



Published in final edited form as:

J Clin Psychol. 2012 January ; 68(1): 78–87. doi:10.1002/jclp.20852.

The Relationships of Attachment Style and Social Maladjustment to Death Ideation in Depressed Women with a History of Childhood Sexual Abuse

Phillip N. Smith, Ph.D.¹, Stephanie A. Gamble, Ph.D.², Natalie A. Cort, Ph.D.², Erin A. Ward², Yeates Conwell, M.D.², and Nancy L. Talbot, Ph.D.²

Phillip N. Smith: PNSmith@usouthal.edu; Stephanie A. Gamble: Stephanie_Gamble@urmc.rochester.edu; Natalie A. Cort: Natalie_Cort@urmc.rochester.edu; Erin A. Ward: Erin_Ward@urmc.rochester.edu; Yeates Conwell: Yeates_Conwell@urmc.rochester.edu; Nancy L. Talbot: Nancy_Talbot@urmc.rochester.edu

¹University of South Alabama, 5871 USA Drive North, Mobile, AL 36688

²University of Rochester School of Medicine, 300 Crittenden Blvd., Rochester, NY 14642

Abstract

Objective—Women who experience both depression and a history of childhood sexual abuse are at substantially greater risk for suicide compared to those who experience depression alone.

Though psychiatric diagnoses, such as Major Depression and Borderline Personality Disorder, are often considered in the assessment and management of suicide risk, understanding how enduring characteristics interact with contextual factors to result in suicide-related thoughts and behaviors may be more useful for identifying specific targets for intervention.

Design—The current study used cross-sectional survey methodology to examine the interaction of attachment orientation and acute social maladjustment as risk factors for death ideation in a sample of women with Major Depression and histories of childhood sexual abuse.

Results—Social maladjustment was associated with greater likelihood of endorsing death ideation. Avoidant and anxious attachment orientations moderated the social maladjustment and death ideation associations in some domains. Specifically, work-related social maladjustment was associated with greater odds of death ideation for those with higher levels of attachment avoidance. Parent-role related maladjustment was associated with greater odds of death ideation for those with lower levels of attachment anxiety.

Conclusions—Findings demonstrate strong associations between death ideation and acute social maladjustment, and suggest that death ideation may be specific to certain domains of adjustment for anxious and avoidant attachment styles. Implications for the conceptualization and treatment of patients who report death ideation are discussed.

Keywords

Death Ideation; Attachment Theory; Social Adjustment; Interpersonal Vulnerability

Introduction

Women with childhood sexual abuse histories are at particularly high risk for suicidal thoughts and behaviors (Gladstone, et al., 2004). This heightened risk cannot be ascribed

solely to the elevated rates of depression found among sexually abused women (Andover, Zlotnick, & Miller, 2007; Joiner, et al., 2007). Psychiatric comorbidity, particularly Borderline Personality Disorder (BPD) (Brown, Comtois, & Linehan, 2002; Soloff, Lynch, Kelly, Malone, & Mann, 2000), is also a factor in abused women's risk for suicide-related thoughts and behaviors. Some have argued that treating underlying psychiatric disorders may not reduce suicide risk (Linehan, 2008), and that an empirical identification of the enduring characteristics and contextual factors that influence suicidal thoughts and behaviors could better guide risk-reduction efforts.

In the current study, we examined how chronic difficulties in interpersonal need fulfillment (or attachment orientation) and acute social maladjustment interact to influence thoughts of death, or death ideation, among women with major depression and sexual abuse before age 18. Death ideation was examined as our dependent variable as it is a risk factor for suicide that, occurring earlier in the suicide process, may be more amenable to intervention and reduction of downstream suicide risk (Neeleman, de Graaf, & Vollebergh, 2004; Runeson, Beskow, & Waern, 1996). Chronic and acute interpersonal difficulties may be especially salient to the understanding of death ideation in this population. Women who have experienced childhood sexual abuse are more likely to experience severe attachment disturbances and acute episodes of social maladjustment (Alexander, 2009; DiLillo, 2001; Gamble, Smith, Poleshuck, He, & Talbot, 2011; Mickelson, Kessler, & Shaver, 1997). Additionally, there is a strong link between social factors and suicidal thoughts and behaviors (Duberstein, Conwell, & Caine, 1993; Duberstein, et al., 2004; Van Orden, et al., 2008). Although attachment difficulties have been shown to be associated with suicidal thoughts and behaviors in child and adolescent populations (Adam, Sheldon-Keller, & West, 1996; Baca-Garcia, et al., 2007; de Jong, 1992; Violato & Arato, 2004; Wright, Briggs, & Behringer, 2005), few studies have examined those relationships in adults (Grunebaum, et al., 2010; Stepp, et al., 2008). Further, no known studies have examined how attachment disturbance might function as a vulnerability to death ideation among depressed women with childhood sexual abuse histories.

