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THE RELATIONSHIP BETWEEN MENTAL HEALTH AND SELF-HARM BEHAVIORS AMONG MALE AND FEMALE STUDENTS

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ABSTRACT

The aim of current study is determination of relationship between mental health and self-harm behaviors among students of male and female in high schools. The community which has been studied among students of high schools was the students of first district, which the 300 students have been chosen as a sample through random cluster (150 girls and 150 boys) and have been tested. The used instruments in this study are the questionnaire of self-harm behaviors (Glenn and Klvvnsky, 2009) and the questionnaire of mental health GHQ (Goldberg and Hiller 1979). The results of correlation between two variables and multiple regression have been showed through step by step method. According to the results, increase of depression and impairment in physical symptoms leads to increase of self-harm behaviors. On the basis of that, we can conclude that, when the students are more depressed, they tend to do the harmful behaviors more and the ones who has impairment in their physical symptoms, shows more harmful behaviors. There is a positive relationship between mental health and self-harm behaviors. This means that lack of mental health effects the self-harm behaviors and will cause the self- harm behaviors.

Keywords: Self-Harm Behaviors, Mental Health, Depression, Impairment of Physical Symptoms

INTRODUCTION

One of the most serious general health is self-harm behavior. In another explanation, the amount of self-harm behaviors are known as one of the most important indicators of mental health for people of the community (**Conner and colleagues, 2001**). Personality characteristics, mental traumas and negative life's events in terms of theoretical and research are related to the self-harm behaviors (**Brown and colleagues, 2002; Yen and colleagues 2005**). The various researches show that personality disorder is one of the most important indicators of these behaviors (**Richard and colleagues, 2005**). Affective disorders (one polar and bipolar depression), schizophrenia and related disorders accompanied with using drugs are the most important related mental disorders with self-harm behaviors (**Faweett and Scheftner 1990, Brent 1995**).

World Health Organization, known the mental health as a state of prosperity, in which everyone sees himself as an able and talented person and they can cope with the normal stress of their life, work as a useful and successful person and actively involved in the community. The conducted research in recent years, expressed the existence of mental disorders in different levels of students. The students visit consultants more, which means the mental, social and educational problems have been increased. There are several factors that may have a positive impact on mental health.

Although the intentional self-harm behaviors, is one of the common symptom of borderline disorder, but these behaviors are not specific of this disorder. Therefore, self-harm behaviors are known as a specific behavioral phenomenon (**Klonsky & Oltmanns & Turkheimer 2003**). Self-harm behavior refers to intentional physical, purposeful and unacceptable social harms which are done without suicidal. (**Klonsky, 2007; Walsh, Walsh 2006**). In addition, known as a self-harm behavior with the aim of suicidal (**Nack 2009**). The unusual and disturbing behaviors exist in all cultures and different levels of economic and social and most of the people cannot understand it (**Lieberman, 2006**). Although the self-harm behavior without aim of suicidal can be done at any ages, but usually it appears at age of adolescence and at this age of evolution will appear. Therefore, it is known as a major concern for adults who work with children and young people, especially personnel of school. School is the first place where the children and adolescents who suffered from self-harm behaviors will be entered, therefore, it is often an

environment which begins the most effective responses **(Niksoon, 2009)**.

The **World Health Organization (2004)** defined the mental health as a state of well-being in which the individuals recognize their abilities, and use them effectively and productively and is useful for their community. Generally, mental hygiene is creating mental health through prevention of mental illness, control the factors of its expression, early detection, prevention of reversal of mental illness and creating a healthy environment to provide right human relations. Having a mental health is not a spontaneous and involuntary phenomenon, rather it needs a conscious effort and investment. The human's psychology began to form in a certain hereditary from childhood and is the best time to train and improve mental health. The community's health is dependent to the people's health of that community. The healthy body without healthy mind and the right behavior and relation does not lead to increase the health of the community. Having attention to the principal of configuration and social learning in forming human's behaviors and providing accurate patterns in the levels of family and community is very important. The importance of parenting, education of children and raising them in a healthy and safe environment in

aspects of mentally and emotionally and the impact of this era in overall health of them in adulthood is very obvious **(Ms Key, Shelder, 2006)**.

