ages 13 to 17; 80% White, 21.6% Black; 9.8% American Indian; 2.9% Asian), seeking medical emergency services. They were randomized to a screening follow-up condition. Screening measures assessed primary risk factors for suicidal behavior, including suicidal thoughts, depressive symptoms, alcohol use, and aggressive/delinquent behavior.

Results—There was no main effect of follow-up condition on adolescents' screening scores; however, significant interactions between follow-up condition and public assistance status were evident. Adolescents whose families received public assistance were less likely to report aggressive-delinquent behavior if assigned to In-Person Follow-Up. Adolescents whose families did not receive public assistance reported significantly higher levels of suicidal ideation if assigned to In-Person Follow-Up.

Conclusions—Findings suggest that response biases impact some adolescents' responses to suicide risk screenings. Because national policy strongly recommends suicide risk screening in emergency settings, and because screening scores are used to make critical decisions regarding risk management and treatment recommendations, findings indicate the importance of improving the reliability and validity of suicide risk screening for adolescents.

Keywords

suicidal ideation; depression; screening; emergency department

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The nationally representative Youth Risk Behavior Survey revealed that 6.3% of high school students had attempted suicide in the past year and 13.8% had seriously considered making an attempt (Centers for Disease Control and Prevention, 2010). Primary risk factors for suicide attempts and suicide among adolescents include psychopathology (i.e., depressive disorders, substance abuse, and conduct disorder or aggression), suicidal ideation, and previous suicide attempts (Gould, Greenberg, Velting, & Shaffer, 2003). Because these are identifiable risk factors, and because the emergency department is the first point of contact with the healthcare system for many individuals at risk for suicidal behavior (Folse & Hahn, 2009), it is perhaps not surprising that the National Strategy for Suicide Prevention (U. S. DHHS, 2001) recommends suicide risk screening in emergency medical settings.

Self-report questionnaires are a primary method of screening adolescents for elevated suicide risk (Goldston, 2003; Huth-Bocks, Kerr, Ivey, Kramer, & King, 2007). Many studies have found that such measures have moderate to high test-retest reliability and can be reliable sources of information about adolescents' psychological distress (Ridge, Warren, Burlingame, Wells, & Tumblin, 2009) and alcohol use (McMurran, Hollin, & Bowen, 1990). Moreover, several studies indicate that adolescents are crucial in assessing their emotional and behavioral problems as parents may underreport problems (Yeh & Weisz, 2001), including their child's suicidal thoughts and behaviors (Klaus, Mobilio, & King, 2009).

Despite the strengths of self-report questionnaires, cognitive and situational factors have been found to impact adolescents' reports of certain mental health risk factors, including suicidal behavior, alcohol use, and violent behavior (Brenner, Billy, & Grady, 2003). One such factor, social desirability, has been given special attention: When participants answer in what they believe to be the socially acceptable manner, it may result in underreporting of symptoms and the under-identification of mental disorders (Bardwell & Dimsdale, 2001). For example, in a sample of chronic pain patients, adolescents who had higher social desirability scores reported fewer psychological problems than children with lower social desirability scores (Logan, Claar, & Scharff, 2008). Other factors may also impact adolescent reports, such as fear of government interference (e.g., being removed from their parents' custody; Dore, Doris, & Wright, 1995). Given the important clinical decisions that may be made based on adolescents' responses to suicide risk screenings, it is important to understand these possible response biases.

Biases in adolescents' responses to suicide risk screenings may occur differentially by gender and socioeconomic status. A study by Stanton, Burkner, and Kershaw (1991) examined the effect of various follow-up conditions on response biases in self-reports of depression among 357 undergraduates (mean age = 19.7 years). As the intrusiveness of personal contact during the follow-up increased, male self-reports of depressive symptoms decreased, whereas female self-reports showed no decrease. Similarly, in a study of gender differences in reports of depressive symptoms among college students, ages 18–53 years, Sigmon et al. (2005) found that men, but not women, reported less depression as the level of follow-up involvement increased. The authors hypothesized that this may have been due to differential gender socialization. Finally, in a study of social desirability response biases among Mexican, Mexican American, and Anglo American adults, ages 18–65, Ross and Mirowsky (1984) found that as socioeconomic status decreased, socially-desirable responses became more numerous.

