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Research report

Attachment and social adjustment: Relationships to suicide attempt and major depressive episode in a prospective study

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ABSTRACT

Objective: To study two aspects of interpersonal function – attachment security and social adjustment – in relation to suicide attempt and major depressive episode (MDE) during naturalistic follow-up of up to one year after presentation with MDE.
Method: 136 adults who presented with a DSM-IV MDE completed the Adult Attachment Scale and the Social Adjustment Scale-Self Report at study entry. Based on follow-up interviews at three months and one year, we used survival analysis to investigate the relationship of scores on these measures with time to a suicide attempt and time to recurrent MDE.
Results: Less secure/more avoidant attachment predicted increased risk of suicide attempt during the 1-year follow-up (Wald $\chi^2 = 9.14$, df = 1, $p = 0.003$, HR = 1.16, 95% CI = 1.05 to 1.27). Poorer social adjustment predicted increased risk of recurrent MDE (Wald $\chi^2 = 6.95$, df = 1, $p = 0.008$, HR = 2.36, 95% CI = 1.25 to 4.46), and that in turn increased the risk of a suicide attempt ($z = 4.19$, df = 1, $p < 0.001$, HR = 17.3, 95% CI = 4.6 to 65.5).
Conclusions: Avoidant attachment in the setting of major depressive disorder is a potential therapeutic target to prevent suicidal behavior. Enhancing social adjustment may reduce relapse in major depressive disorder and thereby reduce risk of a suicide attempt. Study limitations include small sample size and use of a self-report attachment scale.

1. Introduction

Prevention of suicide, most commonly associated with Major Depressive Disorder (MDD), is an NIMH "area of high priority"(2009). Interventions aimed at reducing suicidal behavior in depressed individuals must target modifiable risk factors. One established risk factor for suicidal behavior is the domain of interpersonal relationships. "There is consistent evidence indicating an association between suicidal behavior and difficulties in interpersonal relationships" (Bongar et al., 2000;Weissman, 1974).

Interpersonal bonds require an ability to form an attachment and then to maintain and negotiate the relationship. Attachment theory, pioneered by Bowlby and Ainsworth, holds that early experiences of child–caregiver relationships profoundly influence an individual's ability to navigate social situations throughout life (Crowell et al., 2008). Difficulties in the development of secure attachment patterns appear to "reduce resilience in times of stress and contribute to emotional problems and poor adjustment" (Mikulincer and Shaver, 2008).

An insecure attachment style in adults predicts the onset (Bifulco et al., 2002; Bifulco et al., 2003) and a more severe course (Conradi and de Jonge, 2009) of depression. However, although MDD is the disorder most frequently associated with suicide, "surprisingly few studies have examined the risk of suicide from an attachment perspective," particularly in adults (Mikulincer and Shaver, 2007). Seven studies, mostly in adolescents, which found a correlation between insecure attachment and suicidal ideation or behavior were retrospective or cross-sectional (Adam et al., 1996; de Jong, 1992; DiFilippo and Overholser, 2000; Lessard and Moretti, 1998; Riggs and Jacobvitz, 2002; Stepp et al.,

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2008; West et al., 1999). To our knowledge, no study has examined the predictive effect of attachment on suicidal behavior using a prospective design.

Social adjustment is a broader phenotype than attachment. It represents an ability to negotiate interpersonal relationships defined by an individual's different roles, such as worker, friend, spouse, or parent. Decades of research has focused on social adjustment both as predictor and outcome of depressive disorders (Brown and Harris, 1978; Garmezy, 1993; Henderson, 1998; Kleinman, 1988; Wade and Kendler, 2000). In a female twin registry study, Wade and Kendler found evidence of bi-directional causal relationships between social support and MDD and also a third pathway implicating genetic factors which raise the risk both for MDD and for lower social support (Wade and Kendler, 2000).

Several measures exist for measuring social adjustment (reviewed by Hirschfeld et al. (2000)). Three studies used one such measure, the Social Adjustment Scale (Weissman and Bothwell, 1976; Weissman et al., 2001), to assess this domain as a predictor of depressive symptoms, and reached varying results (Bauwens et al., 1998; Nierenberg et al., 1995; Reimherr et al., 2001). These studies did not test the relationship of social adjustment to suicidal ideation or behavior.

We used a prospective design to investigate the relationships of these two aspects of interpersonal function with MDD and suicidal behavior. We hypothesized that less secure attachment and poorer social adjustment would both predict greater risk of major depressive episode (MDE) and of suicide attempt during one year of follow-up after presentation with a MDE.