Most of the conducted researches up to date, have been defined the self-harm behavior as beatings, intentional poisoning, overdose of drug and jumping from height **(Deleo and Heller, 2004)**. According to the different definitions of disorder, the various reports of prevalence have been presented. For example, the recent study of **Heath and colleagues (2009)**, shows that the amount of prevalence is surprisingly high. Means 47 % in sample of adolescents' community. With respect to the necessity of using mental health, especially in adolescence, and as self-harm behaviors can be prevented, and with respect to the necessity of providing mental health to prevent further harms of adolescents the necessity of using this research will appear. As there is a few researches in Iran regarding self-harm behaviors and relevant factors, and the conducted researches in this field have been mainly limited to the Western countries and more encompasses suicides rather than self-harm behaviors. Attempting to access to information in this way can be an important strategy for health centers and schools, and giving useful information to those who deals with adolescents.

Because the research studies in field of self-harm behavior is fairly new, there exists a wide variety and slight proportionality in methodology. For example, in samples of community, the amount of prevalence in self-harm behaviors has been reported at least less than 4 percent (**Berier and Gil, 1998**) and at most 47 percent (**Lioyd Richardson and colleagues, 2007**) but in clinical samples, the prevalence of that is higher (**Nack and Prinstin, 2004**). When examining the amount of prevalence of self-harm behaviors, minimum from 4 percent (**Berier and Gil, 1998**) and maximum till 47 percent (**Lioyd Richardson, 2007**). When examining the amount of self-harm behaviors' prevalence, some related variables of methodology will be considered, including defining issues, measurement, surveys and sampling (**Heath, 2009**). Two main behavioral disorders which strongly are related to the self-harm behaviors are stereotype and aggressive behaviors (**Rojhan 1994**). In addition to this, the researches show that the self-harm behaviors can be seen in some psychiatry illnesses such as pervasive developmental disorder, conduct disorder, adjustment disorder, Schizophrenia and personality disorder (**Rojhan, 1994**). In some compulsory and dignified environments due to many requests, the self-harm behaviors will increase in order to escape from these demands. Similarly, in environments with less personnel and caregivers of disabled children, they might behave like that due to exclusion of greater attention.

Individual features can be considered as an important variable. It has been observed that the telecommunication capabilities of those who have self-harm behaviors have obvious defects (**Dalldorf, Smith, Schroeder, 1978**), also the adaptive behaviors in these people are limited (**Murphy and colleagues, 1993**). On the other hand, when the number of similar behaviors of self-harm behaviors are increased, these behaviors will be seen less (**Karr and Durand, 1985**). Some transients may affect the provoking of self-harm behaviors. **Taylor and colleagues (1994)** have presented various reports which indicates the relation between self-harm behaviors and menstrual cycle which is a factor of depression. Therefore, more researches have to be done to examine the interaction of these variables, in order to help the cyclical fluctuations in self-harm behaviors. The self-harm behaviors often will be mentioned as a behavior from one group or a group of peers which are enforced in a similar situation and with the same factors. The reaction of a person depends on the benefits which will be achieved from the behavior. But the self-harm behaviors in

compare with other behaviors have a higher efficiency.

The deliberate self-harm behaviors in clinical and non-clinical environments have a high prevalence. The prevalence of this disorder has been reported in psychiatry students patients from 17 to 43 % (**Feldman, 1998; Heath and colleagues, 2009**). The results of various researches have achieved the different prevalent rates for this disorder; for example, in some examples of the community, the amount of self-harm behaviors' prevalence has been reported less than 4 percent (**Berier and Gil, 1998)** and maximum up to 47 percent (**Lioyd Richardson and colleagues, 2007**). **Heath (2009)** has believed that these differences is related to some methodological variables such as: issues related to the definition, measurement, surveys and sampling, two of the most can be noted:

Due to the different definitions of disorder, the various reports of prevalence have been presented. For example, the studies of **Heath and colleagues (2009)**, show that the amount of prevalence is 47 percent in one sample of adolescent community. On the other hand, when the behavior was limited to cutting, splitting, burning, tattoos, scratching and scraping the skin (for example, with using a cutting tool to abrade the skin to reach the point of bleeding or irritation), during the 12

months the rate of prevalence has been decreased to 28 percent (**Lioyd Richardson and colleagues, 2007)**.