Attachment Theory

Attachment theory assumes that people have innate needs for social support and interpersonal connection (Bowlby, 1988). Attachment behaviors are actions that are motivated by and aim to satisfy those needs. Based on the quality of one's early interpersonal experiences, such as the responsiveness of caregivers, the child formulates internal working models of important others, which involve expectations of whether support will be available and how to most effectively obtain the needed support. Though heavily influenced by caregiving provided during infancy, attachment orientation is continually shaped throughout life (Fraley, 2007). Those working models are carried forward and heavily influence adult behaviors in interpersonal relationships. Thus, individuals who grow up with supportive and responsive parents develop *secure* attachments and positive working models of relationships; they expect that support is available when needed and that directly asking for support is likely to result in its provision.

In contrast, childhood sexual abuse involves such a profound failure to provide security, safety, and support that the working models on which attachment is based are likely to be adversely affected (Alexander, 2009). Such *insecure* attachments are characterized by beliefs that support will not be available or will be inconsistently available, and by ineffective need-fulfilling behaviors. Insecure attachment orientations are often described as involving high levels of *anxiety* and/or *avoidance* (Brennan, Clark, & Shaver, 1998a); both are driven by high levels of discomfort and mistrust of others as reliable attachment figures. Individuals with anxious attachments highly stress, and even over-value, the importance of relationships and engage in maladaptive behaviors to ensure that those relationships are

maintained. Those with avoidant attachments de-value and distance from relationships to minimize their interpersonal discomforts (Alexander, 1992; Gormley, 2004; Meyer & Pilkonis, 2001). Consequently, avoidant persons may identify sources for need gratification in work or academic achievements (Sibley & Overall, 2008), rather than interpersonal relationships (Alexander, 2009; Meyer, Pilkonis, Proietti, Heape, & Egan, 2001; Mickelson, et al., 1997). Thus, anxious and avoidantly attached individuals may be differentially vulnerable to social versus achievement-related stressors.

The insecure attachment that results from childhood sexual abuse and associated developmental circumstances serves as an enduring point of vulnerability for death ideation (Alexander, 2009; Bowlby, 1989; Murphy & Bates, 1997). This vulnerability is expressed acutely when a stressor triggers the attachment system, influencing the individual to seek care and support to help manage distress (Dozier, Stovall, Albus, & Jude, 1999). Insecurely attached persons are more likely to experience problematic outcomes because they are less likely to obtain needed support. Such expression of attachment anxiety or avoidance would be evidenced by social maladjustment or dysfunction. These episodes are more likely to result in death ideation when experienced by individuals higher in insecure attachment styles (Alexander, 1992; Mickelson, et al., 1997).

The vast majority of research on the relationship between attachment and suicide related thoughts and behaviors has been conducted in child and adolescent samples populations (Adam, et al., 1996; Baca-Garcia, et al., 2007; de Jong, 1992; Violato & Arato, 2004; Wright, et al., 2005). In contrast, suicide-related thoughts and behaviors in adults have been examined from an attachment theory perspective in a handful of studies. Grunebaum et al. (2010) found that psychiatric outpatients diagnosed with a Major Depressive Episode who reported higher baseline attachment avoidance were more likely to report suicide ideation within the following three months and a suicide attempt in the following year. In a second study of clinical outpatients, Stepp et al. (2008) found that greater attachment anxiety was associated with all combinations of life-time self-harm and suicide attempts. Neither of these studies, however, examined whether enduring attachment difficulties interacted with acute social difficulties to result in suicide-related thoughts or behaviors. The current study aims to test the applicability of attachment theory to the problem of death ideation in depressed women with a history of childhood sexual abuse. Specifically, we examine the degree to which an anxious or avoidant attachment style may create a vulnerability to death ideation that is expressed during episodes of acute social maladjustment.

Aims & Hypotheses

The current study aimed to test the hypothesis that the relationship of social maladjustment to death ideation would be moderated by attachment avoidance or anxiety. These relationships were examined independent of the influence of depressive symptoms and BPD diagnosis. We expected that death ideation would be most pronounced for women higher in attachment anxiety and avoidance and experiencing greater acute social maladjustment across several domains (overall/total maladjustment, work/school, social and leisure activities, the extended family or family outside the home, the intimate relationship partner, parent-role, and the family unit or family within the home). We also hypothesized that individuals high in attachment anxiety or avoidance would be differentially vulnerable to types of social maladjustment. Specifically, more highly avoidant women were predicted to be vulnerable to death ideation in the context of greater work-role maladjustment. We expected more anxiously attached women to be vulnerable to maladjustment death ideation in the context of maladjustment in close relationships (i.e., intimate partners, immediate family, and children).

