

Model of Suicidal Ideation among Iranian Soldiers: the Role of Personality Disorder, Emotion Focused Coping Style and Impulsivity

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ABSTRACT

Suicidal behavior is one of the fundamental strains in the area of Mental health. One of the most considerable suicidal behaviors is the suicidal ideation which is an important predictor for suicide completion. This study has conducted the role of borderline personality disorder, impulsivity, and excitement-oriented coping style in predicting soldiers' suicidal ideation. A total of 1,659 soldiers were selected through multi-level cluster sampling method. Data were collected using Beck Suicide Ideation Scale (BSSI), the Millon Clinical Multiaxial Inventory (MCMI-III), UPPS Impulsive Behavior Scale, and Coping Style Questionnaire (CSQ). The results have indicated that not only the borderline personality disorder directly affects the suicidal ideation but it could also have a role in predicting the suicidal ideation via the way of directly influencing the other variants. The findings resulting from the method analysis are indicative of the intermediary role of excitement-oriented coping style and impulsivity regarding the relationship between the borderline personality disorder and suicidal ideation. Therefore, the research findings exhibited that the relationship between the borderline personality disorder and the suicidal ideation could be more precisely and comprehensively explained via the intermediary variants such as the excitement-oriented coping style and impulsivity. Screening and identifying soldiers through diagnosing the borderline personality disorder and hyper impulsivity and also those individuals more frequently using the excitement-oriented coping style are effective for the purpose of restricting access to weapons in prevention of suicide attempt.

KEYWORDS: Suicidal Behavior, Suicide Ideation, Soldier, Impulsivity, Borderline Personal Disorder

INTRODUCTION

Identifying the risk factors in suicide attempt is one of the most important actions for implementation of suicide prevention program in the armies of the world. Suicide is accounted for as one of the most fundamental health problem throughout the world and approximately 900,000 individuals die of suicide worldwide[1]. World Health Organization (WHO) testifies to the fact that suicide has the greatest contribution in creating voluntary injury in the developed countries and the burden of diseases caused by suicide will augment in the next decades[2]. Suicide is the second cause of mortality in the U.S. armed forces and it is the main leading factor for death in the Russian army. The studies conducted by the American Psychological Society (APA) have exhibited that the suicide rate within the period of 1970 and 2002 has been %15.3 in every one hundred thousand individuals[3]. The results of mentioned study have shown that previous suicide attempt history, psychological disorders, access to lethal tools and medical problems are considered as the risk factors associated with committing suicide. Access to a weapon and opportunity to use it at a secluded location away from others are considered the most important risk factors among military forces [3]. According to a report from Iran's Legal Medicine Organization, the suicide rate in this country has been established at %5.7 for every one hundred thousand males and %3.1 for every one hundred thousand females [4]. There are not any evident statistical data for the armed forces' suicides in Iran, however, studies on suicidal behaviors are being performed. Suicidal behaviors refer to a range of behaviors for all of which the voluntary suicide attempt is the common element. Suicide ideation, suicide plan, and suicide attempt are considered the three important suicidal behaviors[2]. One of the strongest predictors is the suicide attempt. The studies have indicated that most suicides occur when individuals have the suicide ideations [5]. Psychological disorders, history of suicide in family, drug abuse, conflict with law, abrupt changes in health, and family's interferences are known as the risk factors for the suicidal ideations[6]. In the recent studies, the personality risk factors such as impulsivity and emotional callousness have also come into attention by researchers[7]. Personality disorders and especially cluster personality disorders of type B as a part of psychological disorders are known to be the risk factors in committing suicide [2]. It is estimated that more than 30% of individuals who die due to suicide, about 40% of