Therefore, with respect to the necessity of using mental health, especially in adolescence, and since the self-harm behaviors can be prevented and due to the necessity of providing mental health to prevent further damages for the adolescents, the necessity of using this research will appear, as there is a few researches in Iran regarding self-harm behaviors and relevant factors, and the conducted researches in this field have been mainly limited to the Western countries and more encompasses suicides rather than self-harm behaviors; Attempting to access to information in this way can be an important strategy for health centers and schools, and giving useful information to those who deals with adolescents. And the importance and necessity of this research can be seen and the question arises whether the mental health among adolescents are affected by self-harm behaviors?

METHODOLOGY

The mentioned research is descriptive correlation study, which describes the phenomenon that have been studied. The aim of this study was to determine the relationship between mental health and self-harm behaviors which are among correlation

researches. Also in this research on the basis of the mental health variable has been predicted the self-harm behaviors.

The considered statistical population includes male and female students in second and third grade in high schools of 1st district in 2013, 300 students of that strict have been chosen as a sample through random cluster sampling. At first through random cluster sampling among the 6 girls and boys of high schools, 3 girls high school and 3 boys high schools have been chosen and among students of each school 50 students from 2nd grade till pre-university level have been answered to the questionnaires.

- Research Tools
- The self-harm behaviors assessment questionnaire (ISAS)

This questionnaire which have been provided by **Klonsky and Glenn (2009)**, is a self-report tool that have been assessed the abundance of non-suicidal harm behaviors. This questionnaire has two sections. The first section of the questionnaire screens the 12 different kinds of deliberate (intentional) non-suicidal self-harm behaviors such as banging / hitting, biting, burning, carving, cutting, interfering with wound healing, pinching, pulling hair, rubbing skin against rough surfaces, severe scratching, sticking self with needles, swallowing dangerous chemicals. In addition, the questionnaire assessed some non suicidal descriptive features such as: the date of first and most recent of attempt of self-harm behavior **(Klonsky, 2008)**. The second section assessed the performance of non-suicidal self-harm behaviors. This section assessed 13 performances of self-harm behaviors which have been approved in terms of experimental and theoretical studies **(Klonsky, 2007)**. The below 13 performances have been sorted by two factors: Intrapersonal performances (emotional regulation, anti fragmentation, anti suicide, show their distress and self punitive) and interpersonal performances (independence, privacy of the individual, interpersonal influences, peer affiliation, revenge, self-care, seeking sensation and tenacity). The options have been developed in the form of three-options Likert which have been sorted from 0 completely unrelated), 1 (somewhat related) and 2 (fully related). Therefore, each of the subscales have been scored from 0 to 6. Also, the average of overall scales will be obtained from the sum of subscales scores divided by their number **(Klonsky and Glenn, 2009)**. In the recent research the reliability of above questionnaire has been measured by Cronbach's Alpha test and according to the obtained result, the value of standardized alpha is 0/943 which 39 items of that is

related to the assessing questionnaire of self-harm behaviors (ISAS) and has a high reliability and sense of inner harmony to measure this indicator.

- ▪ Mental / General Health Questionnaire GHQ

This questionnaire has 28 questions which investigates the metal status of every one in recent month which includes symptoms such as abnormal thoughts and feelings and some aspects of observable behaviors. The General Health Questionnaire (GHQ) has four scales such as physical symptoms, anxiety, disorder in social functions and depression. The question of mentioned questionnaire have 4 options and the scores are from 0 to 3. The cutting point of 23 was considered to determine the people who have problems. Questionnaire of GHQ has been provided by Goldberg and Hiller (1979). In the existing research the reliability of above questionnaire have been tested by Cronbach's Alpha, and according to the result the amount of standardized Alpha is about 0/88 that the 29 items which is related to the General Health Questionnaire (GHQ) have a high reliability and a sense of inner harmony to measure this scale.

RESULTS

The **Table 1** shows the correlation between self-harm behaviors with subscales of mental health. In this phase of research we have used the correlation test of Pearson in order to show the relation between independent and dependent research variables in a correlation matrix.

As you can see in the **Table 1** in (P<0/01) and (P<0/05) with two domain test between harmful behavior scale and subscales of mental health; there is a direct relationship between all subscales of mental health with self-harm behaviors.