Method

Participants

Participants were recruited as part of one of two treatment studies for depression in women with a history of childhood sexual abuse in a community mental health center: an uncontrolled pilot study of Interpersonal Psychotherapy (IPT) ($N = 36$; (Talbot, et al., 2005; Talbot & Gamble, 2008) and a randomized clinical trial comparing IPT to treatment as usual ($N = 70$; (Talbot, et al., 2011). A total of 106 women (age range 19 to 57 years; $M = 35.0$, $SD = 9.8$) experiencing current Major Depression and reporting a history of childhood sexual abuse were included.

Childhood sexual abuse was defined as any unwanted sexual contact, ranging from fondling to sexual intercourse, or any sexual contact with a family member five or more years older prior to age 18. Sexual abuse history was assessed through structured clinical interview (Talbot, 2005). Major depression and BPD diagnoses were assessed with the Structured Clinical Interview for DSM-IV (First, Gibbon, Spitzer, Williams, & Benjamin, 1997; First, Spitzer, Gibbon, & Williams, 2005). Exclusion criteria were: current active psychosis and a diagnosis of schizophrenia, bipolar disorder, mental retardation, or active substance abuse or dependence. Self-reported racial identity was 50% Caucasian, 50% African-American, and 12% identified a Hispanic ethnic origin. Reported marital status was 34.9% single/never married, 27.4% living with a spouse or partner, and the 37.7% separated, divorced, or widowed. More than half (56.6%) of the sample received public financial assistance (e.g., welfare, disability, etc.).

Procedure & Materials

The Institutional Review Board approved all study procedures. All assessments were conducted during the pre-treatment evaluation session from each of two therapy trials from which these data were drawn. Evaluations were conducted in individual meetings by clinical research staff trained in the administration of study assessments. Attachment anxiety and attachment avoidance were assessed using the *Experiences in Close Relationships scale* (ECR)(Brennan, Clark, & Shaver, 1998b). The ECR is a 36-item self-report measure of how individuals *generally* respond in primary or romantic relationships and provides separate scale for attachment anxiety and avoidance (e.g., “I worry a lot about my partner leaving me”, “I prefer not to be too close to romantic partners”). The ECR scores range from one to seven with higher scores indicating greater attachment anxiety and avoidance. The two factor structure of the ECR has been replicated and the internal consistency and 6-week temporal stability of the ECR have been shown to be excellent (Sibley & Liu, 2004).

Social maladjustment was measured using the *Social Adjustment Scale* (SAS)(Weissman & Bothwell, 1976; Weissman, Olfson, Gameroff, Feder, & Fuentes, 2001). The SAS is a 54-item self-report measure of social functioning in several domains over the previous two weeks. These domains, as well as descriptive statistics from a sample of 139 individuals with no psychiatric diagnosis (Weissman, et al., 2001), include: overall/total maladjustment ($M = 1.7$, $SD = 0.3$), work/school ($M = 1.4$, $SD = 0.4$), social and leisure activities ($M = 2.2$, $SD = 0.6$), the extended family or family outside the home ($M = 1.4$, $SD = 0.4$), the intimate relationship partner ($M = 1.8$, $SD = 0.6$), parent-role ($M = 1.1$, $SD = 0.3$), and the family unit or family within the home ($M = 1.7$, $SD = 0.7$). Level of functioning within each domain is indicated by items such as: failure to attend to obligations, arguments and conflict, feelings of affection towards others, quality of communication with others, frequency of contact and feelings of connection. Scores on the SAS scales range from one to five with higher scores on the SAS indicate greater maladjustment. The SAS demonstrates good internal consistency, sensitivity to change, and correlates significantly with other measures of social

adjustment and interpersonal problems (Vittengl, Clark, & Jarrett, 2003; Weissman & Bothwell, 1976; Weissman, et al., 2001).

Depression severity was assessed using the *Hamilton Rating Scale for Depression* (HRSD) (Hamilton, 1960). The HRSD is an interview-based assessment of depression symptoms experienced during the previous week. Higher scores on the HRSD indicate greater depressive symptom severity. Cut points have been developed to categorize depression severity according to HRSD scores: normal/no depression (0–7), mild depression symptoms (8–13), moderate (14–18), severe (19–22), and very severe (23+).

Death ideation was assessed using item-14 from the HRSD. Item-14 of the HRSD requires the interviewer to determine the severity of the respondent's suicide-related thoughts and behaviors during the previous week: (0) absent, (1) feeling like life is not worth living, (2) wishing for death, (3) suicidal thoughts or gestures, and (4) suicide attempts. Although the HRSD uses a continuous scoring system, we dichotomized participants into two groups in order to examine death ideation: 1) those denying death or suicidal ideation or behaviors (score of 0) and 2) those who endorsed death ideation (score of 1 or 2 on item 14). Individuals who reported suicidal thoughts or gestures or suicide attempts (score of 3 or 4) were excluded from the current analysis (although the presence of suicidal thoughts and behaviors was not an exclusion criterion for the parent study).

