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The effect of social adjustment and attachment style on suicidal behaviour

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Abstract

Objective—Prior studies examining the relationship between social adjustment and suicidal ideation or behaviour have not examined attachment. This study examines the effect of attachment on the association between current social adjustment and suicide attempt risk.

Method—Attachment, social adjustment, and history of suicide attempt were assessed in patients participating in research on major depressive disorder ($N = 524$). Suicide attempters and non-attempters were compared with attachment style and social adjustment using hierarchical logistic regression models. The two factor scoring method of the Adult Attachment Scale (secure vs. avoidant) was utilized as each measures unique aspects of attachment.

Results—Anxious attachment ($OR = 1.33$; 95%CI = 1.016–1.728; $P = 0.038$) but not overall social adjustment ($P = 0.14$) was associated with a history of a past suicide attempt when both attachment and social adjustment were assessed in the same model. Among subtypes of social adjustment, work adjustment was associated with past history of suicide attempt ($OR = 1.25$; 95%CI = 1.019–1.540; $P = 0.033$). As impairment in work adjustment increased by 1 unit, the likelihood of reporting a suicide attempt increased by approximately 25%. There was no interaction between anxious attachment and work adjustment ($P = 0.81$).

Conclusion—Anxious attachment and work adjustment warrant further study as potential treatment targets in depressed suicidal patients.

Keywords

attachment; social adjustment; suicide attempt

Introduction

Poor social adjustment is related to increased suicidal ideation and behaviour across age groups (1–5). Because of its influence on social relationships, a person's style of attachment is likely to be a key factor in resilience to stress, which may provoke suicidal behaviour in vulnerable individuals. Attachment style influences social adjustment, ability to relate to others, and social resources that may enhance resilience via increasing social support (6, 7).

Attachment style is thought to derive from early emotional experience with primary caretakers (8, 9). Individuals with a secure attachment style report greater relationship

satisfaction (10–12), good communication and higher levels of support (10–12), less mistrust and fewer break-ups with significant others (12, 13). Those with an insecure attachment style report greater dissatisfaction with relationships (13), premature self-disclosure on the one hand (14), and an inability to connect intimately on the other (10). Interpersonal attachment is also related to psychological outcomes. Depression (15), anger and hostility (16), difficulty regulating affect (7, 15), interpersonal conflict (17, 18), and poorer social adjustment (19, 20) have been found to be associated with less secure attachment.

Studies that examined the effect of social adjustment on suicidal ideation or behaviour have rarely simultaneously examined attachment. We found in a small previous study of both variables that while social adjustment was not a significant factor, an avoidant attachment style predicted increased risk of suicide attempt during 1-year follow-up of a major depressive disorder sample ($N=136$) (21).

Given the influence that attachment style has on social adjustment, dissecting the relative effects of each characteristic on suicidal impulses may help identify targets for psychosocial interventions and identify endophenotypes. Characterizing endophenotypes of risk for suicide attempt, which is the strongest risk factor for future attempt, may improve our ability to identify those for whom more intensive or specific treatment may be indicated.

Aims of study

The goal of this study was to explore the relative associations of social adjustment and attachment style with history of past suicide attempt, in an expanded sample four times as large as our prior study and including both unipolar and bipolar depressed patients.

Material and methods

Six hundred thirteen patients in a major depressive episode (MDE) presenting for participation in research studies at a tertiary care, university psychiatric hospital in New York City were screened for participation. The first patient was enrolled in January, 1995, and the last in February, 2008. After a complete explanation of the study, 524 patients signed written informed consent to participate, as approved by the Institutional Review Board at New York State Psychiatric Institute/Columbia University and 89 eligible individuals declined participation in the study. Subjects aged 18–75 years who met Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for a MDE (unipolar or Bipolar Disorder) as determined by the Structured Clinical Interview for the DSM-IV (SCID-I) (22) were eligible. Exclusion criteria included current substance or alcohol use disorder and any neurological impairment or unstable medical condition that could affect the assessment of psychopathology. Interviews were conducted when patients were first admitted to the hospital or outpatient clinic.

