Assessment of Impulsivity with Self-report Scales and Behavioral Tasks in Symptomatic and Remitted Patients with Major Depression

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INTRODUCTION
Impulsivity is a multidimensional construct involving diverse neuropsychological and neurobiological processes. Impulsivity has clinical significance in mood disorders due to its potential association with suicidality [1] and treatment non-compliance [2]. Research on impulsivity in mood disorders frequently involves bipolar patients [3], with relatively few and nonconsistent studies on unipolar depression [4]. The aim was to cross-sectionally assess impulsivity in patients with depression simultaneously with self-report scales and behavioral tasks and study their association with suicidality.

METHOD
Consecutive patients clinically diagnosed with major depression in psychiatry outpatient clinic were invited to participate. Hundred and three outpatients diagnosed with lifetime and current major depression with Structured Clinical Interview for DSM-IV were recruited. Comorbidity of any current Axis I mental disorder other than remitted anxiety disorders was the only criteria for exclusion. ‘Remitted Major Depression’ (RMD, n=32) and ‘Major Depression’ (MD, n=71) groups were constituted based on Hamilton Depression Rating Scale scores ≤ 7 and ≥ 8, respectively.

Figure 1 Flow chart of the study

Figure 2 Screenshots of Iowa Gambling Task and Balloon Analogue Risk Task

RESULTS
When data from all participants were pooled, depression symptom severity was found to have significant positive correlations with lack of premeditation and urgency subscales of UPPS, non-planning and attentional impulsivity subscales of BIS-11, and omission errors in GNG. MD patients reporting suicidal ideation within last month had higher BIS-11 total and attentional impulsivity scores, UPPS total, lack of premeditation and urgency scores, and more frequent commission errors in GNG reflecting failure in response inhibition (p<0.05) (Table 2). Furthermore, MD patients with lifetime history of suicide attempt had higher scores for BIS-11 total, motor, and non-planning impulsivity scores (p<0.05) compared to MD patients without suicidal ideation, however there was no difference in behavioral task performances.

Table 1: Comparison of impulsivity dimensions between RMD, MD and C groups

Table 2: Association between suicidal ideation and facets of impulsivity in MD

CONCLUSION
Higher self-reported impulsivity during depressive episode suggests a state, rather than trait, impulsivity associated with major depression. However, symptomatic, as well as remitted depression patients’ task performances which were not different from nondepressed individuals do not support this hypothesis. However, our findings suggest an association between both suicidal ideation and behavior and response inhibition and urgency facets of impulsivity. The relationship between impulsivity and suicidality in depressed patients should be investigated in further studies in order to be able to predict the risk of suicide, improve management according to this risk, and to develop more effective treatment approaches.

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References