In the next phase, we assess to explain the amount of each subscale of mental health on self-harm behaviors. To determine the amount of explained variance, the variable of harmful behaviors have been used through subscales of mental health via multivariable Regression's method. In this hypothesis, the variable of harmful behaviors is intended as a criterion variable (dependent) and subscales of mental health variable as a prediction variable (independent). After the analysis is done, the multiple regression with method of step by step among 4 subscales of mental health, only 2 subscales (depression and physical symptoms) of the default criterion (P<0/05) for being included in the model were entitled. The results of the analysis of variance and regression statistical characteristics, the intensity scale of harmful

behaviors based on the weight of the mental health components are presented in **Table 2**. According to the results of **Table 2**, the amount of F observed in both models for harmful behaviors variables in level of (P<0/001) is meaningful. This means that there is a meaningful relationship among linear combinations of weighted independent variables which has been specified by the model and dependent variable. As you can see in the **Table 2**, the first predicted variable, means depression, can explain 16/7 percent of variance of harmful behaviors by its self. In second step, the second predicted variable means physical symptoms has been added to the equation, which adds 17/9 percent to the explained variance of previous model, and has been increased it to 34/6 percent, in fact, the explained variance has been showed that 34/6 percent of criterion variable variance (harmful behaviors) by predicted variables (depression and physical symptoms) have been explained. The table No. 3 is focused on coefficients and specifications of weight of each predicted variables on the criterion variable.

As you can see in **Table 3**, both subscales have a meaningful effect on harmful behaviors. The regression coefficient of predicted variable, depression variable show that this variable can explain the related variance of harmful behaviors in a meaningful way. The coefficient impact of depression (B=1/438); based on t test show that this variable in level of (P<0/001) can predict the changes which is related to harmful behaviors. This seems that the increase in depression lead to increase the harmful behaviors. In the next step, the regression coefficient of predicted variable, the physical symptoms' variable show that this variable can explain the related variance of harmful behaviors meaningfully. The impact's coefficient of physical symptoms (B=0/52), based on t test show that this variable in level of (P<0/001) can predict the related changes of harmful behaviors. In another word, it seems the increase of physical symptoms lead to increase the harmful behaviors.

Table 1: Correlation between mental health and self-harm behaviors

Variables	Physical Symptoms	Anxiety	Disorder in Social Function		
Depression	Self-harm behavior	0/282**	0/331**	0/138*	0/412**

Table 2: The summary of regression model, variance analysis of mental health on self-harm behaviors

Predicted Model	Sum of Variables	Degrees of Squares	F	Level of Freedom	Explained Standard Significance
Varianc Error.......		14772/263	1	60/936 0/01	0/167
Deoression Depression Physical	15/570..... 15/459..... Symtoms	16040/319	2	33/562 0/01	0/179

Table No. 3: Weight coefficients and characteristics of mental health components on harmful behaviors

Model	dependent variables	coefficient of impact	t	significant level
1	depression	1/438	7/806	0/01...............
2	depression	1/244	6/173	0/01...............
	physical symptoms	0/520	2/304	0/022.............

DISCUSSION AND CONCLUSION

The current research has been done in order to investigate the impact of mental health on self-harm behaviors. The current research is one of the few internal researches which examines the mental health on self-harm behaviors. Also, despite of searching among international articles, we could not find any similar research.

According to the obtained results in the current research, there is a positive relation between mental health and self-harm behaviors. Which means mental health effects on self-harm behaviors and caused the incurrence of self-harm behaviors. The people who have physical symptoms' disorders, have a high anxiety, they suffer from depression and there is disorder in their social functions, therefore, they highly tend to do self-harm behavior.

In addition, in the current research, they have examined the relation of each subscale on harmful behaviors. According to the obtained result, there is a meaningful relationship between depression's subscale and physical symptoms. Based on the analytical reports, the increase of depression and physical symptoms can cause the occurrence of self-harm behaviors in people and according to the previous research, mental health effects on high risks behaviors. Therefore, we can mention that when the people are more depressed or they have physical symptoms, there is a possibility to increase their harmful behaviors. As the second predicted personality's disorder on the appendix section of DSM-IV-TR is depression disorder. The infected people of this disorder, show the pattern of depressive cognitions and behaviors which are penetrative and pervasive. Their emotional states are typically include gloom or heartbreak though not necessary depression. They tend to have the feelings of inadequacy, worthlessness, remorse of guilt

(Azad, H, 2010). Therefore, we can mention that the people who suffer from depression, might harm themselves and also there are the physical symptoms such as: the unified physical symptoms which are chronic or reversible. This disorder usually will be called Briquet Syndrome on the name of the first physician who researched about it on 1959. The complaints of infected people are usually exaggerating, ambiguous and dramatic. We can mention the most important complaints such as headache, fatigue, palpitations, weaknesses of faintness, nausea, vomiting, visceral pain, intestinal disorders, poisoning and menstrual problems **(Azad, H, 2010)**. In these people the possibility of self-harm behaviors are more, because they tend to express the sickness and to prove their statement, they might show some high risks behaviors.