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those who attempt suicide and nearly 50% of psychiatric patients who lose their lives because of suicide suffer from the borderline personality disorder [2]. The borderline personality disorder is identified by the model of acute unstable interpersonal conflict, affective mood disorder, chronic emotional lability, and phobia from seclusion and exclusion [8]. The main structure in the borderline personality disorder which is associated with the suicidal behavior is the impulsivity. The impulsivity includes a wide range of heterogeneous implications which are discussed under the name of impulsivity. Instances of such implications include obsession for excitement, inclination for danger, temerity, modernity, adventurism, distrust, insubordination, and susceptibility to tedium [9]. The impulsivity and aggressiveness, as the two main personality attributes, are found in a significant manner among those individuals who have a previous history of attempting suicide as opposed to those without any prior background for such an act. Generally, the borderline personality disorder and the impulsivity/aggressiveness are the strong predictors of suicidal ideation [8]. Founded upon the existing studies, impulsive individuals have a greater tendency towards provocative, agonizing events and this condition leads to their accustomization to fear and pain which, in turn, ultimately creates a capacity for involvement in the suicidal behaviors [10]. An individual's coping style against stressful situations is another element that could have an association with psychological depressions. Coping is said to be those attempts which a person implements for changing stressful situations or situations that are regarded as painful from his or her standpoint [11]. Altogether, the coping styles are divided into two categories: Problem Focused Style and Emotion Focused Style [12]. In the problem focused style, the individual works on stressful situations directly and by using this method he or she lessens the painful effects, which are caused by the situations, upon themselves. Manipulating problematic situation, identifying ways to overcome the problem, and searching for public support are examples of attempts in the problem focused style. In contrast, in the emotion focused style, the individual is in pursuit of adjusting emotional responses to stressful situations [12]. In the emotion focused style, the person seeks to reduce the emotional effects of the stressful events by utilizing indolence, consumption of alcohol and narcotics, and social activities and/or defensive mechanisms [11]. The studies have indicated that the emotional focused style, which is known through denial and avoidance in confronting problems, has a negative relationship with psychological well-being and, in contrast, the problem focused style, through which the person actively encounters the problem, has a positive connection with the psychological health [13]. Studies have shown that utilizing the problem focused style has a negative relationship with the suicidal ideation and certain psychological ailments such as emotional exhaustion and psychophysical disorders [11]. Some researchers believe that the suicidal behaviors may be a pattern of coping with emotional disorders and this matter is more frequently observed among youth. The studies have exhibited that those youth who suffer from the symptoms of depression and the behavioral disorders tend to make use of the emotional focused style [14] (Teresa Kinchner *et al.*, 2011). A study conducted by Ander in 2006 has shown that Deliberate Self Harm (Deliberate Self-inflicted Injury) and the suicide ideation are observed among individuals who utilize the emotional focused style more repeatedly. Based on the aforementioned discussion and by considering the theoretical principles of this theory that the borderline personality disorder, impulsivity, and emotional focused style have a relationship with the suicidal behaviors, the main objective of the present research is to present a structural model of the relationships between the borderline personality disorder, the emotional focused style, and impulsivity and the suicidal ideation among soldiers.

MATERIALS AND METHODS

This is a correlative study and its statistical population embodies all the soldiers serving one of the military forces corps of the Islamic Republic of Iran in the year (since 2010 to 2011). For the purpose of selecting the samples, a total of 1,659 individuals with the minimum education of the third grade of junior high school were chosen randomly.

The tools utilized in this study included: Beck Suicide Scale Ideation (BSSI), a 19-part, self-test sheet, which is prepared for the purpose of revealing and measuring the magnitude of tendencies, behaviors, and also planning for committing suicide. The questions of this particular test at this scale examine typical cases of death wish, tendency to commit suicide in active and inactive forms, duration and frequency of suicidal ideation, feeling of self-control, and preparation level of an individual to commit suicide. Beck Suicide Scale Ideation questionnaire has 19 multiple-choice questions (3 items per each question) which have been calibrated on principles of degree point ranging from 0-2. The total grade point for an individual is computed on the basis of summation of points earned which may vary from 0 to 38. The reliability of this scale has been reported with 0.95 **Cronbach's alpha** method [15]. In this study, the Urgency lack of premeditation lack of perseverance (UPPS) scale has been used. This scale is comprised of four factors of Urgency, Lack of Premeditation, Lack of Perseverance, and Sensation Seeking. It has an extensive application with respect to testing impulsivity [16]. The Millon Clinical Multiaxial Inventory (MCMI-III) is a self-testing scale with 175 yes/no answers which has twenty eight different scales including fourteen personality clinical models, ten clinical targets, and four modification scales. This test has been structured based on Millon's pathological model. The calculated **Cronbach's alpha** coefficients for this questionnaire have been reported from 0.67 up to 0.89. Although, the correlative coefficients have been reported at time intervals of 5 to 14 days from 0.88 to 0.93 through the test-retest method [17]. Coping Style Questionnaire (CSQ): This questionnaire contains 60 questions along with four subscales exhibiting an individual's tendency to utilize the coping styles and it has been created by Roger,

