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ScienceDirect
Comprehensive Psychiatry 52 (2011) 352–358
Comprehensive PSYCHIATRY
www.elsevier.com/locate/comppsych

Suicide attempts in anorexia nervosa subtypes

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Abstract

Objective: The risk for suicide attempts is elevated in anorexia nervosa (AN), yet we know little about the relation between suicide and personality in this group. We explored the prevalence of lifetime suicide attempts in women with AN and compared those who had and had not attempted suicide on eating disorder symptoms, general psychopathology, and personality both relative to a healthy control group and then across AN subtypes.
Method: One hundred four outpatients with restricting AN, 68 outpatients with purging AN, and 146 comparison individuals participated in the study.
Results: The prevalence of suicide attempts differed significantly across the 3 groups (P = .003), with 0% in the controls, 8.65% in the restricting AN group, and 25.0% in the purging AN group. Depression measures were elevated in those with suicide attempts. Within the restricting AN group, those who attempted suicide scored significantly higher on Phobic Anxiety, measured by means of the Symptom Checklist–Revised, than those who did not (P = .001).
Conclusion: The presence of purging and depressive symptoms in individuals with AN should increase vigilance for suicidality; and among restrictors, greater anxiety may index greater suicide risk.

1. Background

1.1. Suicide and suicide attempts in individuals with eating disorders

Eating disorders have one of the highest excessive mortality rates of all psychiatric disorders [1]. Suicide is a major cause of mortality for those with eating disorders [2-5]. Rates of suicide attempts are also elevated in individuals with eating disorders relative to the general population [2-8]. Reports are mixed regarding differential rates of suicide attempts between anorexia nervosa (AN) and bulimia nervosa (BN), with some studies reporting no significant differences [9,10], another reporting higher rates of suicide attempts in BN than AN [11], and another reporting higher rates of suicide attempts in AN than BN [12]. These discrepant results may be accounted for by differences in recruitment strategies (eg, inpatient or outpatient services) [12] and differences across AN subtypes including restricting AN (RAN) and purging or binging/purging AN (BPAN) [13]. In support of this latter possibility, several studies have found higher rates of suicide attempts in BPAN than RAN [3,14,15].

1.2. Clinical profiles of individuals with AN who attempt suicide

Suicide attempts in AN are associated with more frequent comorbid disorders (Axis I and II) including affective

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0010-440X/$ – see front matter © 2011 Elsevier Inc. All rights reserved.
doi:10.1016/j.comppsych.2010.09.003

disorders [9,16], substance-related disorders [3,12,17,18], posttraumatic stress disorder [3], various impulse-control disturbances [3,19], and personality disorders [3,14,20]. Clinical features associated with the presence of suicide attempts in AN patients include purging behavior [11,13], low body weight [11], longer duration of illness [11,20], age of onset [12], history of physical/sexual abuse [11], and poorer prognosis [2,21].

1.3. Personality profile of individuals with AN who attempt suicide

Suicidality in AN is associated with personality characteristics such as aggressive/impulsive traits, hopelessness, neuroticism, psychasthenia, and external locus of control [22-24]. Other traits associated with suicide attempts in AN include high persistence, low self-directedness, and high self-transcendence [9,3].

1.4. Factors related to suicide attempts across AN subtypes

Although differences in rates of suicide attempts across AN subtypes have been explored [3,11,15,23], typically reporting a lower rate of suicide attempts in RAN, there are scant data on potential differences in factors associated with suicide attempts across AN subtypes. A study using the MMPI-2 found that for individuals with RAN, those who attempted suicide scored higher than those who did not on the "Depression" and "Antisocial Practices" scales, whereas for individuals with BPAN, those who attempted suicide scored higher than those who did not on "Hysteria," "Psychopathic Deviate," "Shyness/Self-Consciousness," "Antisocial Practices," "Obsessiveness," and "Low Self-Esteem" scales [15].

Given the lack of information on differential factors associated with suicide attempts across AN subtypes, the goals of the current study were (*a*) to examine differences between individuals with AN and matched controls on measures of personality, psychopathology, and rates of suicide attempts and (*b*) to evaluate differences in factors associated with suicide attempts between individuals with RAN and BPAN using measures of personality traits, psychopathology, and eating disorder symptoms.

2. Methods

2.1. Participants

The initial sample included 203 AN patients presenting for assessment and treatment at the University Hospital of Bellvitge (Barcelona, Spain). All participants were diagnosed according to the *Diagnostic and Statistical Manual of Mental Disorders, Revised Fourth Edition* [25], criteria using a semistructured clinical interview (Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,* Axis I Disorders) [26] conducted by experienced psychologists and psychiatrists. For the present analysis, we excluded males (n = 9), as their number was too small for meaningful comparisons, and participants with missing data that were central to the methods of the study (n = 22). The total final sample included 172 patients (68 BPAN, 104 RAN). The mean age of AN participants was 24.7 years (SD = 5.3). Mean age of onset of the eating disorder was 19.7 years (SD = 4.3), and mean duration of illness was 5.0 years (SD = 4.5). Mean weekly number of binges was 0.8 (SD = 2.5), and mean weekly number of vomiting episodes was 2.3 (SD = 5.1). Mean body mass index (in kilograms per square meter) at presentation was 15.6 (SD = 1.4). Most patients were single (56.3%), were unemployed (71.3%), and had completed primary (31.5%) or secondary (47.0%) studies.

No statistically significant differences in age (mean = 24.7 years, SD = 5.3), marital status (56.3% without couple), education (31.5% primary education and 47.0% secondary education), or unemployment rates (71.3%) were observed between the group of patients with lifetime suicide attempts and the group of patients without suicide attempts.

From an initial sample of 151 female undergraduate students comprising the comparison group (CG), 5 individuals who screened above the cutoff on the General Health Questionnaire–28 (GHQ-28) [28] were excluded. The mean age of the CG was 22.2 years (SD = 5.4), and the mean body mass index (in kilograms per square meter) was 21.1 (SD = 2.6). Most CG participants were engaged (53.5%), were employed (79.6%), and had completed secondary education (88.2%).

Entry into the study was between January 2002 and December 2006. The Ethics Committee of our institution approved this study, and informed consent was obtained from all participants.

2.2. Assessment

2.2.1. Lifetime suicide attempts

To assess lifetime incidence of a suicide attempts, participants were asked "Have you ever attempted suicide?" as part of a structured clinical face-to-face interview (for a description of the full study see Forcano et al [7]). A *suicide attempt* was defined as a self-destructive act with some degree of intent to end one's life. Thus, to be considered an attempt, the suicidal gesture was required to have 2 components: an action that was self-destructive and an acknowledgment of intent to die.

2.3. Sociodemographic variables

Demographic information including age, marital status, education, occupation, living arrangements, and parental occupation was obtained via semistructured interview [27].

2.4. Self-report questionnaires

2.4.1. General Health Questionnaire–28 [28]

The GHQ-28 is a self-report questionnaire designed to screen for elevated probability psychiatric disorders. The