Impaired Decision Making in Suicidal Adolescents: A Preliminary Study

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Abstract

Introduction: The aim of this study was to examine the relationship between suicidal ideation and decision making processes in adolescents using the Iowa Gambling Task.

Method: Adolescents aged 13 to 18 years, inclusive, were recruited from an outpatient behavioral health care setting in central Ohio. Participants with suicidal ideation in the past 6 months (n=25; cases) were compared with age-, gender-, and race-matched participants with no lifetime history of suicidal thoughts or behavior (n=25; controls) on the Child Behavior Checklist (CBCL), current psychotropic medication use, a measure of impulsivity (Barratt Impulsiveness Scale-Adolescent version; BIS-11-A), a measure of aggression (Buss-Perry Aggression Questionnaire-Short Form; BPAQ-SF), respectively, and decision making performance as assessed by the Iowa Gambling Task (IGT).

Results: The groups did not differ in terms of IQ, proportion of subjects living with both biological parents, and household income. With regard to the CBCL DSM-IV scales, suicidal cases had significantly higher T-scores for affective problems (70.4 [8.2] vs. 62.0 [8.3], t=3.61, df=48, p=.001) and somatic problems (65.5 [11.5] vs. 59.1 [7.7], t=2.32, df=48, p=.02) compared with controls. Cases also had higher rates of current antidepressant medication use (40.0% vs. 8.0%, Fisher’s exact test, p=.02) and higher scores on the BPAQ Hostility subscale (8.0 [2.5] vs. 6.1 [3.1], t=2.37, df=47, p=.02). The net score for the IGT differed significantly between the suicidal and non-suicidal groups (Mann-Whitney U test, Z=-2.1, p<.05). The difference in net IGT scores between suicidal cases and controls persisted in separate ANCOVA analyses that controlled for CBCL affective problems T-scores, CBCL somatic problems T-scores, current antidepressant medication use, and BPAQ Hostility subscale scores. A sensitivity analysis that excluded six suicidal cases with a past history of suicide attempt yielded similar between group differences on the net score of the IGT (t=2.15, df= 42, p=.04).

Conclusion: In this preliminary study, we found significant deficits in decision making in suicidal adolescents compared with non-suicidal controls. Longitudinal studies are needed to better elucidate the relationship between suicidal ideation, suicide attempts, and impaired decision making in youth.