Data Analysis

Logistic regression analyses were used to examine the likelihood of endorsing death ideation as predicted by the main effects of avoidant and anxious attachment, the seven domains of social maladjustment, and the interactions between each of anxious and avoidant attachment with the seven domains of social maladjustment. A total of seven models were tested, one each corresponding to the seven domains of social maladjustment. Separate models were required in order to examine each domain's individual effect on death ideation. Within each model, the dependent variable was endorsement of death ideation (yes/no). In hierarchical models, the HRSD score (minus item-14) and BPD diagnosis were included at step-1 as covariates. At step-2, the independent variables of avoidant and anxious attachment scales and one of the social maladjustment domain scales (one each for the seven models) were entered. At step-3, the interactions between anxious and avoidant attachment styles with the social maladjustment domain were entered.

Results

Descriptive Statistics

The percentage of individuals endorsing death ideation was 48.6%. One participant was excluded from the current analysis due to endorsement of active suicidal ideation. No participants reported having made a suicide attempt in the previous week. The sample mean of the HRSD was $M=22.22$ ($SD=5.10$), indicating that this sample demonstrated severe to very severe depressive symptoms. A large proportion (34%) of participants qualified for a diagnosis of BPD. The sample means (and standard deviations) for the independent variables were: attachment anxiety 4.49 (1.16), avoidance 4.17 (1.35), overall social maladjustment 2.78 (.51), work/school 2.52 (.81), social and leisure activities 3.25 (.58), the extended family 2.46 (.71), intimate partner 2.67 (.70), parent-role 2.05 (.77), and family unit 2.78 (.51).

Logistic Regression Predicting Endorsement of Death Ideation

The individual parameter estimates for each of the logistic regression models, including the odds ratios and 95% confidence intervals, can be found in Table 1. Depression contributed

significantly to the prediction of endorsement of death ideation across all models. BPD diagnosis did not contribute to the prediction of death ideation. However, both depression and BPD diagnosis were retained as covariates to examine effects over and above the influence of depressive symptoms and BPD diagnosis.

Four of the seven the logistic regression models were significant: the models including overall social maladjustment: $\chi^2_{(6)} = 19.524, p = .007$, Nagelkerke $R^2 = .274$, work-related maladjustment: $\chi^2_{(6)} = 15.614, p = .029$, Nagelkerke $R^2 = .230$, social and leisure maladjustment: $\chi^2_{(6)} = 16.993, p = .017$, Nagelkerke $R^2 = .242$, primary relationship maladjustment: $\chi^2_{(6)} = 13.783, p = .05$ Nagelkerke $R^2 = .415$. The models including family unit and extended family maladjustment were not significant: family unit maladjustment: $\chi^2_{(6)} = 11.438, p = .121$; extended family maladjustment: $\chi^2_{(6)} = 11.203, p = .130$. Although the total model for parent role maladjustment was not significant, $\chi^2_{(6)} = 11.614, p = .114$, Nagelkerke $R^2 = .322$, this is likely due to loss of participants who were not parents to estimate the χ^2 (i.e., limited power to estimate the model). Despite this, the inclusion of the interaction term resulted in significantly better model fit, $\chi^2_{(6)} = 6.180, p = .045$, Nagelkerke $R^2 = .322$ (increased from .162), and the individual parameter estimate was significant (Table 1).

Two significant interactions between attachment style and specific social maladjustment domains predicting death ideation were found. Higher work-related social maladjustment was associated with greater odds of death ideation for individuals experiencing higher levels of attachment avoidance. Greater parent-role related social maladjustment was associated with greater odds of death ideation for individuals experiencing lower levels of attachment anxiety.

Discussion

The current study examined the relationship between attachment disturbances, current social maladjustment, and death ideation in depressed women with sexual abuse histories--a population shown to be at significant risk for suicide-related behaviors (Gladstone, et al., 2004; Mickelson, et al., 1997). As hypothesized, greater difficulties in overall social adjustment, and maladjustment in the domains of social and leisure, and intimate or primary relationships, were associated with greater odds of endorsing death ideation. These relationships were not moderated by degree of attachment security. Levels of attachment anxiety and avoidance were not associated with the likelihood of endorsing death ideation. However, attachment security was a potent factor in moderating the social maladjustment and desire for death relationship in two specific domains. Consistent with our hypothesis, women experiencing difficulties in social maladjustment related to work were more likely to experience death ideation if they were higher in attachment avoidance. Contrary to hypotheses, women experiencing difficulties in parent-role maladjustment were more likely to experience death ideation if they were comparatively *less* anxiously attached. Notably, neither work adjustment nor parent-role adjustment was associated with death ideation for the group as a whole. Thus, attachment appears to be a decisive factor in women's vulnerability to death ideation in the context of work-role or parenting-role problems. All results were independent of the influence of depressive symptoms (save suicide-related thoughts and behaviors) and BPD diagnosis.