Despite the potential significance of response bias to suicide risk screening with adolescents, factors that influence such bias have not been examined empirically. The goal of this experimental study was to determine if communication about the nature of staff follow-up impacted adolescents' self-reports of suicide risk factors. Specifically, this study examined

the effect of communication about two distinct staff follow-up conditions (in-person versus no in-person follow-up) on adolescents' self-reports of suicidal ideation, depression, alcohol use, and aggressive/delinquent behaviors. These problems were selected for screening because they are well-established suicide risk factors. It was hypothesized that informing adolescents of greater staff contact prior to their completion of self-report measures would be associated with lower levels of self-reported suicide risk factors. In addition, it was hypothesized that gender and socioeconomic status would moderate the impact of communication about assigned screening follow-up condition, with boys and those receiving public assistance reporting lower levels of suicide risk factors in the in-person follow-up condition than girls and those not receiving public assistance.

Method

Participants

This study recruited 245 adolescents (131 girls, 114 boys), ages 13–17 years ($M = 15.32$, $SD = 1.37$), seeking services in a general pediatric emergency department at a university hospital. The racial distribution was 80% Caucasian/White, 21.6% African American/Black, 9.8% American Indian or Alaskan Native, 2.9% Asian, 0.8% Native Hawaiian or Pacific Islander, and 3.3% "other." These percentages total greater than 100% as participants were able to select multiple racial identities. In addition, 5.7% identified their ethnicity as Hispanic/Latino. Due to the low rates of several groups, comparisons involving race are between those who identified as White versus those who identified as Black. Twenty-six percent ($n = 63$) of adolescents were from families receiving public assistance. The racial distribution of this subgroup was 61.9% Caucasian/White, 39.7% African American/Black, 20.6% American Indian or Alaskan Native, 1.6% Asian, 1.6% Native Hawaiian or Pacific Islander, and 4.8% "other."

All adolescents, ages 13–17 years, seeking emergency services were eligible (identified by computerized patient tracking system) unless they presented with: (1) a life-threatening condition (Level 1 trauma, e.g., intubated and unconscious) and/or (2) severe cognitive impairment (as reported by medical staff), and thus were unable to provide informed assent. Over the recruitment period (September 2009 – April 2010), 350 adolescents were eligible and 70% ($n = 245$) assented (with parent/guardian written informed consent) to participate. Twenty-nine percent ($n = 102$) refused; 1% ($n = 3$) could not be contacted for participation. There were no significant differences with regard to age or gender between those who did and did not consent. It is unknown whether there were differences based on other demographic variables as study personnel only had access to the age and gender of non-consenting youths.

This study was approved by a University of Michigan Institutional Review Board. Research staff members were bachelor level research assistants and senior undergraduates, with training in the study protocol, research ethics, consent/assent procedures, the suicide risk management protocol and feedback procedures. Adolescents were given a "dollar store" gift for participation.

Measures

Self-report screening measures required 5–10 minutes. The questionnaires varied in Flesch-Kinkaid reading level from 0.2 (RADS-2:SF) to 6.1 (AUDIT-C). Adolescents were free to ask questions for clarification. Parents provided demographic information concerning the adolescent's date of birth, gender, ethnicity, race, and if the family received public assistance.

The 10-item Reynolds Adolescent Depression Scale-2: Short Form (RAD-2:SF; Reynolds, 2008) was used to assess depression. Responses are recorded on a 4-point Likert scale ranging from “never” to “almost always,” with total scores ranging from 10 to 40. A score of 26 is the published clinical cutoff (Milfont et al., 2008). The 30-item RAD-2 has demonstrated high test-retest reliability (.79 – .87) for periods ranging from approximately 2 to 12 weeks (Reynolds & Mazza, 1998) and high criterion-related validity, as evidenced by its association ($r = .76$) with scores on the Hamilton Depression Rating Scale (HDRS; Hamilton, 1967). Scores on the shorter RAD-2:SF used in this study have been found to be highly correlated ($r = .94 - .96$) with scores on the RAD-2 in school and clinical populations (Reynolds, 2008). Internal consistency in this sample was .86.

