

Intentional Self-Harm And Personality Traits Using Big Five Factor Model In Patients Presenting To A Tertiary Level Hospital

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Abstract

Introduction: Suicide is an important, largely preventable public health problem. The occurrence of suicide and suicidal behavior has been increasing dramatically. There is a growing recognition that the personality traits is important risk factor for intentional self-harm (suicide/ purposely self-inflicted poisoning or injury). This study was done to assess the personality traits in patients presenting with intentional self-harm and relationship of intent of the self-harm with personality traits.

Material And Method: A cross sectional study was conducted in patients presenting with Intentional self-harm to tertiary hospital emergency department. Patients who met inclusion criteria and gave consent during six months period were included, Socio demographic information and detailed history was taken. The suicide intent scale and five factor model rating form were administered to the patients.

Results: Most patients who presented with intentional self-harm scored median score of 4 (high) in anger hostility, self-consciousness, impulsivity and altruism traits while in other traits they scored neutral score, which concluded that patients who presented with intentional self-harm were more bitter, short-tempered, timid, impulsive and sacrificial. The study showed that the relation of certain traits as anxiousness, impulsivity, vulnerability, gregariousness, ideas, trust, straightforwardness, altruism, competence, order and SIS grading was statistically significant ($p < 0.05$).

Conclusion: Our findings suggest that patients who presented with intentional self-harm were more bitter, short-tempered, timid, impulsive and sacrificial. Further patients who committed intentional self-harm with low intent were more impulsive, vulnerable, outgoing, haphazard and sloppy as compared to those who committed with high intent who were rather more anxious and sacrificial.

Keywords: Intentional Self-Harm, Personality Traits, Big Five Factors, Suicide Intent Scale

INTRODUCTION

Suicide is the 3rd leading cause of death in the 15-45 ages and is the second leading cause of death in 15-29-year-olds.¹ Nepal has an estimated 6,840 suicides annually, or 24.9 suicides per 100,000 people.² Over the last few decades, it has become increasingly clear that people who commit suicide have a certain individual predisposition.^{3,4} This predisposition seems to be mediated by several factors like clinical and demographic risk factors, personality traits and recent life events.^{5,6}

Involvement of personality traits in susceptibility to suicide/suicidal behaviour has been the subject of research since long. Certain personality traits may be useful markers of suicide risk. Identifying risk factors provides critical information to assess and manage suicide risk in individuals. Therefore this study was undertaken with the aim to assess personality traits in person presenting with intentional self-harm and to find the relationship of intent of the self-harm with personality traits.

MATERIAL AND METHOD

A cross sectional study was conducted over 6 months (Jan, 2015- June 2015)in patients presenting with Intentional self-harm to emergency department and psychiatry OPD at Institute of medicine, kathmandu and seeking psychiatric consultation.The ethical approval was taken from Institutional Review Board, Institute of medicine. Written informed consent was taken from the respondents who were 18 years and above and were able to comprehend with the tool. Using purposive sampling,97 patients were included in the study. Sociodemographic information was collected using the self- designed semi-structured proforma and detailed history was taken from patients and informants. The tools suicide intent scale and five factor model rating form were administered to the patients.The diagnosis of intentional self-harm and associated mental disorders was according to ICD-10, DCR.Information obtained were analyzed by using SPSS version 16 and suitable statistical tool were applied. Descriptive analysis was performed,mean, median, range were calculated. Chi square Test was used to test the level of significance.

RESULT

Total of 97 participants in the study, the mean age was 30.47 ± 9.498 years. Most of the participants 47.4% were of age group 21-30 years. Females were 70.1 % while males were 29.9 % of total sample. Most of them 38.1 % had attended primary school , 28.9 % were unemployed, 50.5 % cases were married,46.4 % were from joint family, and 58.8 % were from within valley. The study found poisoning to be the most common method of intentional self-harm accounting for 46.4 %, followed by drug overdose 20.6 %.Most of the participants 72.2 % had not consumed any psychoactive substance during the act ,however few of them 21.6 % were found to be under influence of alcohol during the act. 29.9 % had past history of self-harm and positive family history of intentional self- harm was found in 14.4% of participants. Majority of the participants were diagnosed of having either F43.3 Adjustment disorder 25.8 % or F32 Depressive disorder 22.7 %, While 14.4 % of participants has no any definite psychiatric disorder diagnosed.