That death ideation was more likely under conditions of greater overall social maladjustment and maladjustment in social and primary relationships is consistent with the literature indicating that interpersonal stressors are proximally related to suicidal thoughts and behaviors (Duberstein, et al., 1993; Duberstein, et al., 2004). Work-related maladjustment was associated with greater odds of endorsing death ideation only in the context of

concurrent avoidant attachment, suggesting that this combination of acute and chronic maladjustment creates a particular vulnerability to experiencing death ideation. Individuals who are highly avoidant experience discomfort with interpersonal closeness and report that relationships are of little importance to them (Gormley, 2004; Mikulincer, Gillath, & Shaver, 2002). Thus, work may serve as an alternative source of meaning in life for avoidant women. Such prioritizing of domains of living is consistent with the sociotropy-autonomy distinction wherein individuals exhibit orientations towards socializing with others versus becoming engrossed in achievement (Robins & Luten, 1991). Consequently, a highly avoidant individual who experiences disruption in her work life may be relatively more prone to developing death ideation.

The unexpected finding that high parent-role related maladjustment was associated with death ideation among comparatively less anxiously attached individuals is intriguing. Less anxiously attached women may be particularly invested in being a good parent and in enjoying satisfying relationships with their children, which in turn causes them to be more vulnerable when functioning deteriorates in that domain. However, this explanation is hard to reconcile with the high relationship investment of anxiously attached individuals. A second and more plausible explanation is that women with less anxious attachment were, on average, functioning better in their parent-role and enjoying more satisfying relationships, and that deterioration in that domain was therefore more evident and acutely distressing. It is important to note, however, that we cannot determine whether low attachment anxiety is synonymous with a secure attachment due to the lack of published norms for the ECR. Further, given that the sample was selected for current Major Depression, it is possible that this relationship is specific to current Major Depression.

Although prior studies have demonstrated a relationship between attachment insecurity and suicidal thoughts and behaviors in adults (Grunebaum, et al., 2010; Stepp, et al., 2008), the current study found no main effect of attachment anxiety or avoidance. The greater severity of attachment disturbances found in depressed women with childhood sexual abuse (Alexander, 2009) may have limited our ability to detect such a relationship (a problem of restricted range). More likely, differences in the time intervals in which the outcomes were assessed may explain the discrepancy between our study's findings and those of previous reports (Grunebaum, et al., 2010; Stepp, et al., 2008). Both of the previous studies examined the relationship between attachment and suicidal thoughts and behaviors over longer time intervals (life-time and 3-months) compared to the current study (1-week). If attachment insecurity creates a vulnerability to developing suicidal thoughts and behaviors, then assessing this relationship over a brief time interval requires consideration of the vulnerability expressing stressor (i.e., social maladjustment). When the assessment is over longer intervals, it is more likely that vulnerability expressing events will have occurred in the interim, thereby making apparent a relationship between attachment insecurity and suicidal thoughts and behaviors. Our study's findings highlight the importance of considering attachment style in conjunction with current social maladjustment in the development of suicide ideation in this population.

Clinical Implications

Approximately 20–25% of female patients in community mental health centers are depressed and have childhood sexual abuse histories (Talbot et al., 2005). In this sample, depressed women with childhood sexual abuse histories experienced, on average, pervasive social maladjustment, and the severity of that maladjustment appears to be tied to their experience of death ideation. Additionally, maladjustment in social and primary relationships may be of greater importance than extended or even immediate family adjustment. Thus, improving social function in these domains is a clear treatment target that may reduce both death ideation and downstream suicide risk for this high-risk population.

These findings also suggest that therapists should consider the possible intersection of attachment avoidance and work role-related stressors in their clinical assessments of patients exhibiting death ideation. When treating avoidant patients exhibiting death ideation, a therapist might emphasize work-related targets of adjustment early in therapy to build on patient strengths and to obtain more immediate benefit. Such a focus may facilitate rapport and provide the symptom early relief necessary for further success. Although clinicians may be more prone to attending to the suicide related thoughts and behaviors of individuals exhibiting high levels of attachment anxiety, these results suggest that women with relatively lower attachment anxiety may experience death ideation in the context of parent-role related maladjustment. This finding highlights the need to be aware of how enduring interpersonal patterns and characteristics interact with contextual factors to result in suicide-related thoughts and behaviors.

Limitations & Future Directions

The current study had some important limitations. The participants varied greatly in age (ranging from 19 to 57 years old). The role of attachment style and the influence of maladjustment across domains may vary as a function of age. Future studies should examine how these relationships change over time. Variability in the types and severity of childhood sexual abuse experiences may have affected results or obscured important relationships. Although the current sample was selected in order to gain better understanding of the experience of death ideation in this at-risk population, the lack of comparison groups precludes generalization of these results to non-depressed, non-sexually abused populations. Furthermore, we did not measure current life stressors that might account for participants' Major Depression, death ideation, social maladjustment, and/or attachment expression.