Measures

Subjects were assessed for suicide attempt history using the Columbia Suicide History Form (23). Suicide attempt was defined as a self-injurious act with intent to die. Severity of current depression was assessed using the 17-item version of the Hamilton Depression Rating Scale (24). Social adjustment was assessed using the SAS-SR (25). The SAS-SR is a 42-item self-report questionnaire that assesses role performance during the prior 2 weeks in distinct areas (i.e., work, family, extended family, and social and leisure activities). Questions are answered on a 5-point scale with higher scores indicating greater impairment. A mean score for each role can be computed, as can an overall adjustment score by adding the scores on all of the items and dividing by the number of items completed. The SAS-SR

has demonstrated good internal consistency and test–retest reliability (26). For the purpose of the multivariate analyses, only those subjects who completed all of the subscales for the role areas assessed (work, family, extended family, and social and leisure activities) were included in the analyses. This led to the exclusion of approximately 15 subjects. There were no significant differences in age, gender, suicide attempt status between those excluded and those included in the analyses.

Attachment was assessed using the AAS (12). The AAS is a 13-item self-report questionnaire that measures an individual's level of comfort with closeness as well as their anxiety about separateness in interpersonal relationships (i.e., 'I am somewhat uncomfortable being too close to others'; 'I rarely worry about my partner(s) leaving me'). Items are rated on a 7-point Likert scale ranging from strongly agree (1) to strongly disagree (7). Higher scores represent greater problems with attachment.

Statistical analysis

The AAS has been noted to reflect three dimensions of attachment (secure, dismissive, and preoccupied) in some studies (27, 28) and two dimensions (avoidant and anxious) in others (29). As in our prior study (21), we followed Simpson's (30) 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). Subsequent analyses were based on the inclusion of these two factors as independent variables as each measures unique aspects of attachment.

Correlations were analyzed using Pearson's *r*. *T*-tests were used to compare individuals with and without a history of suicide attempt on the attachment factors, overall social adjustment, and the four social adjustment sub-scales. Based on the univariate analyses, two hierarchical logistic regression models were estimated in which past history of suicide attempt (yes / no) was the outcome variable. Age correlated with both attachment factors, overall social adjustment score, and subscale scores, as well as with suicide attempt history. Thus, age was introduced first as a confounding variable, then the two attachment measures, followed by the overall social adjustment score (SAS-SR total) in the first model. Because the only subscale of the social adjustment scale associated with suicidal behaviour was the work adjustment scale, we conducted a second hierarchical logistic regression that had age introduced first as a confounding variable, then the two attachment measures and finally work adjustment.

Results

The sample had a mean age of 37 year ($SD = 13.3$) and a mean number of school years completed of 14.7 ($SD = 3.02$). The majority of the sample was women (59.7%), Caucasian (89.5%), unemployed (60%), and unmarried (52.1). Approximately half of the sample reported a past suicide attempt at assessment (49.7%). Approximately 70% had a diagnosis of major depressive disorder with the remainder having bipolar disorder with a current episode of major depression; 46% of subjects with bipolar disorder and 54% of subjects with major depressive disorder reported a history of suicide attempt. Among attempters, the mean number of past suicide attempts was 1.2 ($SD = 1.9$). The mean lethality of these attempts was 3.4 ($SD = 2.0$) (where 0 = no or minimal medical consequences or treatment; 4 = hospitalization required; 8 = death); 37.3% of suicide attempters were men.

Significant correlations were found between both factors of the AAS and overall social adjustment (Avoidant Factor, $r = 0.437$; $P = 0.047$ and Anxious Factor, $r = -0.128$; $P = 0.033$). The mean overall SAS-SR score for attempters and non-attempters was 2.4 and there was no difference between attempters and non-attempters on the overall SAS-SR ($P = 0.77$). The mean scores for attempters on the family, extended family, work, and social leisure

subscales were 2.6, 2.4, 3.6, and 3.1 respectively. For non-attempters, the mean scores on the family, extended family, work, and social leisure subscales were 2.6, 2.2, 3.3, and 2.9 respectively (see Table 1).

Neither clinician-rated nor self-rated depression as measured, respectively, by the Hamilton Depression Rating Scale or the Beck Depression Inventory were associated with social adjustment ($P = 0.77$ and $P = 0.66$ respectively). Subjects with bipolar and unipolar disorders were equivalent on all measures with the exception of work adjustment on which bipolar disordered subjects received lower scores than those with unipolar disorder ($P = 0.013$). There were no main or interaction effects of work adjustment and diagnosis on attempt status (work adjustment, $P = 0.69$; diagnosis, $P = 0.91$; work $\times$ diagnosis, $P = 0.43$).

