

## Family structure and personality traits in suicidal attempters: comparison between user and non- user of mental health services

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### Abstract

Different factors such as family and personality are related to suicidal attempt which play as protective role and risk factors. The present study aimed to investigate the differences between personality traits and family functions of suicide attempters who used and didn't use mental health services. In this cross sectional case (non-user)-control (user) study, 100 suicide attempters (36 male and 64 female) in the age range of 18 to 60 years who had at least once referred to the Poison Center, were selected by convenience sampling that were evaluated by using the NEO-Five factor inventory, family assessment device and barriers for using of health services inventory. Independent t-test and chi square were used to analyze the data. Results showed that in the 5 data collection period 43% of the suicidal patients didn't referred to psychiatrist or psychologist before suicidal attempt and 57% have used professional services. Although there were no significant differences between two groups in demographic factors but personality traits and family structure is different between the two groups.. Patients who didn't meet psychiatrist were more introvert and neurotic; also, they had a pathologic family structure in communication, roles, affective involvement and overall family function. In order to make more use of mental health services, it should be focused on training and treatment plans about importance of emotion and appropriate emotional response for families with psychological and psychiatric patients.

**Keywords:** Family, Mental health services, Personality, Suicide

### Introduction

The World Health Organization estimates that one million people die due to suicide per year and suicide is one of the main death factors for people between 15 to 44 years old. The WHO also estimates that failed suicide attempting is 20 times in comparison of those suicide attempting which lead to death and on average

in every 3 seconds one suicide attempting happens while one person dies due to suicide attempting in every 40 seconds [1,2].

Attempted suicide in adolescence is predictive attempt at later ages. Most studies focused on complete suicide cases rather than suicide attempters being more at the risk of

suicide. However, studies have shown that the use of mental health services in the youth attempting suicide is low [3,4]. Some of the studies have shown that over 90% of young adults and teenagers who committed suicide had at least one diagnosable mental disorder at the time of death and the mental disorder has not been diagnosed and untreated for the most of them [5-8]. There are effective treatments and services available to help these people but large groups of them can't use these services due to barriers of using mental health services. Financial concerns and social stigma associated with mental health services that are the most common barriers which lead to failure of the services or premature termination of therapy [9]. Arria and his colleagues' study showed that 44% of 94 individuals, who had history of suicidal ideation, did not intend to be treated and ambiguity in needed treatment, uncertainty about the effectiveness of treatment, stigma and financial concerns were barriers to seek treatment. However, the most common sources of assistance were families (65%), friends (54%), psychiatrists (34%) and psychologists (33%) among those who had sought treatment [10]. Downs and Eisenberg's findings revealed that factors such as perception of needs, belief in effective of treatment, communication with service users, personal stigma and sexual minorities are included in affective mental health services [11].

Ghanizadeh and his colleagues' finding indicated that although the barriers related to mental health services included the conceptions lack of trust and family/friends perception but the most common barriers to the use of mental health services were costs and poor access to the services [12].

Vogel and Wester conceptualized the relationship between personality traits, stigma and attitudes toward seeking counseling services in a model. According to this model, personality traits play moderator role in attitudes toward seeking counseling services [13]. It should be noted that personality played important role in conceptualizing patients' suicidal attempts, some research such as Shakeri, Parvizifard,

Sadeghi and Moradi in 2005 reported that neuroticism and extraversion had influence on suicidal attempts [14]. Along with this research Sharif et al, in 2014 found that there was significantly difference in five dimensions of personality between suicidal and non-suicidal patients [15]. When people see the signs of mental illness in themselves or their circumstances arise that they require psychological help and treatment, fear of stigma makes the individuals consider the treatment worthless and futile; therefore, they will be reluctant towards paying for mental health services, finding the services inaccessible, etc. Generally, the fear of stigma would increase the mental health service barriers in society's levels [16]. In fact, individuals' perceptions on mental health services build these barriers and no studies have been done to explain lack of use of mental health services or simply for personal reasons. According to the previous researches, it seems that different parts of the person and environments are necessary in getting professional helps so the goal of the present study is to investigate the differences between personality traits and family function of suicide attempters who used and didn't use mental health services.

### **Method**

In this case (non-user of mental health) - control (user of mental health service) study which research was done in Poison Center of hospital setting in Ali Asghar [PBUH] Hospital affiliated to Shiraz University of Medical Sciences (SUMS). The patients who attempt suicide with poison or drug are referred to this center. 100 cases of suicide attempters (36 male and 64 female) were studied between months of January to the end of May in 2013 who had inclusion criteria, such as willingness to participate in the study and age between 18-60 years old were selected by convenience sampling method who had inclusion criteria 1) age between 18-60 years old; 2) didn't have major psychiatric problems such as schizophrenia, 3) didn't have any medical condition with poor prognosis and

4) medically being stable. They filled out the questionnaires; NEO Personality inventory (NEO-FFI), Family Assessment Device (FAD), and Barriers for Using of Health Services inventory. Suicidal attempts patients were divided into two groups according to if they use mental health services or not. The present study procedure was approved ethically by the ethics committee of SUMS's research vice-chancellor and all the participants signed the agreement of participation in the project and were reassured that the data were confidential, it was not necessary to write their names, they could give up the research anytime.