Table 1 : Distribution on basis of Five Factor Rating Form

Dimension	Median	Q1	Q3
Neuroticism Versus Emotional Stability			
Anxiousness	3	2	3
Angry hostility	4	3	4
Depressiveness	3	2	3
Self- consciousness	4	3	4
Impulsivity	4	3	4
Vulnerability	3	3	4
Extraversion versus Introversion			
Warmth	3	3	4
Gregariousness	3	3	4
Assertiveness	3	2	3
Activity	3	2	3
Excitement- seeking	3	2	4
Positive Emotions	3	2	4
Openness versus Closedness to one's own Experience			
Fantasy	3	3	3
Aesthetics	3	2.5	3
Feelings	3	3	3
Actions	3	2	3
Ideas	3	3	3
Agreeableness versus Antagonism			
Trust	3	3	4
Straightforwardness	3	3	4
Altruism	4	3	4
Compliance	3	2	4
Modesty	3	2	3
Tender- Mindedness	3	3	3
Conscientiousness versus Undependability			
Competence	3	2	3
Order	3	2	3
Dutifulness	3	3	4
Achievement	3	3	3
Self-Discipline	3	2	3

In the study most of the participants scored median score of 3(neither high nor low) in various traits. However, in traits of Anger hostility, Self- consciousness, Impulsivity and Altruism participants scored median score of 4(high). There was no traits noted in which participants scored median score of 2 or less. Thus concluding that patients who presented with intentional self -harm were more short -tempered, timid and tend to be embarrassed easily. They were absorbed to be more bitter than others. They were found to have difficulty

controlling their anger, are more impulsive, sacrificial and giving. They were found to be emotionally less stable and neurotic.(Table 1)
 The study showed that 48.5 % of subjects had moderate suicide intent score, while 39.2% of subjects had mild suicide intent score. Only 12.4% of subjects had intentional self- harm with high suicide intent.(Fig:1)

Table 2 : Comparison of SIS score and facets of personality dimension (Neuroticism Versus Emotional Stability)

SIS	1 and 2 (low)	3 (neither low nor high)	4 and 5 (high)	p-value
Anxiousness				
Mild	42.1% (16)	44.7% (17)	13.2%(5)	0.033*
Moderate to severe	18.6% (11)	55.9% (33)	25.4% (15)	
Angry hostility				
Mild	21.1%(8)	26.3%(10)	52.6%(20)	0.328
Moderate to severe	10.2%(6)	28.8%(17)	61.0%(36)	
Depressiveness				
Mild	31.6%(12)	55.3%(21)	13.2%(5)	0.798
Moderate to severe	25.4%(15)	59.3%(35)	15.3%(9)	
Self-consciousness				
Mild	5.3%(2)	42.1%(16)	52.6%(20)	0.152
Moderate to severe	16.9%(10)	28.8%(17)	54.2%(32)	
Impulsivity				
Mild	2.6%(1)	23.7%(9)	73.7%(28)	0.008*
Moderate to severe	27.1%(16)	18.6%(11)	54.2%(32)	
Vulnerability				
Mild	5.3%(2)	36.8%(14)	57.9%(22)	0.001*
Moderate to severe	33.9%(20)	37.3%(22)	28.8%(17)	

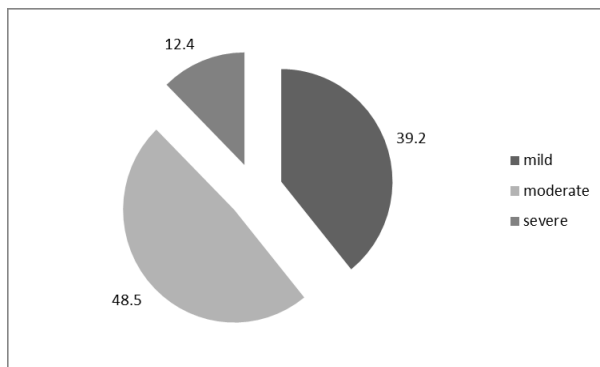


Fig: 1 Distribution on the basis of suicidal Intent Scale (SIS)

The study shows that, among those who committed intentional self harm with low intent , 42.1 % of cases have lower scores (1 to 2) in Anxiousness trait which is only 18.6% among the cases with moderate to severe intent. Similarly, 25.4% of cases have higher scores (4 to 5) in Anxiousness trait among moderate to severe intent patient which is 13.2% among mild cases. The relation of anxiousness scores and SIS grading is statistically significant. Similarly, the study shows that the relation of certain other traits like Impulsivity, Vulnerability in neuroticism vs emotional stability Facet and SIS grading was statistically significant (p=<0.05)