Ras and Heath (2002) who have done direct researches about self-harm behaviors on samples of adolescents community, have found that about 20 percent of 240 students of high school, are suffered from self-harm behaviors; however, after further interviews with this sample was found that 14 percent of adolescents exactly are infected with self-harm behaviors. According to the obtained result in Goudarzi and Moeini Roudbali's researches (2010) in order to predict the high risks behaviors of adolescents based on positive and negative aspects of mental health, 6 common high risks behaviors of them which are as follow as: violence, suicide, smoking, alcohol, drugs and unsafe sexual behaviors of 385 teenagers of girls and boys aged 14 to 19 years old have been examined, and the result of research showed that the advent of high risks behaviors of teenagers, in both negative and positive aspects of mental health is involved. And also, the research of **Mohammadkhani and Colleagues (2005)** in order to predict the high risks behaviors of adolescents based on positive and negative aspects of mental health, 6 common high risks behaviors of them which are as follow as: violence, suicide, smoking, alcohol, drugs and unsafe sexual behaviors have concluded that the advent of high risks behaviors of teenagers, in both negative and positive aspects of mental health is involved. and in order to plan for the preventive interventions in this field, the promotion of different indicators of mental health in adolescent should be placed in priority of the programs. And finally the obtained results in the current research, we can mention that having a mental health effects the decrease of high risks behaviors.

In conclusion, the investigations showed that self-harm behaviors exist in adolescents of all

cultures **(Heath and colleagues, 2009)**. However, the obtained researches in Japan **Izutsu and colleagues (2006)**, and Turkey **Zoroglu and colleagues (2003)**, showed the prevalence rate of self-harm behaviors between 10 to 20 percent, and generally is consistent with studies of prevalence of self-harm behaviors in developing countries **(Miller and Nihan, 2007)**. On the other hand, the media reports showed that the self-harm behaviors among adolescents are increasing **(Donofrio, 2007)**. But there is a little empirical founding to support this claim. **Heath and colleagues (2009)** showed that the main reason to support this concept is that the self-harm behaviors among adolescents are increasing. The conducted studies in the process of "self-harm behaviors" in England have implied a broader definition of self-harm behaviors which includes non-suicidal self harm behaviors (for example, over dose of drugs and committed suicide). It is likely that the increased level of self-harm behaviors is due to the emergence of the disease among the youth **(Lieberman, 2004)**; and it is also possible that the youth currently are more comfortable than previous decades looking for a treatment for the self-harm behavior **(Heath and colleagues, 2009)**.

According to the previous researches about self--harm behaviors among adolescents and

the current study, the prevalence of self-harm behaviors are very high among adolescents, and this is more between depressed people or the one who suffers from physical symptoms disorders. Therefore, it is better to study more in this field, in order to find a result more explicitly which can be generalized to the entire population and finally to prevent or resolve problems in this context, some actions should be taken.

The mentioned study is based on solidarity and sectional, therefore based on the results of that, we cannot make a strong casual conclusions. The used data in this study were obtained only based on self-reports and potential interfering variables such as the emotional and physical situation of students during filling the questionnaire and or social economical problems of a person which can effects the reported psychological distress, which have not controlled. This research has examined the relation between self-harm behaviors with mental health among students' community. It is recommended in the further researches, to examine the variables on clinical samples. As this study is correlative and due to the time constraints, it is not possible to implement this study in two phases (comparative), it is suggested to consider this issue in further researches. It is recommended, the used self-harm

questionnaire in this research, self-harm self-report questionnaire **(Klonsky and Glenn, 2009)** among Iranian youth and adolescents be validated and its validity and reliability be calculated. It is suggested to examine the survey for prevalence of self-harm behaviors among the youth and adolescent and the relation of that with other disorders.

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