The 15-item Suicidal Ideation Questionnaire –Junior (SIQ-JR) was used to assess frequency of suicidal thoughts. Responses are recorded on a 7-point Likert Scale (ranging from “almost every day” to “I never had this thought”; Reynolds, 1988), and scores range from 0 to 90 with higher scores indicating more suicidal thoughts. A score of 31 is the recommended clinical cutoff. The SIQ-JR has demonstrated strong convergent validity, as evidenced by moderately high positive correlations between SIQ-JR scores and depression scale scores and moderately high negative correlations between SIQ-JR scores and general self-esteem (Reynolds, 1988). It has also shown predictive validity for subsequent suicide attempts (King, Hovey, Brand, & Wilson, 1997). Internal consistency in this sample was .94.

The Aggression Scale, composed of items from the “Violence and Fighting” section of the National Longitudinal Study of Adolescent Health (Add Health) survey (Harris, Halpern, Entzel, Bearman, & Udry, 2008), was used to assess involvement in violent aggressive behavior during the past year. Scores from this scale have been associated with violent victimization (Aceves & Cookston, 2007). The five questions ask if the adolescent has (a) been seriously injured in a fight, (b) been shot, (c) been stabbed, (d) been injured by another person, or (e) shot or stabbed someone. Response choices are “yes,” “no,” and “don’t know.”

The Zimmerman’s Delinquency Scale (Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000) was used to assess adolescents’ lifetime delinquent behavior by asking four yes or no questions regarding their participation in activities that were “breaking rules” or against the law. Test-retest reliability in a community sample was .77 (Zimmerman et al., 2000), and higher scores have been associated with greater substance use (Zimmerman & Maton, 1992). Internal consistency in the present sample was .84. Because the frequencies of positive responses on the Aggression Scale and Zimmerman Delinquency Scale were low, data from these scales were combined into a dichotomous variable, aggressive/delinquent behavior ($n = 82$ with scores = 1).

The Alcohol Use Disorders Identification Test - Consumption (AUDIT-C; Reinert & Allen, 2007) was used to assess an adolescent’s frequency of drinking, level of alcohol consumption, and frequency of binge drinking. The AUDIT-C contains 3 items (Chung, Colby, Barnett, & Monti, 2002). Responses are recorded on a 5-point scale with total scores ranging from 0 to 12 (item range: 0 – 4). A clinical cut score of three results in a sensitivity of .89 and specificity of .74 for meeting current DSM-IV alcohol abuse or dependence diagnosis criteria (Chung et al., 2002). Internal consistency for this sample was .88. Due to an excessive number of zero scores (no alcohol use), AUDIT-C scores were dichotomized for analyses (zero, positive value).

Procedure

Adolescents were randomly assigned to one of two conditions: No In-Person Follow-Up (NF) or In-Person Follow-Up (IPF). An envelope was opened in front of the adolescent, revealing a card indicating the assigned follow-up condition. Adolescents were shown the card, told which group they were in, and then given the study questionnaires. Thus, the experimental manipulation was the communication about receiving in-person follow-up (or lack thereof), enabling examination of the hypothesis that informing adolescents of greater staff contact prior to their completion of self-report measures would be associated with lower levels of self-reported suicide risk factors. Adolescents in the IPF condition participated in a 20-minute in-person follow-up session. This session with the trained research staff (three Caucasian, two African-American) involved the following components: (1) in-person review of the adolescent's personalized feedback form (summary of findings with information on norms for each screening scale); (2) opportunity to ask questions for clarification; (3) provision of psychoeducation resource materials regarding depression/suicide risk and community services. Adolescents in both conditions received written information about community mental health resources.

As a manipulation check, after completing the screening adolescents were asked to respond to a question asking whether or not they were assigned in-person staff follow-up concerning their responses. Responses were considered consistent if the adolescent's response to this item (IPF or NF) matched their assigned follow-up condition. There were no significant differences between those who did and did not answer correctly based on study condition, gender, or public assistance status (yes/no).