Table 3 : Comparison of SIS score and facets of personality dimension (Extraversion Versus Introversion)

SIS	1 and 2 (low)	3 (neither low nor high)	4 and 5 (high)	p-Value
Warmth				
Mild	7.9%(3)	42.1%(16)	50.0%(19)	0.549
Moderate to severe	15.3%(9)	40.7%(24)	44.1%(26)	
Gregariousness				
Mild	5.3%(2)	47.4%(18)	47.4%(18)	0.003*
Moderate to severe	35.6%(21)	30.5%(18)	33.9%(20)	
Assertiveness				
Mild	39.5%(15)	31.6%(12)	28.9%(11)	0.23
Moderate to severe	52.5%(31)	32.2%(19)	15.3%(9)	
Activity				
Mild	21.1%(8)	55.3%(21)	23.7%(9)	0.512
Moderate to severe	30.5%(18)	52.5%(31)	16.9%(10)	
Excitement seeking				
Mild	60.5%(23)	18.4%(7)	21.1%(8)	0.218
Moderate to severe	42.4%(25)	27.1%(16)	30.5%(18)	
Positive Emotions				
Mild	42.1%(16)	34.2%(13)	23.7%(9)	0.599
Moderate to severe	44.1%(26)	25.4%(15)	30.5%(18)	

The relationship of gregariousness traits and SIS grading is statically significant.

Table 4 : Comparison of SIS score and facets of personality dimension Openness Versus closedness to ones's own experience

SIS	1 and 2 (low)	3 (neither low nor high)	4 and 5 (high)	p-value
Fantasy				
Mild	13.2%(5)	65.8%(25)	21.1%(8)	0.656
Moderate to severe	20.3%(12)	59.3%(35)	20.3%(12)	
Aesthetics				
Mild	31.6%(12)	50.0%(19)	18.4%	0.433
Moderate to severe	20.3%(12)	61.0%(36)	18.6%	
Feelings				
Mild	7.9%(3)	71.1%(27)	21.1%(8)	0.095
Moderate to severe	23.7%(14)	52.5%(31)	23.7%(14)	
Actions				
Mild	21.1%(8)	55.3%(21)	23.7%(9)	0.151
Moderate to severe	32.2%(19)	57.6%(34)	10.2%(6)	
Ideas				
Mild	13.2%(5)	63.2%(24)	23.7%(9)	0.025*
Moderate to severe	15.3%(9)	79.7%(47)	5.1%(3)	
Values				
Mild	28.9%(11)	55.3%(21)	15.8%(6)	0.304
Moderate to severe	42.4%(25)	49.2%(29)	8.5%(5)	

The relation of ideas facet scores and SIS grading is statistically significant.

Table 5 : Comparison of SIS score and facets of personality dimension (Agreeableness Versus Antagonism)

SIS	1 and 2 (low)	3 (neither low nor high)	4 and 5 (high)	P-value
Trust				
Mild	2.6%(1)	65.8%(25)	31.6%(12)	<0.001*
Moderate to severe	35.6%(21)	35.6%(21)	28.8%(17)	
Straightforwardnes				
Mild	0%	68.4%(26)	31.6%(12)	0.006 *
Moderate to severe	15.3%(9)	40.7%(24)	44.1%(26)	
Altruism				
Mild	5.3%(2)	36.8%	57.9%	0.021*
Moderate to severe	23.7%(14)	18.6%	57.6%	
Compliance				
Mid	21.1%(8)	21.1%(8)	57.9%(22)	0.065
Moderate to severe	30.5%(18)	35.6%(21)	33.9%(20)	

Modesty				
Mild	31.6%(12)	50.0%(19)	18.4%(7)	0.306
Moderate to severe	40.7%(24)	50.8%(30)	8.5%(5)	
Tender- Mindedness				
Mild	13.2%(5)	76.3%(29)	10.5%(4)	0.344
Moderate to severe	25.4%(15)	66.1%(39)	8.5%(5)	

The relation of trust trait, Straightforwardness, Altruism trait and SIS grading was statistically significant.