Table 1 reports differences between attempters and non-attempters on the attachment style factors, overall social adjustment, and the four social adjustment subscales. Only the work adjustment subscale and anxious attachment were statistically different between attempters and non-attempters. Individuals with poor work adjustment ($P = 0.011$) were more likely to report a history of suicide attempt as were those with more anxious attachment ($P = 0.019$).

The results of the hierarchical logistic regression model of past suicide attempt status with the two attachment style factors and overall social adjustment are presented in Table 2a. Overall social adjustment was not associated with past suicide attempt after controlling for the two attachment measures (OR = 0.98; $P = 0.829$; 95%CI = 0.807–1.187). Age and anxious attachment were associated with the likelihood of having made a suicide attempt. As the level of anxious attachment increased by 1 unit, the likelihood of reporting a history of suicide attempt increased by approximately 33%. For every 1 unit increase in age, the likelihood of reporting a suicide attempt decreased by approximately 3%. There was no interaction effect on past attempt status between overall social adjustment and anxious attachment ($P = 0.37$).

Table 2b reports the results of the hierarchical logistic regression model of past suicide attempt status with the two attachment style factors and work adjustment. The overall model was significant ($P < 0.001$). However, when examining individual variables in this set, only age (OR = 0.97; $P = 0.002$; 95%CI = 0.941–0.984) and work adjustment exhibited a statistically significant relationship to suicide attempt status (OR = 1.25; $P = 0.033$; 95%CI = 1.019–1.540). Neither attachment factor contributed significantly. As impairment in work adjustment increased by 1 unit, the likelihood of reporting a suicide attempt increased by approximately 25%. Every 1 unit increase in age was associated with a 3% decrease in the likelihood of reporting a suicide attempt. There was no interaction between anxious attachment and work adjustment ($P = 0.81$).

Discussion

In terms of social functioning, the current sample scored in a similar range on the SAS-SR to that reported for other studies of individuals with mood disorders (31). We found that overall social adjustment was not associated with suicide attempt history after adjusting for quality of attachment, although anxious attachment was. However, when examining specific social adjustment subscales, quality of work adjustment was associated with suicide attempt status whereas neither attachment factor was. The findings suggest that anxious attachment and work adjustment may be important risk factors for suicidal behaviour in persons with mood disorders.

It has been suggested that the likelihood of engaging in suicidal behaviour could be related to how negative early attachment experiences are structured into internal working models of attachment (32). Furthermore, prior research has identified impaired parental attachment and

bonding as one key risk factor for suicidal behaviour later in life (33). The results of the current study indicating a significant correlation between attachment and suicide attempt status are consistent with previous research that has also found a relationship between both anxious attachment (34, 35), avoidant attachment (21), and suicide attempt. Although results of this study differ from our prior study (21) in that anxious rather than avoidant attachment is significant, results are consistent in that insecure attachment of either type appears to be associated with suicidal ideation or behaviour. It may be that less secure attachment of any kind, be it anxious or avoidant, increases the risk for suicide attempt.

Several investigations indicate that attachment style influences social roles other than just that of romantic partner, such as those of parent and friend (27, 30, 36–38). Work functioning was the only subtype of social adjustment associated with past suicide attempt in our analysis. Other studies have shown similar findings of impaired work functioning among suicide attempters with mood disorders (39), schizophrenic suicide attempters with schizophrenia (40) and individuals with borderline personality disorder (41), and separation anxiety disorders (42), and have found poor premorbid functioning to be associated with severe and persistent mental illness in patients with affective disorders (43). Impaired work function likely contributes to poor self-esteem and sense of lack of purpose. Conversely, a past suicide attempt could lead to an interrupted or otherwise impaired work history. Impaired social adjustment has often been found in depressed individuals, particularly work functioning (44–49). Suicide attempters represent a distinct subset of depressed individuals (50, 51) which may explain the relationship between impaired work functioning and suicide attempt history found in this study. It may also be that work adjustment is a more accurate measure of illness severity or impairment than interpersonal attachment.