Results

Screening Scores and Demographic Variables

The percentages of adolescents who scored in the clinical range on screening measures with clinical cut-points were as follows: SIQ-JR (total score ≥ 31), 4.1% ($n = 10$); RADS-2:SF (total score ≥ 27), 7.3% ($n = 18$); AUDIT-C (total score > 3), 10.2% ($n = 25$). Adolescent girls' scores ($M = 19.17$, $SD = 5.41$) were significantly higher than boys' scores ($M = 17.85$, $SD = 5.10$) on the RADS-2:SF, $t(243) = 1.97$, $p < .05$, $d = 0.25$. Conversely, boys were significantly more likely to report aggressive/delinquent behaviors than girls (42.5% versus 26.0%), $\chi^2(1) = 7.42$, $p < .01$, $OR = 2.07$, 95% CI [1.21, 3.56]. There were no gender differences for SIQ-JR and the AUDIT-C scores. Similarly, gender did not differ as a function of race or family public assistance status.

Adolescents whose families received public assistance had significantly higher scores on the RADS-2:SF ($M = 19.79$, $SD = 5.13$) than adolescents whose families did not receive public assistance ($M = 18.13$, $SD = 5.30$), $t(243) = -2.17$, $p < .05$, $d = 0.28$). Similarly, those whose families received public assistance were more likely to report aggressive/delinquent behaviors than others, 48.4% versus 28.6%, $\chi^2(1) = 8.14$, $p < .01$, $OR = 2.27$, 95% CI [1.26, 4.10]. The mean scores on the aggressive-delinquent behavior scale for families receiving and not receiving public assistance were 1.13 [$SD = 1.53$] and 0.57 [$SD = 1.20$], respectively. SIQ-JR and AUDIT-C scores did not differ by public assistance status.

Black adolescents were significantly more likely to report aggressive/delinquent behaviors than white adolescents, $\chi^2(1) = 7.44$, $p < .01$, $OR = 2.64$, 95% CI [1.29, 5.39]. RADS-2:SF, SIQ-JR, and AUDIT-C scores did not differ by race. Based on parental report of the child's race, race was coded and analyzed in two ways: (a) black only ($n = 38$) compared with white only ($n = 180$); and (b) black and black/white biracial combined ($n = 53$) compared with white. The results were the same using either method; the data reported are based on analyses excluding biracial individuals. There was a significant association between

adolescents whose families received public assistance and race, with 57.9% of black adolescents and only 19.4% of white adolescents from families who received public assistance, $\chi^2(1) = 24.0, p < .001, OR = 5.70, 95\% CI [2.71, 11.97]$.

Adolescents who reported alcohol use (AUDIT-C, coded dichotomously) were significantly older ($M = 16.36, SD = 1.19$) than those who did not ($M = 15.31, SD = 1.33$), $t(242) = -5.14, p < .001, d = 0.66$, and age was positively correlated with the continuous depression scale scores (RADS-2:SF) ($r = .21, p = .001$). Age did not relate to race, public assistance status, suicidal ideation (SIQ-JR) or aggressive/delinquent behavior.

IPF versus NF Follow-Up Condition

Table 1 displays descriptive data for study variables for adolescents randomly assigned to IPF and NF conditions, including for subgroups defined by public assistance status (yes/no), gender, and race (black/white). Adolescents assigned to IPF and NF conditions did not differ in age (ANOVA) or in the distributions of public assistance status, gender, and race (chi-square analyses). Results did not differ when log transformed versus non-transformed values were used. Therefore, all results are based on non-transformed values to facilitate interpretation.

The first hypothesis, that follow-up condition (IPF versus NF) would impact self-reported outcomes, was not supported. An ANOVA indicated that follow-up condition had no significant main effect on self-reported suicidal ideation (SIQ-JR) and depression (RADS-2:SF) scores. Similarly, logistic regression analyses indicated that follow-up condition was not a significant predictor of aggressive/delinquent behavior or alcohol abuse.