Jarvis, and Najjarian. The grading method of this scale was done by **Likert** Scaling method. The **Cronbach's alpha** coefficients for the mentioned questionnaire's subscales have been reported from 0.69 up to 0.80 [18]. To analyze the data Lisrel and SPSS (+Amos) software's were used. The analysis of the data was performed on two levels of descriptive and analytic. In the descriptive statistics section, frequency index, percentage, mean, and standard deviation (SD) and coefficient of correlation have been used. Using Lisrel Correlative Matrix of variants, Beta coefficients, and General-Fix Index(GFI) and Comparative-Fix Index(CFI) were computed to confirm the theoretical model.

FINDINGS

From the total 1,659 soldiers, 36.6% had high school diploma, 27.4% had junior high school education, 16.8% had college diploma, 9.8% had senior high school education, and 9.5% had university bachelor degrees. The mean age of the group under the study was 22 with a Standard Deviation (SD) of about 2.7 %. 87% of the individuals in the experiment group were single whereas 12% were married. 4% of the individuals reported the consumption of the substance and hallucinogenic drugs during the period when this research was being conducted. The prevalence level for the suicidal ideation in the participants of this research was 10.9% and the level for the suicide attempt was 5.7% (Table 2). Although, findings demonstrated that the suicidal ideation had a significant positive correlative relationship with the borderline personality disorder, the impulsivity, and the emotionally focused coping style. This obvious correlative relationship is indicates that the more there are the characteristics of the borderline personality disorder, the impulsivity, and also the emotionally focused coping style in an individual, the higher is the level of the suicidal ideation in him or her (Table 3). The variants direct and indirect impact coefficients upon the suicidal ideation has beenreported in tables 4 and 5. The maximum likelihood indexes of the model are at suitable levels and they indicate that this pattern has a very suitable likelihood with respect to the theoretical data (Table 6), in other words, the emotion focused coping style and the impulsivity play the intermediary role between the borderline personality disorder and the suicidal ideation.

Table 1: The socio -demographic data of the subjects(N=1,659)

Variables	Classes	Frequency	(%)
Education	Junior H.S	455	27.4
	Senior H.S	162	9.8
	H.S Diploma	607	36.6
	College Diploma	278	16.8
	Bachelor Degree	157	9.5
Age(in years)	19-23	1170	70.5
	24 -28	489	29.5
Marital Status	Single	1444	87
	Married	198	11.9
	Divorced	17	.01

Table 2: The prevalence level of the suicidal behaviors among subjects(N=1,659)

Variant	Level	Frequency	Percentage
Suicidal Ideation	Has suicidal ideation	181	10.9
	Has no suicidal ideation	1376	82.9
	missing	102	6.1
	Total	1659	100
Previous History of Suicide	Has previous suicide history	95	5.7
	Has no prior suicide history	1534	92.5
	Abstained from answering	30	1.8
	Total	1659	100

Table 3: The coefficient of correlation between the suicide ideation and the borderline personality disorder, the impulsivity, and the emotion focused style

Variants	1	2	3	4
1. Borderline personality	1			
2. Impulsivity	**0.13	1		
3. Emotion focused	0.02	**0.39	1	
4. Suicide ideation	**0.42	**0.11	*0.06	1

**p<0.01

*p<0.05

For the purpose of analyzing the data on the basis of pattern analysis, correlation matrix was utilized as the entry data. After checking the multivariate normal assumption we used Maximum Likelihood (ML) to fits theoretical model.