NEO Five Factor Inventory (NEO-FFI): This 60 items inventory evaluates five main personality dimensions in five point Likert scale (from 0 to 4). These dimensions include neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness, each dimensions consist of 12 items so the expected score range is between 0 to 48 [17]. The test has acceptable psychometric characteristics in Farsi Language previous study reported the test internal consistency 0.68 to 0.86; and also, Cronbach's alpha 0.86 to 0.92 [15].

Family Assessment Device (FAD): This 60 items inventory was designed by Epstein, Baldwin and Bishop based on McMaster model in 1983 which measures the family function. The scale evaluates aspects of family structure such as problem solving, communication, roles, affective responsiveness, affective involvement, behavior control and general family function, and the participants answer it in 4 point Likert scale in which the higher the score on a subscale, the greater the pathology. This scale was used in different studies in Iran and had acceptable reliability (internal consistency 0.72 to 0.92) and validity in Farsi Language [18].

Barriers for Using of Health Services inventory: This inventory was designed by Ghanizadeh and his colleagues which measure the barrier in using mental health services based on previous studies in Iranian culture. Test- retest validity reached 0.85. This inventory includes 4 items: Do the people look for a help to solve the

mental health or they think mental disorder symptoms during a recent months? Do the people have any mental health problem or they think they have mental disorder symptom during recent months and didn't look for help? What barriers have they used in using mental health services? The answer to the last question requires checking 15 potential barriers to use the services. These barriers include 6 logistic barriers, 2 barriers related to people's perception of health service and 7 barriers related to mental health services. The answers were in two diminutions zero represented no barriers and one represented the existing barriers [12].

SPSS-19 was used to analyze the data. Kolmogorov-Smirnov test was used to investigate the normal data condition. Chi square and independent sample t-test was performed to compare the dependent variables between groups after approving the group sample being in the normal distribution.

## Results

The present study was done on 100 suicide attempters who were referring to the hospital that participants were divided into 2 groups. One used mental health services (user), since 6 months before suicidal attempt which was equal to 57% with mean age of  $23.47 \pm 0.91$  and the other one didn't use these services (non user). About 43% with mean age of  $26.48 \pm 1.5$  besides other demographic factors didn't show any significant differences. Table 1 demonstrates these demographic factors in two groups also the last column of the table present odd ratio (OR) for risk estimation of demographic factors, accordingly, living in rent home (OR:1.2) and being female (OR:1.3) had higher risk rather than marital status (OR:0.7).

So, according to demographic factors the groups were matched,  $\chi^2$  (chi square) is not significant so the demographic factor distributions weren't significant. Differences of these groups in personality, family function were calculated at the rest of the results.

Independent sample t-test showed that there

**Table1** Frequency of demographic factors and odd ratio

Variables	Group	Used Mental health services	Not Used Mental health services	Total	OR <sup>a</sup>
Gender	Female	38(66.7%)	26(60.5%)	64(64%)	1.308
	Male	19(33.3%)	17(39.5%)	36(36%)	
Marital status	Single	34(59.6%)	29(67.4%)	63(63%)	0.714
	Married	23(40.4%)	14(32.4%)	37(37%)	
Type of residential place	Rent	21(36.8%)	14(32.6%)	35(35%)	1.208
	Private	36(63.2%)	29(64.4%)	65(65%)	

OR<sup>a</sup>: Odd Ratio for risk estimation of suicidal attempt

**Table 2** Comparison of personality traits and family functions between groups

Variables	Groups	Mean	Standard deviation	t- value	Sig
Neuroticism	User	40.89	6.61	2.72	0.008**
	Non user	44.76	7.31		
Extroversion	User	38.75	6.13	-1.87	0.05*
	Non user	36.20	7.13		
Openness to experience	User	37.89	4.39	0.03	0.970
	Non user	37.93	4.82		
Agreeableness	User	39.94	4.95	0.64	0.521
	Non user	40.60	5.11		
Conscientiousness	User	45.16	8.76	-1.49	0.138
	Non user	42.62	8.03		
Problem Solving	User	13.40	2.63	0.59	0.556
	Non user	13.86	4.52		
Communication	User	15.92	3.93	2.49	0.01**
	Non user	17.76	3.42		
Roles	User	22.36	3.14	2.30	0.02**
	Non user	24.18	4.38		
Affective Responsiveness	User	17.54	5.45	1.71	0.089
	Non user	19.09	3.55		
Affective Involvement	User	19.96	4.09	2.22	0.02**
	Non user	21.72	3.75		
Behavior Control	User	21.75	3.82	1.68	0.095
	Non user	22.88	2.88		
General family Function	User	28.24	5.20	2.27	0.02**
	Non user	30.76	5.68		