The hypotheses that family public assistance status and gender would moderate the effect of follow-up condition on adolescent screening responses were examined using ANOVAs (SIQ-JR, RADS-2:SF) and logistic regression (AUDIT-C, aggressive/delinquent behavior). The interaction between follow-up condition and public assistance status was significant for suicidal ideation (SIQ-JR) scores ($F[1,240] = 4.63, p < .05, d = 0.64$), but not depression (RADS-2:SF) scores. In families not receiving public assistance, adolescents who were told they would receive in-person follow-up reported greater suicidal ideation ($n = 85; M = 9.27, SD = 12.61$) than those who were told they would not ($n = 97; M = 5.94, SD = 8.88; t(180) = -2.08, p < .05, d = 0.31$). The opposite directional pattern was present, but not significant, in families receiving public assistance: Adolescents in the NF condition ($n = 36, M = 9.83, SD = 15.02$) and IPF condition ($n = 26, M = 5.98, SD = 7.72$) did not report significantly different levels of suicidal ideation.

Family public assistance status also moderated the impact of follow-up condition on adolescents' reports of aggressive/delinquent behaviors. For adolescents in the NF condition, those in families receiving public assistance were more likely to report aggressive/delinquent behaviors than those in families not receiving public assistance ($OR = 4.59, 95\% CI: 2.01 - 10.46, p < .001$). For adolescents in the IPF condition, those in families not receiving public assistance were more likely to report aggressive/delinquent behaviors than those in the NF condition ($OR = 2.61, 95\% CI 1.34-5.06, p < .001$).

There were no significant interactions between gender and follow-up condition for adolescents' scores on any of the suicide risk screening measures. Similarly, there were no significant interactions between follow-up condition and either race or age with screening measures.

Discussion

This experimental study examined the impact of implementation procedures, specifically the nature of expected staff follow-up, on adolescents' responses to a self-report suicide risk screening. We examined the impact of in-person follow-up (IPF) versus no in-person follow-up (NF) on adolescents' self-reports of suicide risk factors in a general pediatric emergency services setting. Our first hypothesis, that expected in-person follow-up would be associated with lower levels of self-reported suicide risk factors, was not supported. We found no main effect for follow-up condition on adolescents' responses to the suicide risk screening. However, our second hypothesis, that gender and public assistance status would moderate the effect of follow-up condition on screening scores, was partially supported. We found significant interactions between family public assistance status and follow-up condition for adolescents' scores on suicidal ideation and aggressive/delinquent behavior. Specifically, adolescents whose families received public assistance reported significantly lower levels of two suicide risk factors, suicidal thoughts and aggressive/delinquent behaviors, if assigned to the in-person follow-up condition.

Social desirability may be a more salient response bias for adolescents from poorer families. This might be due to feelings of stigma and fear of disclosing psychological distress (Bardwell & Dimsdale, 2001) or to a more general concern about government interference (Dore et al., 1995). This possibility is suggested by Ross and Mirowsky's study (1984) that examined the tendencies to acquiesce and give socially desirable responses. They found that both response patterns were more common among adults of lower socioeconomic status. Furthermore, their hypothesis that socially desirable responses would be more likely for "normatively-charged" (involving stigmatized traits) rather than neutral questions was supported. Those who gave more socially desirable responses were less likely to report psychological distress (Ross & Mirowsky, 1984). Finally, although race did not interact with follow-up condition to impact adolescent screening responses in the present study, adolescents from families receiving public assistance were significantly more likely to be Black than White. Studies of social desirability biases among adults have generally found that Blacks are more likely to limit disclosure of potentially negative information to strangers and score higher than Whites on social desirability scales (Bardwell & Dimsdale, 2001; Dudley, McFarland, Goodman, Hunt, & Sydel, 2005). However, in the only published study that could be located on these relationships among adolescents, scores on social desirability between African American and Caucasian adolescents were not different (Edwards, 1974).

In this study, gender did not moderate the effect of follow-up condition on adolescents' responses to screening measures. We had hypothesized that gender would moderate the impact of follow-up condition, with adolescent boys reporting relatively lower levels of psychological distress in IPF condition. Study findings do not converge with those from previous studies concerning adults' reporting of depressive symptoms (Sigmon et al., 2005; Stanton et al., 1991). This may be due to a cohort difference in the salience of social desirability such that adolescent boys may not feel as strongly about not reporting psychological distress as adult men (Jang, Chiriboga, & Okazaki, 2009).

