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Research report

Affective temperaments, as measured by TEMPS-A, among nonviolent suicide attempters

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ABSTRACT

Background: The aim of this study was to investigate the role of affective temperaments in suicidal behavior.

Method: Using the standardized Hungarian version of the full-scale 110-item version of the TEMPS-A autoquestionnaire we compared the affective temperament-profiles of 150 consecutively investigated nonviolent suicide attempters (106 females and 44 males) and 302 age, sex and education matched normal controls (216 females and 86 males).

Results: Compared to controls, both female and male suicide attempters scored significantly higher in the four of the five affective temperaments, containing more or less depressive component (depressive, cyclothymic, irritable and anxious). On the other hand, however, no significant difference between the suicide attempters and controls was found for the hyperthymic temperament. Significantly higher rate of suicide attempters (90.0%) than controls (21.5%) have had some kind of dominant (mean score + 2SD or above) affective temperament. Compared to controls, depressive, cyclothymic, irritable and anxious temperaments were significantly more frequent and hyperthymic temperament was nonsignificantly less common among suicide attempters.

Conclusions: The findings support the strong relationship between depression and suicidal behavior even on temperamental level, and suggest that hyperthymic temperament does not have predisposing role for suicidal behavior at least in the case of nonviolent suicide attempters.

Limitation: As only nonviolent suicide attempters were studied, our findings should pertain only for this patient-population.

1. Introduction

As suicidal behavior is a major public health problem its prediction and prevention receives more and more attention nowadays. Between 10 and 18% of adults report lifetime suicidal ideation and 3–5% have made at least one suicide attempt at some points in their life (Kessler et al., 1999; Szadoczky et al., 2000; Weissman et al., 1999). In spite of the fact that suicidal behaviour is very complex, multicausal human behaviour, over 90% of suicide victims and suicide

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attempters have at least one current major mental disorder and more than two-thirds of them have (mostly untreated) major depressive episode at the time of the suicidal act (Coryell and Young, 2005; Rihmer, 2007). The short-term risk of suicidal behavior is very high in the case of severe depression particularly in the presence of hopelessness, guilt and few reason for living (Coryell and Young, 2005; Hawton et al., 2005; Malone et al., 2000; Maser et al., 2002; Oquendo et al., 2004; Valtonen et al., 2005), which characteristics are strongly related to each-other. Suicidal ideation/plan, the major precursors of attempted and completed suicide, that show high consistency across major depressive episodes (Rihmer, 2007; Sokero et al., 2006) and of course, recent suicide attempts are the most powerful predictors of the short-term risk of suicidal behavior (Coryell and Young, 2005; Hawton et al., 2005; Rihmer, 2007).

However, since unipolar and bipolar mood disorders are highly recurrent or chronic in their nature, prediction of suicidal behavior in mood disorder patients for long-term is also an important and challenging task for the clinician. Beside the recurrence (i.e., the new episode) of a given major mood disorder (Coryell and Young, 2005; Hawton et al., 2005; Rihmer, 2007), adverse life-situations and acute psychosocial stressors (Coryell and Young, 2005; Hawton et al., 2005; Rihmer, 2007; Sokero et al., 2005; Zouk et al., 2006) as well as some personality characteristics (Akiskal et al., 2003; Heisel et al., 2006; Kochman et al., 2005; Maser et al., 2002; Oquendo et al., 2004) seem to have the most important role. It has been repeatedly found that aggressive/impulsive personality features (Mann et al., 2005; Maser et al., 2002; Oquendo et al., 2004; Rihmer, 2007; Zouk et al., 2006), high neuroticism, low openness and impaired problem solving capacity (Heisel et al., 2006; Malone et al., 2000; Stankovic et al., 2006) increased the risk of both attempted and completed suicide. While "neuroticism" is a global construct which subsumes, among others, such traits as anxiousness, depressiveness, and mood lability (Akiskal et al., 2006; Eysenck, 1987; Miller and Pilkonis, 2006), the depressive, cyclothymic, hyperthymic, irritable and anxious subscales of the recently developed TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego-Autoquestionnaire version) (Akiskal et al., 2005a,b) more specifically and individually measure each of the foregoing trait dimensions.