Early attachment may operate as a general vulnerability factor, increasing the risk of poor work functioning and suicide attempt. Individuals with an anxious attachment style may exhibit impaired behaviours and may lack the interpersonal skills required to be successful in a work environment (i.e., balancing team work with functioning independently, good communication skills, etc.). This may result in impaired self-esteem and depressed mood, thus, increasing the risk of suicide attempt. Clinical interventions aimed at reducing suicide risk would benefit from an improved understanding of the factors that serve to modify a person's attachment style. It would be particularly important to learn more about the factors that promote positive attachment behaviours related not only to relational well-being but interpersonal skills required to be successful in work environments.

Limitations

There are limitations to this study. Most importantly is the retrospective design, although the results are generally consistent with our prospective study in a smaller sample. The cross-sectional correlations found in this study cannot be used to infer causal relationships. The sample included individuals participating in research about major depression so the results may not be applicable to other populations. However, suicide attempts are more often associated with mood disorders than any other psychiatric condition (50). Therefore, these findings are likely to apply to a substantial proportion of persons at risk of attempting suicide. The AAS measure of attachment style has limited published psychometric data. The SAS-SR social functioning scale assesses the previous 2 weeks, thus, responses may be influenced by current depressive symptoms. However, we did not find this using either the Hamilton Depression Rating Scale (Hamilton, 1967) or the Beck Depression Scale (Beck, 1961). Multiple tests were performed raising the issue of possible false positives.

In conclusion, social adjustment has long been a focus of study particularly concerning depressed individuals and more recently among those at risk for suicide attempt (1–5). Rather than focusing treatment on overall social adjustment, more specific interventions

targeting problems in attachment and work adjustment may enhance prevention of suicidal behaviour. Further research in these areas is warranted.

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Significant outcomes

- Anxious attachment was associated with past suicide attempts.
- Overall social adjustment was not associated with suicide attempts after adjusting for attachment style, however, the sub-component of work adjustment was associated with past suicide attempt.
- Anxious attachment and work adjustment warrant further study as potential treatment targets in suicidal patients with mood disorders.

Limitations

- The cross-sectional correlations found in this study cannot be used to infer causal relationships.
- The sample included individuals participating in research about major depression so the results may not be applicable to individuals with other psychiatric disorders.
- The Adult Attachment Scale (AAS) measure of attachment style has limited published psychometric data.
- The Social Adjustment Scale-Self-Report (SAS-SR) social functioning scale assesses the previous 2 weeks, thus, responses may be influenced by current depressive symptoms.

Table 1

Association between attachment, social adjustment, and suicide attempt history

Clinical variable	<u>Attempter 119 (46.9)</u>	<u>Non-attempter 135 (53.1)</u>	<i>t</i> -test (df)	<i>P</i>
	Mean (±SD)			
Overall social adjustment	2.36 (1.40)	2.40 (1.37)	0.292 (296)	0.771
Social leisure subscale	2.99 (0.66)	3.06 (0.67)	0.957 (298)	0.339
Work subscale	3.26 (1.30)	3.64 (1.29)	2.571 (288)	0.011
Extended family subscale	2.22 (0.72)	2.37 (0.72)	1.717 (288)	0.087
Family subscale	2.57 (1.16)	2.60 (1.20)	0.220 (292)	0.826
AAI factor 1 (Avoidant)	2.31 (0.95)	2.50 (1.05)	1.673 (306)	0.095
AAI factor 2 (Anxious)	2.30 (0.99)	2.57 (0.99)	2.361 (306)	0.019

AAI, adult attachment inventory.

Table 2

(a,b). Hierarchical logistic regression of past suicide attempt status

Variable	OR	95% CI	P-value
(a)			
Age	0.97	0.947–0.990	.004
Avoidant attachment	1.15	0.890–1.482	0.288
Anxious attachment	1.33	1.016–1.728	0.038
Overall social adjustment	0.98	0.807–1.187	0.829
(b)			
Age	0.97	0.941–0.984	0.002
Anxious attachment	0.80	0.608–1.041	0.096
Avoidant attachment	0.88	0.680–1.141	0.337
Work adjustment (SAS-SR)	1.25	1.019–1.540	0.033

SAS-SR, social adjustment scale self-report.