Table 6 : Comparison of SIS score and facets of personality dimension (Conscientiousness Versus Undependability)

SIS	1 and 2 (low)	3 (neither low nor high)	4 and 5 (high)	P-value
Competence				
Mild	21.1%(8)	73.7%(28)	5.3%(2)	0.004*
Moderate to severe	45.8%(27)	39.0%(23)	15.3%(9)	
Order				
Mild	28.9%(11)	65.8%(25)	5.3%(2)	0.003*
Moderate to severe	30.5%(18)	37.3%(22)	32.2%(19)	
Dutifulness				
Mild	15.8%(6)	57.9%(22)	26.3%(10)	0.207
Moderate to severe	5.1%(3)	66.1%(39)	28.8%(17)	
Achievement				
Mild	23.7%(9)	50.0%(19)	26.3%(10)	0.238
Moderate to severe	22.0%(13)	64.4%(38)	13.6%(8)	
Self-Discipline				
Mild	28.9%(11)	63.2%(24)	7.9%(3)	0.063
Moderate to severe	25.4%(15)	47.5%(28)	27.1%(16)	
Deliberation				
Mild	31.6%	34.2%(13)	34.2%(13)	0.222
Moderate to severe	39%(23)	42.4%(25)	18.6%(11)	

The relation of Competence and order trait scores and SIS grading was statistically significant.

DISCUSSION:

Intentional self- harm is one of the most dramatic symptoms of mental illness. It is one of the major public health problems, causing immense cost and suffering, both individually as well as in the society. As in many countries, Intentional self-harm in Nepal is an unrecognized, hidden, and a silent epidemic.

Although the literature is scant from South - Asian subcontinent, the available data suggest that the number is rising steadily and that the risk factors associated and methods employed for suicide attempt/self-harm are strikingly different from those reported in Western data. This study explores the high risk personality traits in cases of intentional self-harm (purposefully self- inflicted injury or poisoning). Few studies have been conducted using five factor rating form and intentional self- harm behavior. Soltaninejad and colleagues in their study found significant positive correlation ($r=0.323$) between neuroticism and suicide ideation; however, significant negative correlations existed between three other personality traits -extraversion [$r = -0.306$], agreeableness [$r = -0.227$], and conscientiousness [$r = -0.271$] and suicidal ideation.⁷ Several other studies have shown similar result. A study done by Youssef and colleagues in women with attempted suicide using MMPI-2 found self-consciousness and shyness were significantly high in these patients.⁸ Hostility and trait anger had a significant positive association with suicidal attempt.⁹

In this study, in neuroticism Versus Emotional stability spectrum, out of six traits most of the participants scored median score of 4(high) in 3 different traits i.e Anger-hostility, self - conscientiousness and impulsivity. while in remaining traits the median score was 3 (Neither low nor high). It signifies that majority of the participants were emotionally unstable, neurotic.

In a study done by Maclaren and Best, intentional self- harm behavior was significantly associated with facets of Neuroticism, which is consistent with this study finding, and lower scores on facets of Agreeableness and Conscientiousness.¹⁰ But in this study there was no traits noted in which participants scored median score of 2 or less. In the study most of the participants scored median score of 3(neither high nor low) in various traits which signify that patient presenting with intentional self - harm had no significant variation of ranges in above traits.

The study shows that the relation of Certain traits like anxiousness, Impulsivity, Vulnerability gregariousness, Ideas, trust,

Straightforwardness, Altruism, Competence, order and SIS grading is statistically significant ($p<0.05$)which indicates that the patients who committed intentional self harm with low intent were more impulsive, vulnerable, outgoing, haphazard, Creative and sloppy as compared to those who committed with high intent who were rather more anxious and sacrificial.

Studies comparing SIS and Five factors traits have not been found to be conducted much. A study done using SIS along with aggression and impulsive trait scale found that Suicide intent was significantly correlated with verbal aggression (Pearson $r = 0.90$, $P = 0.030$), hostility (Pearson $r = 0.316$, $P < 0.001$), and impulsivity ($r = -0.174$, $P = 0.049$). High hostility and low motor impulsivity emerged as significant predictors of suicide intent.¹¹ Another study done by Megan S, chesin also found that impulsivity was significantly associated with both the lethality and suicide intent which supports the current findings.¹²

CONCLUSION:

Personality traits may be of value as correlates, predictors, endophenotypes, and targets of health interventions in Intentional self- harm. Despite the clinical importance of understanding suicidality, research on the associated risk factors is still scarce especially the evidence concerning personality traits. The present study makes a contribution to the field by investigating personality trait in intentional self- harm cases. No studies has been conducted in regard to suicidality and big-five factor model in our setting. Our findings suggest that patients who presented with intentional self -harm were more bitter, short -tempered, timid, impulsive and sacrificial. The ultimate goal of research on self-harm is to prevent it from occurring. Further investigations with multi - centered approach and bigger sample are recommended for better understanding of personality traits in self- harm patients which could be helpful in step forward for suicide prevention.

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CONFLICT OF INTEREST: None

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