In support of the clinical view of Kraepelin and Kretschmer, recent results strongly suggest that the specific different affective temperament types (depressive, cyclothymic, hyperthymic, irritable and anxious) are the subaffective (trait-related) manifestations and frequently the precursors of the major depressive and bipolar major mood disorders, playing also a significant role in the symptom-formation of the cross-sectional clinical picture (Akiskal, 1996; Akiskal and Pinto, 1999; Kochman et al., 2005). This raises the question whether the affective temperaments could serve as a long-term predictor of suicidal behavior.

In fact, most recent studies have demonstrated a strong relationship between some specific affective temperament-types and suicidal behavior. Compared to non-cyclothymic bipolar II patients ($n=120$) cyclothymic bipolar II subjects ($n=74$) reported significantly more frequently lifetime suicide attempts (38% vs 49%) and experienced more current hospitalization for suicidal risk (50% vs 61%), (Akiskal et al., 2003). During a 2–4 year prospective follow-up of 80 juvenile inpatients with current major depressive episode, cyclothymic-hypersensitive temperament at baseline significantly predicted the bipolar outcome and suicidal behavior during the follow-up (Kochman et al., 2005). In their study on 115 bipolar I or bipolar II patients Young et al. (1994/1995) found that bipolar (I + II) patients with lifetime history of cyclothymic disorder reported significantly higher mean number of prior suicide attempts than bipolar patients without cyclothymic disorder (0.30 vs 0.15). Investigating the depressive and hyperthymic temperament scores of 72 euthymic bipolar I patients, Henry et al. (1999) also reported that previous suicide attempts appeared significantly more frequently in the history of patients with high depressive temperament scores but this was not the case in patients with hyperthymic temperament. Pompili et al. (2008) investigated the affective temperament-profile of 150 consecutively hospitalized Italian psychiatric patients, 80% of them have had unipolar major depressive or bipolar I/II disorder, and 41% have had suicide risk at the admission. The authors found that the 62 suicidal psychiatric patients scored significantly higher on depressive, cyclothymic, irritable and anxious, and significantly lower on hyperthymic subscales of the TEMPS-A than the 88 non-suicidal ones (Pompili et al., 2008).

Investigating the personality profiles of 804 adults, representative for the US general population, Cloninger et al. (1998) found that the rates of prior suicide attempts and current depression were the highest among persons with cyclothymic and depressive personality types (8.2% and 6.9% and 9.7%, and 12.1% respectively), as derived from the Cloninger Temperament and Character Inventory.

While the studies, mentioned above, investigated the frequency of past suicidal behavior or the current suicide risk in relation to affective temperaments, both in mood disorder patients and in community samples, to our best knowledge the frequency and distribution of different affective temperament-types among suicide attempters has not been yet addressed.

2. Subjects and methods

The entire study population was a consecutively contacted and investigated series of 156 individuals who were admitted to the central "Suicide Emergence Unit" of Budapest (Department of Internal Medicine and Toxicology, Elizabeth Hospital and Outpatient Clinic, Budapest) because of their current nonviolent suicide attempt (drug overdose or poisoning). The subjects were interviewed (DSM-IV Axis I diagnoses and temperament-self evaluation see below) within 24–72 h after their admission, in most cases before they discharge, when they were in stable medical and mental conditions. A structured interview according to DSM-IV, the Mini International Neuropsychiatric Interview (Balazs et al., 1998; Sheehan et al., 1998) was administered to determine the current DSM-IV Axis I psychiatric diagnoses. The detailed description of the study procedure has been published previously (Rihmer et al., 2006). The Temperament Evaluation of the Memphis, Pisa, Paris and San Diego-Autoquestionnaire (TEMPS-A) is a new self-assessed temperament 110-item scale with depressive, cyclothymic, hyperthymic, irritable and anxious subscales requiring simple "yes" (score 1) or "no"