



A Study of Association of Impulsivity and Suicidality in Psychiatric Disorders

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ABSTRACT

Impulsivity is a prominent and measurable characteristic of psychiatric disorders that can contribute to risk for suicidal behavior. The purpose of the study is to investigate the relationship between impulsivity and suicidality of past suicidal behavior.

METHOD: 30 patients attending psychiatry department at Meenakshi medical college, kanchipuram are assessed with Barratt's Impulsiveness Scale (BIS), Beck's Suicide Intent Scale (BSIS) and Beck's Scale for Suicidal Ideation (BSSI). The data is analyzed using Pearson's Product Moment Correlation and t-Test.

RESULTS: Impulsivity is a Risk factor for suicide. As the Scores on Impulsiveness Scales increases the Number of attempts also increased. Impulsivity scores are found to be high in Mood disorder with numerical differences in Unipolar Vs. Bipolar Depression. No difference between Impulsivity Scores in various Psychiatric Disorders.

KEYWORDS : Impulsivity, suicidality, Psychiatric disorders.

Introduction:

Impulsivity is a prominent and measurable characteristic of psychiatric disorders that can contribute to risk for suicidal behavior. Identification of Impulsivity and its modification by Behavioral techniques can prevent suicidal attempt.

Alan C. Swann, M.D. Donald M. Dougherty, Ph.D. in 2005 found that Subjects with h/o suicidal attempts had more impulsive errors on immediate memory task and had shorter response latencies, especially for impulsive responses. Barratt's impulsiveness scale scores were numerically, but not significantly higher in subjects with suicidal attempts. F.Gerard Moeller, Ernest. S. Barratt et al, 2001 have observed that impulsivity is a key feature of several psychiatric disorders. Maurizio Pompili, Marco Innamorati et al, 2008, have observed that patients at risk for suicide had more impulsivity. Impulsivity is found to be the strongest predictor even after controlling for socio-demographic and clinical variables.

Aim:

To investigate the relationship between impulsivity and suicidality of past suicidal behavior, which is a potential predictor of eventual suicide in patients with various psychiatric disorders

Objectives:

- If there is any correlation between number of suicidal attempts and impulsivity?
- If there is any correlation between intention lethality of attempt and impulsivity?
- Disorder wise levels of impulsivity.

Materials and Methods:

- Data source: Meenakshi medical college, Kanchipuram.
- Type of patients: Both out-patients and in-patients of the institute attending Department of Psychiatry between April 2016 to May 2016.
- Number of Patients: 30.
- Type of study: Cross sectional study.
- Diagnostic criteria: ICD-10-DCR (Diagnostic Criteria for Research) (WHO).

Inclusion Criteria:

- Age: >18yrs
- Both male and female
- At least one attempt of suicide
- Presence of insight
- Those willing to give written informed consent and able to follow study procedures

Exclusion Criteria:

- Medical disorders
- Any significant neurological illness
- Any significant life events
- Intellectual impairment
- Family H/O psychiatric illness and suicide

Instruments used:

Beck's Suicide Intent Scale (BSIS):

Estimates the intentionality and lethality of suicidal attempt - 20 items

Score	Intent
15—19	Low
20—28	Medium
29+	High

Beck's Scale for Suicidal Ideation(BSSI):

Scale to assess severity of suicidal ideation 21 items

Score	Risk
0---8	Normal
9---17	Mild
18—26	Moderate
27---35	Severe
36---38	Very severe

Barratt's Impulsiveness Scale(BIS):

30 item self-report instrument to assess impulsiveness 3 sub scales

1. Attentional impulsiveness (8 items)

2. Motor impulsiveness (11 items)

3. Non planning impulsiveness (11 items)

Operational Procedure:

- Written informed consent was taken from subjects who met the inclusion and exclusion criteria
- An intake proforma consisting of socio-demographic data ,habits ,details of substance abuse and childhood/adolescent abuse
- Subjects are Diagnosed according to ICD-10-DCR
- BSSI,BSIS and BIS were administered
- Assessment of Impulsiveness and Suicidality are done by two separate investigators in order to reduce Bias in scoring.
- The data is analyzed using Pearson's Product Moment Correlation and t – test is used to compare Means and Standard Deviations of Scores

Results and Discussion :

Table 1 : Socio demographic data of the sample (n=30) :

	Male (n=15)	Female (n=15)
Age in yrs		
20-29	4	9
30-39	6	3
40-49	4	2
50+	1	1
Education		
Illiterate		
Passed Primary	2	2
Passed secondary	2	5
Passed higher secondary	4	1
Graduate	2	5
Post graduate	4	1
	1	1
Domicile		
Rural	5	6
Semi urban	1	2
Urban	9	7
Marital status		
Un married	4	5
Married	10	9
Divorced	1	1
Socio economic status		
Low	3	5
Middle	12	10
High	0	0
Psycho social support		
Poor	1	1
Fair	2	3
Good	12	11
Diagnosis		
Alcohol Dependence Syndrome		
Schizophrenia	3	0
Unspecified Non organic Psychosis	5	2
Bipolar Affective Disorder	0	1
Mania	4	1
Depression	2	3
Recurrent	1	7
Depressive disorder	0	1
Obsessive Compulsive Disorder		

There are 15 male & 15 female patients. More female patients are between 20-29 yrs when compared to male patients who are between age group of 30-39 yrs. Majority of them are from urban background, married and from middle class socio economic status with good family support in both genders. Most common diagnosis in males is Bipolar affective disorder followed by Schizophrenia, where as in females it is found to be Depression either unipolar or bipolar.