The measure of attachment relied on self-report. Some have challenged the assumption that the measurement of attachment via self-report assesses a construct similar to observational measures (Smith, Msetfi, & Golding, 2010). Furthermore, the ECR is a measure of romantic attachment. The degree to which attachment processes involved in romantic relationships generalize to other relationships and domains of social functioning is not established (Smith, 2005). The current study focused on the endorsement of death ideation. Although this is an important early experience in the process that can lead to suicide (Neeleman, et al., 2004), we did not examine suicidal ideation or suicide attempts. Although it was necessary to conduct seven separate regression models to determine the individual relationships of attachment and the seven domains of social maladjustment to death ideation, this does raise the potential for type-1 error. Lastly, the current study relied on cross-sectional survey methodology. The positive findings support the development of prospective studies to examine how the intersection of attachment disturbances and social maladjustment domains are associated with suicidal thoughts and behaviors over time.

Conclusion

In a sample of depressed women with sexual abuse histories, we found that *greater* attachment avoidance concurrent with work-related maladjustment was associated with an increased likelihood of reporting a desire for death. In contrast, greater parent-role maladjustment was associated with a greater desire for death among women with *lower* anxious attachment. Overall social maladjustment and maladjustment across several domains were associated with greater likelihood of death ideation, regardless of attachment style. To our knowledge, this study is the first to examine attachment anxiety and avoidance as vulnerabilities to death ideation in the face of social and work maladjustments in a sample of depressed women with childhood sexual abuse histories. Taken together, these findings demonstrate strong associations between death ideation and social maladjustment, and

suggest that death ideation may be specific to certain domains of adjustment for anxious and avoidant attachment styles.

Acknowledgments

Funding for this study was provided by National Institute of Mental Health grants K23MH64528 and T32MH020061.

References

- Adam KS, Sheldon-Keller AE, West M. Attachment organization and history of suicidal behavior in clinical adolescents. *Journal of Consulting & Clinical Psychology*. 1996; 64:264–272. [PubMed: 8871410]
- Alexander PC. Application of attachment theory to the study of sexual abuse. *Journal of Consulting & Clinical Psychology*. 1992; 60:185–195. [PubMed: 1592947]
- Alexander PC. Childhood trauma, attachment, and abuse by multiple partners. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2009; 1:78–88.
- Andover MS, Zlotnick C, Miller IW. Childhood physical and sexual abuse in depressed patients with single and multiple suicide attempts. *Suicide and Life-Threatening Behavior*. 2007; 37:467–474. [PubMed: 17896886]
- Baca-Garcia E, Parra CP, Perez-Rodriguez MM, Sastre CD, Torres RR, Saiz-Ruiz J, et al. Psychosocial stressors may be strongly associated with suicide attempts. *Stress and Health*. 2007; 23:191–198.
- Bowlby, J. *A secure base: Parent-child attachment and healthy human development*. New York, NY: Basic Books; 1988.
- Bowlby, J. *The role of attachment in personality development and psychopathology*. Madison, CT: International Universities Press, Inc.; 1989.
- Brennan, KA.; Clark, CL.; Shaver, PR. Self-report measurement of adult attachment: An integrative overview. Simpson, Jeffrey A., editor. 1998a. p. 46-76.
- Brennan, KA.; Clark, CL.; Shaver, PR. Self-report measurement of adult attachment: An integrative overview. New York, NY: Guilford Press; 1998b.
- Brown MZ, Comtois KA, Linehan MM. Reasons for suicide attempts and nonsuicidal self-injury in women with borderline personality disorder. *Journal of abnormal psychology*. 2002; 111:198–202. [PubMed: 11866174]
- de Jong ML. Attachment, individuation, and risk of suicide in late adolescence. *Journal of Youth and Adolescence*. 1992; 21:357–373.
- DiLillo D. Interpersonal functioning among women reporting a history of childhood sexual abuse: empirical findings and methodological issues. *Clinical Psychology Review*. 2001; 21:553–576. [PubMed: 11413867]
- Dozier, M.; Stovall, K.; Albus, KE.; Jude, C. *Handbook of attachment: Theory, research, and clinical applications*. New York, NY: Guilford Press; 1999. Attachment and psychopathology in adulthood; p. 497-519.
- Duberstein PR, Conwell Y, Caine ED. Interpersonal stressors, substance abuse, and suicide. *Journal of Nervous and Mental Disease*. 1993; 181:80–85. [PubMed: 8426175]
- Duberstein PR, Conwell Y, Conner K, Eberly S, Evinger J, Caine E. Poor social integration and suicide: Fact or artifact? A case-control study. *Psychological Medicine*. 2004; 34:1331–1337. [PubMed: 15697059]
- First, MB.; Gibbon, M.; Spitzer, RL.; Williams, JBW.; Benjamin, LS. *Structured Clinical Interview for DSM-IV Personality Disorders, (SCID-II)*. Washington, DC: American Psychiatric Press; 1997.
- First, MB.; Spitzer, RL.; Gibbon, M.; Williams, JBW. *Structured Clinical Interview for DSM-IV-TR Axis I Disorders*. New York: Biometrics Research Department, New York State Psychiatric Institute; 2005.
- Fraley R. A connectionist approach to the organization and continuity of working models of attachment. *Journal of Personality*. 2007; 75:1157–1180. [PubMed: 17995461]