2. Methods

2.1. Subjects

The sample included 136 patients who presented to our research clinic for evaluation and treatment of a MDE and who were re-assessed at three months and one year of prospective follow-up. Patients were recruited through advertisements in local newspapers and clinician referral, participated in neurobiological studies of depression, and then received open clinical treatment. For inclusion, subjects had to meet DSM-IV criteria for unipolar MDE and score ≥ 16 on the 17-item Hamilton Depression Rating Scale (HAM17). Exclusion criteria included bipolar disorder, current substance abuse or dependence within six months, anorexia or bulimia within one year, electro-convulsive therapy within six months, unstable medical problems, significant neurological illness, or past head injury. After complete description of the study, participants gave written informed consent approved by the Institutional Review Board.

The sample was 60% female, 73% non-Hispanic white, and 14% Hispanic. The mean age was 39.2 y (SD 12.3) and mean total education was 15.4years (SD 2.6). 39% were currently employed. At study entry, the sample was 24% married, 63% were inpatients, 35% had a lifetime history of substance use disorder, and 49% had a lifetime history of a suicide attempt. The mean baseline HAM17 score was 19.4 (SD 5.4). Subjects had a median of three lifetime MDEs (maximum truncated at 20, as some reported too many to count). The median duration of the baseline MDE was 24 weeks (maximum truncated at 104). The median follow-up time in the study was 306 days (range 36 to 365).

2.2. Measures

Baseline consensus Axis I and II diagnoses utilized the Structured Clinical Interview for DSM-IV patient edition (SCID I and II)(First et al., 1996; Spitzer et al., 1990). Depression was assessed with the HAM17 (Hamilton, 1960) and the Beck Depression Inventory (BDI) (Beck et al., 1961). Raters assessed suicide attempt history with the Columbia Suicide History Form (Oquendo et al., 2003). Lifetime aggression, hostility, and impulsivity were rated with the Brown–Goodwin Aggression Inventory (BGAI) (Brown et al., 1979), Buss–Durkee Hostility Inventory (BDHI) (Buss and Durkee, 1957), and Barratt Impulsivity Scale (BIS) (Barratt, 1965). Suicidal ideation was assessed using the Scale for Suicidal Ideation (SSI) (Beck et al., 1979), hopelessness with the Beck Hopelessness Scale (BHS) (Beck et al., 1974), and reasons for living with the Reasons for Living Scale (RFL) (Linehan et al., 1983). Raters were psychologists or social workers with a masters or Ph.D. Inter-rater agreement and intra-class coefficients for clinical scales were good to excellent (ICC 0.71–0.97) (Mann et al., 1999).

Attachment style was rated at study entry with Simpson's Adult Attachment Scale (AAS) (Simpson, 1990). The AAS, a 13-item measure, asks subjects to rate themselves on a series of statements about "how you usually feel toward your romantic partners." Examples include, "I find it relatively easy to get close to others," "I'm not very comfortable having to depend on other people," "I rarely worry about being abandoned by others," and "I find it difficult to trust others completely." Subjects rate themselves on 7-point Likert scales ("Strongly agree" to "Strongly disagree"). We followed Simpson's recommendation to score the measure using a secure *vs*. avoidant factor (items 1–3 and 5–9) and a secure *vs*. anxious factor (items 4 and 10–13) (Simpson et al., 1992). In our sample, Cronbach's alpha was 0.77 for the secure *vs*. avoidant factor and 0.76 for the secure *vs*. anxious factor, indicating acceptable reliability. For simplicity, we will refer to these as the avoidant and anxious factors.

Social adjustment was assessed at study entry using the Social Adjustment Scale-Self Report (SAS-SR), a 54-item measure of social role function (Weissman and Bothwell, 1976; Weissman et al., 2001). It assesses the prior two weeks in six areas: work (paid, unpaid homemaker, or student); social and leisure activities; relationships with extended family; marital/primary relationship partner; parenting; and family unit, including economic wellbeing (Weissman and MHS staff, 1999). Questions cover: 1) task performance; 2) friction with others; 3) interpersonal relations; and 4) feelings and satisfactions. Questions are rated on a five-point scale, with higher score indicating greater impairment. Item scores are summed and divided by number of items answered to obtain overall and sub-scale means (Weissman and MHS staff, 1999). The SAS-SR has shown good agreement with the clinician-rated version, has high internal consistency, good test–retest reliability, and norms are available for community and clinical samples (Weissman and MHS staff, 1999).

2.3. Follow-up

During follow-up, subjects who enrolled as inpatients received open treatment in the community after hospital discharge whereas those who enrolled as outpatients received