Table 2: Means and Standard Deviations of Scores

	N	Mean	+/- S.D
BSSI	30	15.33	4.780
BSIS	30	26.97	5.163
BIS -1	30	19.93	4.135

BIS-2	30	22.70	6.176
BIS-3	30	29.37	6.003
BIS-T	30	72.00*	14.251

All the means of the scores of Barratt's Impulsiveness Scale (BIS) are above the cut of point -55, which shows that Impulsivity by itself is a risk factor for suicidal behavior. Similar results were reported by Swann, AC et al (2005) where BIS scores are numerically higher in subjects with Suicide Attempts.

Mean scores on Beck's suicide Intent scale(BSIS) are in the moderate range(20-28).

Correlation between number of Suicidal attempts with impulsivity scores and severity and intent of suicidal attempts.

A positive correlation is found between number of attempts & impulsivity, which is more for BIS-1 sub scale (0.50) and BIS total scale scores (0.50). It is inferred that as impulsivity increases the number of suicidal attempts increase. Similar results are reported by Swann AC, et al (2005)in their study showing significant relationship between BIS scores & h/o Suicidal Attempts.

No correlation was found between number of attempts and severity (r=0.08) in our study

There is no correlation between Intent and number of attempts (r=0.06) because there are no recent attempts.

There is a negative correlation between impulsivity and severity of attempts but it is weak

(-0.24) except for BIS-3 which is -0.52. Inference is that there is no relation between impulsivity and severity of the attempt.

There is negative correlation between Intent of the attempt and Impulsivity (BIS-T -0.23) which is weak. It is inferred that there is no relation between intent of the attempt and Impulsivity. Findings similar to Swann et al (2005).

As the number of cases were lesser in some disorders those were not considered while comparing the mean scores with other disorders.

Table 3: Comparison of Mean scores on all the scales across the diagnostic categories

ICD-10 DIAG-NOSIS	BIS-1 Mean	BIS-1 S.D	BIS-2 mean	BIS-2 S.D	BIS-3 mean	BIS-3 SD	BIS-T mean	BIS-T SD
BPAD-Depression	20.0	6.1	25.2	8.3	31.4	5.0	76.6	18.8
BPAD-Mania	20.8	3.3	25.4	6.3	30.8	6.2	77	15.1
Recurrent depressive Disorder	18.6	3.9	19.8	4.1	26.4	8.0	64.8	11.7
Schizophrenia	18.4	3.7	19.3	4.9	28.6	5.1	66.3	11.4

All the means of the Scores in the scales doesn't differ much across various disorders, except for

1. Recurrent Depressive disorder has scored high in severity of an attempt
2. In impulsivity scores Bipolar affective disorder depression scored high in BIS-3 (Non planning impulsivity).

Even though there is a difference in the scores of Impulsivity between Bipolar and Unipolar depressive disorders, on comparing the means using t-test the difference is not found to be statistically significant(p=0.15)

Limitations of the study

- Small sample
- Personality of the subjects was not assessed
- Sample not representative of the actual population as the study

- is conducted in a tertiary referral center.
- Recall bias about the details of last attempt

CONCLUSION:

- Impulsive Subjects tend to have more SAs (Suicide Attempts)
- subjects with high impulsivity need not have more severe suicidal attempts
- No difference between Impulsivity across various disorders

Clinical implications:

- Impulsivity is a significant risk factor for suicide. Assessment is mandatory in routine clinical practice
- Impulsivity as symptom cuts across various diagnoses, & its treatment is related to social, biological, & psychological etiologies.

References:

- Alan C. Swann, Donald. M. Dougherty, Peggy. J. Pazzaglia et al: Increased impulsivity associated with severity of suicidal attempt History in patients with Bipolar Disorder, *Am J Psychiatry*, 2005; 162:1680-1687.
- Maurizio Pompili, Marco Innamorati, Michele Raja et al: Suicide risk in depression and bipolar disorder: Do impulsiveness-aggressiveness and Pharmacotherapy predict suicidal intent?, *Neuropsychiatric disease and treatment*, 2008; 4(1).
- Gerard Moeller, Ernest S. Barratt, Donald. M. Dougherty et al: Psychiatric Aspects of Impulsivity: *Am J Psychiatry*, 2001; 158: 1783-1793.
- Beth. S. Brodsky, Maria Oquendo, Steven .P. Ellis et al; The relationship of childhood abuse to impulsivity and suicidal behavior in adults with Major depression; *Am J Psychiatry*, 2001; 158:1871-1877.
- E. Baca-García², C. Diaz-Sastre², E. García Resa³, et al; Suicide attempts and impulsivity' *European Archives of Psychiatry and Clinical Neuroscience*; April 2005 ,Volume 255, Number 2.
- [Koller G](#), [Preuss UW](#), [Bottlender M](#), et al, Impulsivity and aggression as predictors of suicide attempts in alcoholics. *European Archives Psychiatry Clinical Neurosciences*, 2002 Aug; 252(4):155-60.
- The international classification of diseases, vol. 10: Classification of mental and behavioral disorders. Geneva, World Health Organization, 1993.