

ASSESSMENT OF RELATIONSHIP BETWEEN AFFECTIVE TEMPERAMENTS, TRAIT IMPULSIVITY AND EMOTIONAL RESPONSE INHIBITION IN EUTHYMIC STATE OF BIPOLAR DISORDER

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Introduction: Several cognitive and behavioural disturbances persist in interepisodic bipolar disorder (BD). Affective temperaments may influence impairments as they contribute to the predisposition to BD and may share a common neurobiological basis with elevated trait impulsivity.

Aims: We aimed to assess a relationship between temperamental traits and impulsivity as a trait and state dependent behaviour among euthymic bipolar outpatients and healthy volunteers.

Methods: 38 euthymic bipolar outpatients and 24 healthy volunteers completed TEMPS-A and BIS-11. Computerised picture- based affective go/no-go task was applied to examine emotional response inhibition as an indicator of state dependent impulsivity.

Results: Clinical group scored significantly higher than healthy volunteers on trait impulsivity and affective temperaments scales, and displayed poorer control of emotional response inhibition (Table 1). Correlation patterns were similar in both groups, with strong associations between the majority of affective temperaments and trait impulsivity components, while correlations between state dependent impulsivity measures appeared weak.

Table 1

Means (M), standard deviations (SD) and correlation coefficients between affective temperaments (measured with TEMPS-A) and impulsivity (trait impulsivity- measured with BIS-11; state impulsivity- assessed with affective go/no-go task) in the group of euthymic bipolar outpatients (BG; N = 38) and healthy volunteers (HG; N = 24).

ASSESSED DOMAINS		AFFECTIVE TEMPERAMENTS					
		Depressive	Cyclothymic	Hyperthymic	Irritable	Anxious	
		Correlations					
		M = SD					
Trait impulsivity							
Attentional	BG	18,62±4,82**	0,48**	0,66**	-0,23	0,65**	0,66**
	(score) HG	14,58±3,37	0,28	0,72**	-0,62**	0,52**	0,71**
Motor	BG	22,78±4,54**	0,18	0,47**	0,04	0,48**	0,36*
	(score) HG	19,71±3,88	0,29	0,51*	-0,20	0,44*	0,41*
Nonplanning	BG	26,86±4,49**	0,27	0,31	-0,28	0,45**	0,36*
	(score) HG	23,29±4,56	0,06	0,14	-0,04	0,09	0,00
Total	BG	68,27±11,99**	0,36*	0,56**	-0,18	0,61**	0,53**
	(score) HG	57,58±9,86	0,24	0,51*	-0,31	0,39	0,41**
State impulsivity							
Reaction	BG	664,74±57,27	0,05	0,07	-0,18	0,05	0,08
time (ms)	HG	645,92±65,61	-0,12	-0,23	-0,18	-0,24	-0,13
Target	BG	0,68±0,19**	-0,29	-0,30	0,17	-0,23	-0,37*
accuracy (%)	HG	0,79±0,06	-0,31	0,03	0,10	0,06	-0,14
Distractor	BG	0,82±0,09**	-0,16	-0,16	0,01	-0,29	-0,24
accuracy (%)	HG	0,87±0,04	-0,05	0,04	-0,07	-0,15	-0,07
		M = SD					
Affective	BG	1,50±0,23**	1,47±0,28**	1,44±0,21*	1,28±0,21**	1,47±0,27**	
temperaments	HG	1,34±0,15	1,17±0,16	1,55±0,22	1,12±0,16	1,24±0,20	

BG = Euthymic bipolar group; HG = Healthyvolunteers group

*p<0,05; **p<0,01

[Table 1]

Conclusions: During euthymia, distinctive temperament profile, elevated trait impulsivity and impaired emotional inhibition, prevailed among bipolar outpatients. This is consistent with data suggesting persistent abnormalities within specific areas of the prefrontal cortex and limbic structures which may underlie the emotional, cognitive and behavioural disturbances observed in all phases of BD.