Table 4: The structural patterns' coefficients (direct impacts) in the pattern produced from the data

Structural patterns	Indirect Effect	direct Effect	T	P
Borderline personality disorder on suicide ideation	0.18	0.45	17.33	0.001
Borderline personality disorder on emotion focused style	0.46	0.20	7.08	0.001
Emotion focused on impulsivity	0.52	0.36	13.28	0.001
Impulsivity on suicide ideation	0.01	0.08	2.87	0.01

As it is being observed all the direct patterns are significant and since one of the objectives of pattern analysis is to present the level of indirect impact by the independent variants (extrinsic variants) upon the dependant variants (intrinsic variants), therefore the indirect impact of the independent against the dependant variants were studied (Table 5).

Table 5: The indirect impacts of the existing variants in the model

Structural patterns	Indirect impact
Impact of borderline personality disorder upon suicide ideation by emotion focused style and impulsivity	0.005
Impact of emotion focused style upon suicide ideation by impulsivity	0.02

Figure1. The diagram for the model of impact pattern analysis for the borderline personality disorder upon the suicide ideation, the emotion focused style and the impulsivity

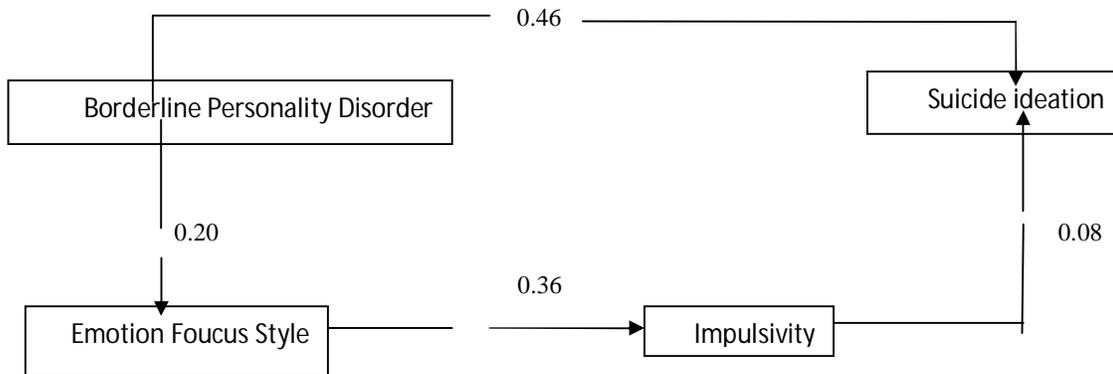


Table 6: Overall Fit Indices of model's of the Hypothesized Structural Model

ECVI	GFI	AGFI	CFI	RMSEA	χ^2/df	df	χ^2
0.01	0.99	0.98	0.99	0.049	3.73	2	7.46

- Comparative fit index (CFI)
- Root (ECVI)
- Mean-square error of approximation (RMSEA)
- Goodness of fit index(GFI)
- Adjusted Goodness' of fit Index(AGFI)

The indexes of the model's absolute fit index are good: The second χ^2 are not significant and also the values of GFI and AGFI and the model's comparative-fit indexes are appropriate. CFI is an indicator of the model's fitness with respect to the independence model and, moreover, the indexes of RMSEA and χ^2/df are indicative of the model being adequate. The ECVI index has shown that the validity of the model is amply sufficiently good.

DISCUSSION

Lack of anger control, behavior's fluctuations, and turbulent interpersonal relationships along with life's threatening behaviors create suitable grounds for the occurrence of the suicidal behavior. All these characteristics have been accumulated in the borderline personality disorder. Previous Studies have exhibited that this disorders had been existed in 57% of the suicide victims [19]. As we seen in the results there is a significant correlation between the prevalence of suicide ideation and the characteristics of the borderline personality disorder. It means that those individuals who have reported the suicide ideation, in comparison to those who lack it, possess a greater number of characteristics relating to the borderline personality disorder and they benefit from more criteria in diagnosing this disorder. The findings of this research are in concurrence with the studies' of John Mann, 2003, [20] Shirley et al. [21]2009, and Paul W C Wong et al, 2008[22]. In explaining the causes for committing suicide among the individuals afflicted with the borderline personality disorder, several points have been mentioned. First,