- Gamble SA, Smith PN, Poleshuck EL, He H, Talbot NL. Domain-specific social functioning improvements during treatment of depressed women with histories of childhood sexual abuse. *Journal of Affective Disorders*. 2011; 130:478–482. [PubMed: 21051087]
- Gladstone GL, Parker GB, Mitchell PB, Malhi GS, Wilhelm K, Austin MP. Implications of childhood trauma for depressed women: An analysis of pathways from childhood sexual abuse to deliberate self-harm and revictimization. *American Journal of Psychiatry*. 2004; 161:1417–1425. [PubMed: 15285968]
- Gormley B. Application of Adult Attachment Theory to Treatment of Chronically Suicidal, Traumatized Women. *Psychotherapy: Theory, Research, Practice, Training*. 2004; 41:136–143.
- Grunebaum MF, Galfalvy HC, Mortenson LY, Burke AK, Oquendo MA, Mann JJ. Attachment and social adjustment: Relationships to suicide attempt and major depressive episode in a prospective study. *Journal of Affective Disorders*. 2010; 123:123–130. [PubMed: 19819021]
- Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry*. 1960; 23:56–62. [PubMed: 14399272]
- Joiner TE Jr, Sachs-Ericsson NJ, Wingate LR, Brown JS, Anestis MD, Selby EA. Childhood physical and sexual abuse and lifetime number of suicide attempts: a persistent and theoretically important relationship. *Behavior Research and Therapy*. 2007; 45:539–547.
- Linehan MM. Suicide intervention research: A field in desperate need of development. *Suicide and Life-Threatening Behavior*. 2008; 38:483–485. [PubMed: 19014300]
- Meyer B, Pilkonis PA. Attachment style. *Psychotherapy: Theory, Research, Practice, Training*. 2001; 38:466–472.
- Meyer B, Pilkonis PA, Proietti JM, Heape CL, Egan M. Attachment styles and personality disorders as predictors of symptom course. *Journal of Personality Disorders*. 2001; 15:371–389. [PubMed: 11723873]
- Mickelson KD, Kessler RC, Shaver PR. Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology*. 1997; 73:1092–1106. [PubMed: 9364763]
- Mikulincer M, Gillath O, Shaver PR. Activation of the attachment system in adulthood: threat-related primes increase the accessibility of mental representations of attachment figures. *J Pers Soc Psychol*. 2002; 83:881–895. [PubMed: 12374442]
- Murphy B, Bates GW. Adult attachment style and vulnerability to depression. *Personality and Individual Differences*. 1997; 22:835–844.
- Neeleman J, de Graaf R, Vollebergh W. The suicidal process; prospective comparison between early and later stages. *Journal of Affective Disorders*. 2004; 82:43–52. [PubMed: 15465575]
- Robins CJ, Luten AG. Sociotropy and autonomy: differential patterns of clinical presentation in unipolar depression. *Journal of abnormal psychology*. 1991; 100:74–77. [PubMed: 2005274]
- Runeson BS, Beskow J, Waern M. The suicidal process in suicides among young people. *Acta Psychiatr Scand*. 1996; 93:35–42. [PubMed: 8919327]
- Sibley C, Liu J. Short-term temporal stability and factor structure of the revised experiences in close relationships (ECR-R) measure of adult attachment. *Personality and Individual Differences*. 2004; 36:969–975.
- Sibley CG, Overall NC. The boundaries between attachment and personality: Localized versus generalized effects in daily social interaction. *Journal of Research in Personality*. 2008; 42:1394–1407.
- Smith AE, Msetfi RM, Golding L. Client self-rated adult attachment patterns and the therapeutic alliance: A systematic review. *Clinical Psychology Review*. 2010 No Pagination Specified.
- Smith GT. On construct validity: issues of method and measurement. *Psychological Assessment*. 2005; 17:396–408. [PubMed: 16393005]
- Soloff PH, Lynch KG, Kelly TM, Malone KM, Mann JJ. Characteristics of suicide attempts of patients with major depressive episode and borderline personality disorder: a comparative study. *Am J Psychiatry*. 2000; 157:601–608. [PubMed: 10739420]
- Stapp SD, Morse JQ, Yaggi KE, Reynolds SK, Reed L, Pilkonis PA. The role of attachment styles and interpersonal problems in suicide-related behaviors. *Suicide and Life-Threatening Behavior*. 2008; 38:592–607. [PubMed: 19014310]

