Early maladaptive schemas of emotional deprivation, social isolation, shame and abandonment are related to a history of suicide attempts among patients with major depressive disorders

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Abstract

Background: Patients with psychiatric disorders have an exceptionally high risk of completed or attempted suicide. This holds particularly true for patients with major depressive disorders. The aim of the present study was to explore whether patients with major depressive disorders (MDD) and a history of suicide attempts differed in their early maladaptive schemas from patients with MDD but without such a history or from healthy controls.
Method: Ninety participants took part in the study. Of these, 30 were patients with MDD who had made a recent suicide attempt; 30 were patients with MDD but no suicide attempts, and 30 were gender- and age-matched healthy controls. Participants completed questionnaires covering socio-demographic characteristics and the Young Schema Questionnaire (YSQ- RE2R) to assess early maladaptive schemas. Experts rated patients' MDD with the Montgomery–Asberg Depression Rating Scale.
Results: Patients did not differ in experts' ratings of symptoms of depression. Compared to healthy controls, patients with MDD recorded higher scores on maladaptive schemas such as recognition seeking, negativity/pessimism, and insufficient self-control. Compared to patients without suicide attempts and healthy controls, those who had made a suicide attempt had higher scores on dimensions such as failure, mistrust, emotional inhibition, social isolation, and abandonment/instability.
Conclusion: Compared to healthy controls, patients with MDD had more pronounced maladaptive schemas, but this was more marked in patients with a history of suicide attempts. The results suggest that suicide attempts and poorer psychological functioning are related.
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1. Introduction

Suicide is the act of deliberately taking one's own life [1], and seems to be unique to *Homo sapiens* [2]. The average international suicide rate in the general population is approximately 11 in 100,000 per annum (0.011%/year; [3,4]), and the reported ratio of attempts to completed suicides (A/S) is approximately 30–50 in 100,000 per annum [3]. As regard suicide in Iran, recent estimates have put prevalence rates at 5.3 per 100,000, with a higher rate for males (7 per 100,000) than for females (3.6 per 100,000; [5]). Suicide and suicidal behavior demand particular attention as they cause dramatic suffering for those who commit or attempt suicide and for those in their social worlds. Socio-economic and psychiatric explanations have been advanced for the complex phenomenon of suicide and suicidal behavior, but no neurophysiological correlates have so far been identified [6].

Among socio-economic explanations is the proposition that, at a macro-level, suicide and suicidal behavior may

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increase during economic crises [7]. However, recent findings from Greece [8] have not supported this notion when factors such as psychiatric disorders and the social environment are taken into at account. Nonetheless, on a micro-level, economic hardship has been reported as one of several factors in attempted suicide in Iran [9].

Next, evidence from psychiatry points to a close association of suicide and suicidal behavior with psychiatric disorders [1,10], and specifically with major depressive disorders [11,12]. Further, Ajdacic-Gross [13] reported the following increases in suicide risk (compared to healthy controls): patients immediately following discharge, 200-fold increase; patients during stay in psychiatric hospitals, 50-fold increase; more than one psychiatric diagnose within the last 4 weeks, 90-fold increase; different psychiatric diagnoses, 10–25-fold increase. With respect to completed suicides, Arsenault-Lapierre et al. [10] reported in their meta-analysis the following: a) a mental disorder was diagnosed in 87% of the 3275 cases included in the studies, b) with respect to gender, diagnoses of substance-related problems, personality disorders, and childhood disorders were more common among male suicides, while affective disorders, including depressive disorders, were more common among female suicides. More specifically, suicide and suicidal behavior were associated with bipolar and unipolar mood disorders [1,14]. In the present study, we focused on major depressive disorders, as depression contributes most strongly to suicide attempts (population attributable risk (PAR) of 26.6%; [12,15,16]). In this view and most importantly, Pompili et al. [11] showed that, among patients with MDD, non-adherence was a significant predictor of negative outcomes such as high rates of recurrence/relapse and active suicidal ideation and suicidal behavior. A positive history of non-adherence has also been associated with both prior suicide attempts and active suicidal ideation. Improving adherence generally may prevent suicidal behaviors. We took this observation into account; in the present study we investigated inpatients under stable and supervised psychopharmacological treatment.

Research based on neurophysiological approaches to understanding suicidal behavior has not produced satisfactory prediction rates. Thus, while some researchers have claimed that dramatically lower cholesterol levels predict suicidal behavior, this has not been the case in other studies (see Shakeri et al. [17] for more detail; they concluded that most probably a broad variety of socio-demographic, social, physiological and psychological factors impact concomitantly and independently on suicidal behavior).

In the present study we focused on psychological dimensions to gain more insight into the cognitive–emotional processes that might underlie suicidal behavior. To this end, patients with major depressive disorders (MDD) and with or without a history of suicide attempts completed the Young Schema Questionnaire to assess early maladaptive schemas. More specifically, we anticipated that patients with such a history would be more focused on interpersonal relationship issues such as disconnection, rejection, inhibition, and abandonment, when compared

either to patients without this history or to healthy controls. In this respect, Joiner et al. [18] and Bryan et al. [19] argue that, among other factors, interpersonal–psychological dimensions such as perceived burdensomeness (that is, the belief to be liability to other people), and thwarted belongingness (i.e., the belief that one does not belong to a social group, or to be unimportant and useless to other people) increase the risk of committing suicide. Likewise, O'Connor and Nock [12] concluded in their review that feelings of defeat, social rejection, entrapment, and humiliation, along with subjectively perceived low social support (all reflecting negative and stressful social relation and interactions) were particular contributors to increased risk of committing suicide. We took these observations into account and asked to what extent inpatients with major depressive disorders and with a recent history of suicide attempts might differ in their early maladaptive schemas, compared to inpatients with major depressive disorders but without any suicide attempts.

According to Beck's cognitive view of the emergence and maintenance of depression [20], mental concepts such as the assumptions, schemas, memories, beliefs, goals, expectations, hopes, plans, assignments and cognitive biases of persons influence their behavioral and emotional responses to the social environment [20]. Such mental concepts might be particularly biased in people with suicidal ideation and behavior, and this reasoning also draws on the concept of evolutionary psychology. According to De Catanzaro [21] and Joiner [18] people are more prone to suicide the less attached they feel to a social group (family, relatives, religious society, etc.), the more of a burden they feel to the social group, and the weaker they feel the prospects to be of becoming integrated within a social community. Thus, we would expect a higher salience of issues related to social interaction among patients with suicide attempt history than among those without (see also [22–24]).

According to Ball and Cecero [25], after becoming acute, early maladaptive schemas act as personality traits, and we expected greater prevalence of early maladaptive schemas in people suffering from MDD, and more so among those with a history of suicide attempts [25]. According to Young et al. [26], schemas that are foundations for later psychological disorders can be described as maladaptive. Early maladaptive schemas are self-defeating emotional and cognitive patterns established in childhood and repeated throughout life. Following Young et al. [26] and Arntz and Gitta [27], 18 maladaptive schemas are identified, and grouped into five schema domains as follows:

- A: The first domain concerns disconnection/rejection and includes five schemas formed as a consequence of unmet needs such as security and empathy. These are abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, and social isolation/alienation.
- B: The second domain includes schemas centered on impaired autonomy/performance, schemas formed