Study limitations include the sole use of adolescent self-report measures for suicide risk screening. Although previous studies indicate that adolescents are more likely than their parents to report many difficulties, such as a history of suicidal thoughts and behaviors (Klaus et al., 2009), additional data sources could enhance the risk assessment. A second limitation is our inability to determine if there were any racial, ethnic, or socioeconomic differences between those who did and did not consent to participate. A third limitation pertains to the generalizability of findings. This study was limited to adolescents who were

seeking services from a medical emergency department in the Midwestern region of the United States. However, this age range is consistent with the period when suicidal ideation and behavior are particularly prevalent (Lewinsohn et al., 1996), and the emergency department offers a community sample that includes at risk adolescents, some of whom do not attend school regularly. Further, the consent rate was higher in this study than what is typically obtained for high school samples with active consent procedures (Ji, Pokorny, & Jason, 2004). Nevertheless, further research is needed to determine if findings would generalize to other groups of adolescents. Finally, due to the low base rate of some of the outcomes, it is possible that “floor effects,” having a preponderance of low/zero scores, inhibited our ability to find significant differences between IPF and NF groups.

Taken together, study results indicate that some adolescents’ responses to self-reported suicide risk screenings are impacted by their expectations concerning what happens following completion of the screening. In particular, adolescents who are of lower socioeconomic status, such as from families that are receiving public assistance benefits, may hesitate to share information about personal distress and behavior problems. Given the potential benefit of early recognition of elevated risk for suicidal behavior, further research is needed to learn how to most effectively screen this subgroup. Results also suggest, however, that large numbers of adolescents do not respond differently to suicide risk screenings when they know that in-person feedback and discussion with a staff member will take place following the screening.

Clinicians should be cognizant of response biases that may occur during self-report screening for suicide risk. Response biases may result in underreporting of possible risk for adolescents of lower socioeconomic status groups (such as those obtaining public assistance) as well as the possibility of over-reporting among other adolescents (Scoliers et al., 2009). It is possible that adolescents in the in-person follow-up condition overreported problems in the hope of having mental health (or public assistance) struggles or needs identified. Although it is well accepted that a positive screening warrants a more extensive interview and evaluation, results suggest that, for some adolescents, a negative screening may be insufficient to “rule out” elevated risk. Further research is warranted to understand how to establish a context for risk screening (e.g., destigmatizing responses, considering impact of staff member’s gender) that maximizes honest responding because extensive follow-up of negative responses is inconsistent with the intent of brief screenings and would likely not be feasible in most screening settings.

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References

- Aceves MJ, Cookston JT. Violent victimization, aggression, and parent-adolescent relations: Quality parenting as a buffer for violently victimized youth. *Journal of Youth and Adolescence*. 2007; 36(5):635–647.
- Bardwell WA, Dimsdale JE. The impact of ethnicity and response bias on the self-report of negative affect. *Journal of Applied Biobehavioral Research*. 2001; 6(1):27–38.
- Brener ND, Billy JOG, Grady WR. Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health*. 2003; 33(6):436–457. [PubMed: 14642706]

- Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance - United States, 2009. Morbidity and Mortality Weekly Report. 2010; 59(SS-5)
- Chung T, Colby SM, Barnett NP, Monti PM. Alcohol Use Disorders Identification Test: Factor structure in an adolescent emergency department sample. *Alcoholism: Clinical and Experimental Research*. 2002; 26(2):223–231.
- Dore MM, Doris JM, Wright P. Identifying substance abuse in maltreating families: A child welfare challenge. *Child Abuse & Neglect*. 1995; 19(5):531–543. [PubMed: 7664134]
- Dudley NM, McFarland LA, Goodman SA, Hunt ST, Sydel EJ. Racial differences in socially desirable responding in selection contexts: Magnitude and consequences. *Journal of Personality Assessment*. 2005; 85(1):50–64. [PubMed: 16083384]
- Edwards DW. Blacks versus whites: When is race a relevant variable? *Journal of Personality and Social Psychology*. 1974; 29(1):39–49.
- Folse VN, Hahn RL. Suicide risk screening in an emergency department: Engaging staff nurses in continued testing of a brief instrument. *Clinical Nursing Research*. 2009; 18(3):253–271. [PubMed: 19411625]
- Goldston, DB. Measuring suicidal behavior and risk in children and adolescents. Washington, DC: American Psychological Association; 2003.
- Gould MS, Greenberg T, Velting DM, Shaffer D. Youth suicide risk and preventive interventions: A review of the past 10 years. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2003; 42(4):386–405. [PubMed: 12649626]
- Harris KM, Halpern CT, Entzel JT, Bearman PS, Udry JR. The national longitudinal study of adolescent health: Research design Retrieved 22 December, 2008. 2008 <http://www.cpc.unc.edu/projects/addhealth/design>.
- Huth-Bocks AC, Kerr DCR, Ivey AZ, Kramer AC, King CA. Assessment of psychiatrically hospitalized suicidal adolescents: Self-report instruments as predictors of suicidal thoughts and behavior. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2007; 46(3):387–395. [PubMed: 17314725]
- Jang Y, Chiriboga DA, Okazaki S. Attitudes toward mental health services: Age-group differences in Korean American adults. *Aging & Mental Health*. 2009; 13(1):127–134. [PubMed: 19197698]
- Ji PY, Pokorny SB, Jason LA. Factors influencing middle and high schools' active parental consent return rates. *Evaluation Review*. 2004; 28(6):578–591. [PubMed: 15486162]
- King CA, Hovey JD, Brand E, Wilson R. Suicidal adolescents after hospitalization: Parent and family impacts on treatment follow-through. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1997; 36(1):85–93. [PubMed: 9000785]
- Klaus NM, Mobilio A, King CA. Parent-adolescent agreement concerning adolescents' suicidal thoughts and behaviors. *Journal of Clinical Child and Adolescent Psychology*. 2009; 38(2):245–255. [PubMed: 19283602]
- Lewinsohn, PM.; Clarke, GN.; Rohde, P.; Hops, H.; Hibbs, ED.; Jensen, PS. Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice. American Psychological Association; 1996. A course in coping: A cognitive-behavioral approach to the treatment of adolescent depression; p. 109-135.
- Logan DE, Claar RL, Scharff L. Social desirability response bias and self-report of psychological distress in pediatric chronic pain patients. *Pain*. 2008; 136(3):366–372. [PubMed: 17822848]
- McMurrin M, Hollin CR, Bowen A. Consistency of alcohol self-report measures in a male young offender population. *British Journal of Addiction*. 1990; 85(2):205–208. [PubMed: 2317586]
- Milfont TL, Merry S, Robinson E, Denny S, Crengle S, Ameratunga S. Evaluating the short form of the Reynolds Adolescent Depression Scale in New Zealand adolescents. *Australian and New Zealand Journal of Psychiatry*. 2008; 42(11):950–954. [PubMed: 18941959]
- Reinert DF, Allen JP. The Alcohol Use Disorders Identification Test: An update of research findings. *Alcoholism: Clinical and Experimental Research*. 2007; 31(2):185–199.
- Reynolds, WM. Suicidal Ideation Questionnaire: Professional manual. Odessa, FL: Psychological Assessment Resources; 1988.
- Reynolds, WM. Reynolds Adolescent Depression Scale. 2nd Edition. Lutz, FL: Psychological Assessment Resources, Inc; 2008. Short Form (RADS-2:SF)