\*p<0.05

\*\*p<0.01

were significant differences between two groups in neuroticism and extroversion; the patients who did not use mental health services had higher mean in neuroticism and lower mean in extroversion as comparison of other group. Moreover, in FAD subscales the results indicated that non-user group had higher mean significantly in communication, role, affective

involvement and general family function as compared to the other group. Table 2 represents the comparison of means in the two groups.

### Discussion

The present study aimed to compare the family structure and personality traits in suicidal

patients who met mental health services and who didn't use this service; in other words, the present study, according to Ghanizadeh [12], accept that some barriers exist in using mental health services and want to estimate if there are any familial and personality differences in using mental health services among patients who attempting suicide and referring to AliAsghar Hospital. The results showed that in 5 months period of data gathering, 43% of suicidal patients didn't meet psychiatrist or psychologist before suicidal attempt compared to 57% who used special helps. Although there were no significant differences between groups in demographic factors, personality traits and family structures showed significant differences in some subscales. Patients who didn't meet psychiatrist were more introvert and neurotic.

This finding is in the same line with Miller's research that evaluates the role of personality in relationship between self-stigma and attitude toward counseling. He came to the conclusion that neuroticism and extraversion play moderator role between personal and social stigma but generally personality does not play moderator role between self-stigma and attitude towards counseling[19]. Also, the results are consistent with those of Brezo, Paris and Turecki's research which showed neuroticism, and extroversion hold the most promise in relation to risk screening suicidal behaviors[20]. Moreover, the finding confirms Chioqueta and Stiles's results, showing that suicide ideation was positively predicted by Neuroticism[21]. Also, similarly Beautrais, Joyce and Mulder's research showed that neuroticism has significant risk factor for serious suicidal attempt [22].

As to this finding, it can be said that Neuroticism is the opposite of emotional stability and it's a strong indication of experiencing negative emotions. Neurotic individuals experience a lot of emotions such as anxiety, depression, moodiness, worry, envy, and jealousy and it's related to a person's ability to tolerate stress. Individuals' tendency toward suicidal thoughts and behaviors would be increased when they

experience negative emotions and have poor ability to tolerate stress. Since the introvert people spend most of their time alone and have limited social interactions, they are more vulnerable to suicide.

Also the results showed that patients who didn't refer psychiatrist had pathologic family structure in communication, roles, affective involvement and general family function. These findings consistent with Perkins and Hartless's research which showed family cohesion is associated with suicide[23]and it is in the same line with Martin et al.'s results which showed that family dysfunction is associated with thinking and planning suicide and suicide attempts [24]. Likewise, Xiu-Ya Xing and his colleagues showed that stressful family life events were related with more reports of suicide attempting and the three factors of parents' inappropriate behavior, parents' divorce and social problems of family members played important role in increasing suicide risk [25]. Also, Jessica and her colleagues' research indicated that adolescents' report of family function had significant relationship with suicide criteria such as suicide though showed significantly all the family aspects in families with non-psychotic patients had better function than families with psychotic patients [26,27].

Family factors, such as family cohesion, family support and emotional support, direct and clear communication within the family, and healthy relationships between parents and children, help the individuals to grow in healthy relationships and learn safe and correct ways of expressing emotions and create pattern of efficient problem solving process which show fewer emotional and inefficient solutions like suicide in dealing with life conflicts and problems. It is worth mentioning that in healthy family, the roles are defined, the interactions are open and transparent, the emotions are not repressed and correctly expressed and the members are aware of each other's needs and problems. So, for this reason the individuals within a family use more effective strategies in dealing with problems.

## Conclusion

According to this study's findings, it is concluded that individuals with high neuroticism and introversion are more at risk so they need more attention from mental health professionals, also family function in affective involvement and communication should be considered important in supporting the suicidal patients.

Also the study recommended that although the patients who participated in suicidal attempts were the main part of professional intervention that family function is important, too. Social welfare organization and other related NGO must have especial plans to train the families or taking care of psychiatric patients to encourage them for completion treatment also improving of family function is as important as the previous interventions.

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## Contribution

Study design: AS, AM,ST,LA

Data collection and analysis: FE,LA, AM, FE, LA

Manuscript preparation: AM, AS, LA

## Conflict of interest

"The authors declare that they have no competing interests."

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