- Talbot NL, Chaudron LH, Ward EA, Duberstein PR, Conwell Y, O'Hara MW, et al. A Randomized Effectiveness Trial of Interpersonal Psychotherapy for Depressed Women with Sexual Trauma Histories in Community Mental Health Care. *Psychiatric Services*. 2011
- Talbot NL, Conwell Y, O'Hara MW, Stuart S, Ward EA, Gamble SA, et al. Interpersonal psychotherapy for depressed women with sexual abuse histories: a pilot study in a community mental health center. *Journal of Nervous and Mental Disease*. 2005; 193:847–850. [PubMed: 16319710]
- Talbot NL, Gamble SA. IPT for women with trauma histories in community mental health care. *Journal of Contemporary Psychotherapy*. 2008; 38:35–44.
- Van Orden KA, Witte TK, James LM, Castro Y, Gordon KH, Braithwaite SR, et al. Suicidal ideation in college students varies across semesters: The mediating role of belongingness. *Suicide and Life-Threatening Behavior*. 2008; 38:427. [PubMed: 18724790]
- Violato C, Arato J. Childhood Attachment and Adolescent Suicide: A Stepwise Discriminant Analysis in a Case- Comparison Study. *Individual Differences Research*. 2004; 2:162–168.
- Vittengl JR, Clark LA, Jarrett RB. Interpersonal problems, personality pathology, and social adjustment after cognitive therapy for depression. *Psychological Assessment*. 2003; 15:29–40. [PubMed: 12674722]
- Weissman MM, Bothwell S. Assessment of social adjustment by patient self-report. *Archives of General Psychiatry*. 1976; 33:1111–1115. [PubMed: 962494]
- Weissman MM, Olfson M, Gameroff MJ, Feder A, Fuentes M. A comparison of three scales for assessing social functioning in primary care. *The American Journal of Psychiatry*. 2001; 158:460–466. [PubMed: 11229989]
- Wright J, Briggs S, Behringer J. Attachment and the body in suicidal adolescents: A pilot study. *Clinical Child Psychology and Psychiatry*. 2005; 10:477–491.

Table 1

Odds ratios of endorsing death ideation as a function of social maladjustment, attachment style, and the interaction between social maladjustment and attachment

	Odds of Endorsing Death Ideation per unit Increase in the Predictor Variable (95%CI)
Depression Symptoms	1.106 (1.015–1.206), <i>p</i> =.022
Borderline PD Diagnosis	.640 (.252–1.629), <i>p</i> =.350
Social Maladjustment	
Overall	7.885 (2.096–29.657), <i>p</i> =.002
Work	1.227 (.665–2.265), <i>p</i> =.512
Social	4.077 (1.496–11.110), <i>p</i> =.006
Extended Family	1.953 (.969–3.938), <i>p</i> =.061
Parent	2.060 (.859–4.941), <i>p</i> =.105
Family Unit	1.624 (.870–3.030), <i>p</i> =.128
Primary Relationship	5.999 (1.254–28.698), <i>p</i> =.025
Attachment	
Avoidance	1.081 (.719–1.625), <i>p</i> =.709
Anxiety	.928 (.557–1.544), <i>p</i> =.772
Interactions	
Overall*Avoidance	1.249 (.488–3.194), <i>p</i> =.643
Overall*Anxiety	.891 (.340–2.338), <i>p</i> =.815
Work*Avoidance	2.052 (1.118–3.763), <i>p</i> =.020
Work*Anxiety	0.837 (.483–1.450), <i>p</i> =.525
Social*Avoidance	0.836 (.413–1.692), <i>p</i> =.619
Social*Anxiety	1.429 (.676–3.019), <i>p</i> =.350
Extended Family*Avoidance	1.333 (.726–2.447), <i>p</i> =.353
Extended Family*Anxiety	1.051 (.593–1.861), <i>p</i> =.865
Parent*Avoidance	1.855 (.727–4.730), <i>p</i> =.196
Parent*Anxiety	.340 (.121–.957), <i>p</i> =.041
Family Unit*Avoidance	1.096 (.689–1.743), <i>p</i> =.689
Family Unit*Anxiety	.637 (.369–1.100), <i>p</i> =.105
Primary Relationship*Avoidance	.736 (.268–2.019), <i>p</i> =.551
Primary Relationship*Anxiety	1.386 (.457–4.208), <i>p</i> =.419

Note: HRSD=Hamilton Rating Scale for Depression, 95%CI=95% confidence interval; estimates for main effects of depressive symptoms, BPD diagnosis, attachment anxiety, and attachment avoidance are the estimates from the overall social maladjustment model and are representative of the results across all models; all analyses control for depression severity (minus HRSD item 14) and BPD diagnosis.