- Reynolds WM, Mazza JJ. Reliability and validity of the Reynolds Adolescent Depression Scale with young adolescents. *Journal of School Psychology*. 1998; 36(3):295–312.
- Ridge NW, Warren JS, Burlingame GM, Wells MG, Tumblin KM. Reliability and validity of the youth outcome questionnaire self-report. *Journal of Clinical Psychology*. 2009; 65(10):1115–1126. [PubMed: 19693961]
- Ross CE, Mirowsky J. Socially-desirable response and acquiescence in a cross-cultural survey of mental health. *Journal of Health and Social Behavior*. 1984; 25(2):189–197. [PubMed: 6470459]
- Scoliers G, Portzky G, Madge N, Hewitt A, Hawton K, de Wilde EJ, van Heeringen K. Reasons for adolescent deliberate self-harm: A cry of pain and/or a cry for help? Findings from the child and adolescent self-harm in Europe (CASE) study. *Social Psychiatry and Psychiatric Epidemiology*. 2009; 44(8):601–607. [PubMed: 19023507]
- Sigmon ST, Pells JJ, Boulard NE, Whitcomb-Smith S, Edenfield TM, Hermann BA, Kubik E. Gender differences in self-reports of depression: The response bias hypothesis revisited. *Sex Roles*. 2005; 53(5–6):401.
- Stanton AL, Burker EJ, Kershaw D. Effects of researcher follow-up of distressed subjects: Tradeoff between validity and ethical responsibility? *Ethics & Behavior*. 1991; 1(2):105. [PubMed: 11653073]
- US. DHHS. National strategy for suicide prevention: Goals and objectives for action. Rockville, MD: Public Health Service; 2001.
- Yeh M, Weisz JR. Why are we here at the clinic? Parent–child (dis)agreement on referral problems at outpatient treatment entry. *Journal of Consulting and Clinical Psychology*. 2001; 69(6):1018–1025. [PubMed: 11777105]
- Zimmerman MA, Maton KI. Life-style and substance use among male African-American urban adolescents: A cluster analytic approach. *American Journal of Community Psychology*. 1992; 20(1):121–138. [PubMed: 1562001]
- Zimmerman MA, Ramirez-Valles J, Zapert KM, Maton KI. A longitudinal study of stress-buffering effects for urban African-American male adolescent problem behaviors and mental health. *Journal of Community Psychology*. 2000; 28(1):17–33.

Table 1
Means, Standard Deviations, and Percentages of Study Variables by Demographic Groups

	RADS-2SF Mean (SD)		SIQ-JR Mean (SD)		Aggression/Delinquency % Yes		AUDIT-C % Yes	
	IPF	NF	IPF	NF	IPF	NF	IPF	NF
Overall	19.15 (5.14)	18.06 (5.40)	8.50 (11.70)	7.00 (10.96)	39.3	28.6	22.5	20.3
Gender								
Male	18.22 (4.80)	17.53 (5.36)	6.99 (11.12)	6.97 (10.90)	53.9	32.3	19.6	21.0
Female	19.95 (5.33)	18.52 (5.43)	9.78 (12.12)	7.02 (11.1)	26.7	25.4	25.0	19.7
Race								
Black	18.15 (3.33)	18.64 (4.97)	7.16 (9.16)	7.69 (9.75)	55.0	50.0	20.0	11.1
White	19.86 (5.59)	17.72 (5.37)	9.51 (13.40)	6.57 (11.13)	36.5	24.5	24.7	20.8
PA								
Yes	19.47 (4.65)	20.04 (5.52)	5.98 (7.72)	9.83 (15.02)	40.7	52.8	15.4	13.9
No	19.05 (5.31)	17.32 (5.19)	9.27 (12.61)	5.94 (8.88)	38.8	19.6	24.7	22.7

Note. IPF = In-Person Follow-Up; NF = No In-Person Follow-Up; PA = Public Assistance; N's are 112 for IPF and 133 for NF for RADS-2SF; N's are 111 for IPF and 133 for NF for SIQ-JR, Aggression/Delinquency, and AUDIT-C. For race, 27 participants were excluded, as they identified as either both Black and White or as another race.

Table 2

2×2 ANOVA of Study Group and Public Assistance

Source	RADS-2SF				SIQ-JR			
	df	F	p	d	df	F	p	d
Study Group	1	2.65	.10	-	1	1.08	.30	-
Public Assistance	1	4.75	.03	0.28	1	.19	.66	-
Study Group X Public Assistance	1	2.46	.12	-	1	4.67	.03	0.31
Within-group error	241	(27.29)			240	(126.30)		

Note: Values enclosed in parentheses represent mean square errors; effect sizes are Cohen's d estimates.