the borderline personality disorder has a relationship with the intensity of negative emotions. Individuals suffering from the borderline personality disorder seek out an escape route from agonizing emotions. This group of people may use different methods such as drug abuse and self harm to minimize their psychological pains. Repetitive self harm and drug abuse are both considered the risk factors in committing suicide. The other explanation for the reasons of suicidal tendencies among individuals who are stricken with the borderline personality disorder is the element of impulsivity. Impulsive individuals have a tendency to perform a task without thinking about the consequences of such task. This problem heightens the suicide risk among these people. Additionally, another explanation regarding the relationship between the suicidal tendencies and the borderline personality disorder recurs to drug abuse among this group of individuals. It is because the studies have shown that drug abuse and the borderline personality disorder are two forms of psychological problems which are usually observed jointly in a person [23]. On the other hand, the substance abuse, the borderline personality disorder and the impulsivity are accompanied with an increase of the suicide risk. Additionally, individuals afflicted with the borderline personality disorder may carry the experience of losing friends', family's support, or professional aide and/or they may refrain from establishing sincere bonds with other individuals because of the fear of instability in their own lives. This behavior leads to social exclusion and isolation which itself is accounted for as an important risk factor for a completesuicide[22]. In this study, the emotion focused style also underwent scrutiny as another variant which is related to the borderline personality disorder and the impulsivity. Founded upon the findings of this study, the emotion focused coping style indirectly influences the suicide ideation via impacting the impulsivity. Certain researches believe that emotional disarrays are the main core of the borderline personality disorder. Inability in maintaining positive emotions and experiencing continuous psychosis are the characteristics of patients with the borderline personality disorder. It is because of such reason that individuals who have the borderline personality disorder make use of the emotionally regulated mechanisms. The emotionally regulated mechanisms of persons stricken with the borderline personality disorder are derived from certain patterns of the emotion focused style. Evading unsuitable situations, creating emotions in other people, partaking emotional roles such as feeling proud, sinful, and embarrassed are a dimension of these types of behaviors. Another personality characteristic which underwent an investigation was the impulsivity. The findings of this research have indicated that the impulsivity has an effect on the suicide ideation. The findings of this research collaborate with those of [10,24,25]. Researchers have reported that suicidal individuals, as opposed to non-suicidal ones, have shown higher levels of the impulsivity both in laboratory evaluations and self-reporting scaling. The relationship between the impulsivity and the suicidal tendency is not a direct connection; rather, the impulsivity has a role in producing a suicidal capacity indirectly. Impulsive individuals experience a great many number of provocative, afflictive events and this manner of behavior makes them prone to suicidal tendencies [10]. In expounding the role of impulsivity with respect to the suicidal tendency, the recent studies have pointed to several cases. One of these cases is the association of serotonin with the impulsivity. Serotonin is a carrier whose level in both depression and the impulsivity is low-based on this fact it is possible that the impulsivity is fundamentally a biological factor making a person susceptible to the suicide tendency [10]. Another explanation regarding the role of impulsivity in suicide is that the impulsivity is a breeding ground for hostile acts, drug abuse, anger, and self harm (self-infliction of injury) and via this manner augmenting the possibility of committing suicide in a person [26]. Investigations have exhibited that impulsive individuals make use of the emotion focused measures in coping with the environmental stresses [27]. Instead of confronting their problems, these individuals resort to imagination, perverse behavior, denial, and illicit drug abuse. The impulsivity and the emotional disarrays are perceived as the foundations for the borderline personality disorder and the emotion focused coping style, which is also affected by the borderline personality disorder, is too influences both of the previously mentioned variants. The final outcomes of these variants have a conspicuous role in creation and continuation of psychological sufferings; and a suitable ground for exhibiting the suicidal tendencies behavior.

Conclusion

The findings of this study have demonstrated that a group of the suicidal behaviors' factors alongside the individualistic, social, familial, and organizational factors are related to a person's individualistic characteristics, personality disorders, and coping styles. Therefore, it is suggested that soldiers, who work with weapons and ammunition, to be psychologically evaluated prior to working with such items in case of the existing possibilities for being stricken with personality disorders, particularly, cluster personality disorder type B, and also the impulsivity and coping styles so that through restricting access to the weapons by them, the possibility of attempt to suicide among the military units would be minimized.

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