



Research Article

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The Relationship between the Resiliency and Locus of Control (Internal-External) with Suicidal Thoughts in Female High School Students in Sangar

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ABSTRACT

This study aimed to investigate the relationship between resilience and locus of control (internal and external) with suicidal thoughts in female high school students in Sangar. The research method was correlational. The study population consisted of all female high school students in the academic year 2011-2012 (N =1207). In this study, stratified random sampling method was used and 293 students were selected as sample. The instruments used in this study were Connor-Davidson Resilience Scale (2003), Beck Scale for Suicidal Ideation (1991) and Rotter's Locus of Control inventory (1966). Data were analyzed by statistical Pearson correlation and multiple regression analysis. The results showed that the correlation between resilience and suicidal ideation ($r = -0.26$) is statistically significant ($p < 0.01$) as well as the correlation between external locus of control and suicidal ideation ($r = 0.15$) is also significant. In other words, resilience and external locus have the ability to predict suicidal thoughts.

Keywords: *resilience, locus of control (internal and external), suicidal thoughts*

INTRODUCTION

Development and expansion of social and psychological harm in communities experiencing transit stages of development are inevitable; there is no doubt that Iranian's society is transiting these stages. This passing that is called moving from tradition to modernity is associated with particular social and cultural problems. Suicide is one of these social harms and even though it is thought as a tragic public health problem, it is potentially preventable (Izadi & Mohammad-Zadeh Mullaie, 2009). In studies about suicide, three phenomena are investigated including; suicidal thoughts, suicide attempts and suicide (Marcenko et al., 1999). Suicidal thoughts are described as self-reported suicide ranged from a vague desire to die to the complete map for suicide. These seeking help thoughts for the release of tension and unbearable, unavoidable events can be evolved into self-destructive behavior (Anderson, 2000). According to the studies, the majority of suicidal behaviors are preplanned (0/880) and suicidal thoughts are served as an effective predictor of suicide attempts even after controlling psychological factors like depression. In other words, the probability of suicide is considered as a linear function of the intensity, duration and suicidal ideation (Levinson et al., 1994). On the other hand, suicide attempt increases suicidal risk (Brent et al., 2002). Suicidal behaviors in adolescents and youth are treated as a major problem of mental health. After 1950, the world is witnessing an increase in suicidal behaviors, including suicidal thoughts, suicide attempts, and suicide. Unfortunately, during

1950 to 1990, the rate of self-destructive behaviors among adolescents and young people for suicidal behavior has been tripled (Fadaie et al., 2011). Risk factors for suicidal behaviors in adolescents and young adults can be classified in several groups: family issues such as the death of parents, grandparents, failure of a marriage, conflicts with parents, divorce or remarriage of parents, continuous clashes and conflicts between parents (Chabrol et al., 2007; Gould et al., 2003), factors such as functional and interpersonal relationships, i.e., rejection and sudden collapse of emotional relationships, poor ability in problem solving, stress, previous suicidal behaviors (Cheng et al., 2000), social and cultural factors such as unemployment, lack of resources and social support to people in crisis and danger, mass media, economic stagnation, inflation and unstable economic indicators, unstable market situation (Beautrais et al., 2005), demographic, biological, personality and psychological factors such as depression, hopelessness, cognitive rigidity, external locus of control, alcohol (Beautrais, 2004, Gould et al., 2003) (Fadaie et al., 2011). Locus of control is a kind of variable related to the behavior and it was firstly introduced by Rutter (Brewer & Krano 1994). The term locus of control has been introduced to distinguish between internal and external control. Those people believe that those have control over their own outcome of events, have an internal locus of control, and those who believe that their fate is controlled by factors outside them, have an external locus of control. People with an internal control believe that bonus depends on their behavior. They are seeking control of their destiny. People with an external control believe that life events are not under their control, but they are under the control of internal and external factors (Toni, 2003). Thompson believes that there is no very pure personality type with internal or external locus of control. However, one can say that internal-external loci of controls are as a continuum and the degree of both external and internal control is being raised among people (Ghazanfari, 1995). Locus of control as a character trait not only is related with depression (Roger et al., 2008), anxiety (Sperling et al., 2008, Asadi et al, 2007) and suicidal ideation and developing related diseases (Chioqueta et al., 2005), but also played an important role in treatment, and for years it has been the focus of researchers. Other factor that can contribute to suicidal thoughts is the subject's tolerance against the psychological pressure. Garmzy and Mastn (1991) describe resilience as a process, an ability or outcome of successful adaptation to stressful and challenging situations. In other words, it is a person's ability to balance bio-psychological resilience in difficult circumstances (Connor & Davidson, 2003). In general, resilience refers to the factors and processes disconnecting the trajectory of growth and the risk of damage to the psychological problematic behaviors despite of harsh conditions leading to adaptive outcomes (Mohammadi, 2005). Rutter (1990) defines resiliency as individual differences in coping and reaction to difficult situations. So a more resilient person processes adverse conditions into more positive manner and considers himself capable to deal with it. However, resilience is not only stability against harms or threatening conditions as well as being passive in the face of dangerous situations, but also it means having active and constructive role in environment. It can be said that resilience is described as the personal ability to maintain ecological-mental balance in dangerous situation (Connor & Davidson, 2003). Some researchers believe that positive emotions are considered as critical psychological resources which help people cope with stress using effective coping methods. Therefore, people who experience positive emotions to a greater extent are possibly to be more resistant against the difficult events and so are more tolerant (Zautra, Johnson and Davis, 2005). Some studies have suggested depression as the main cause of psychological suicidal thoughts. The variables associated with depression are also associated with suicide, however; the nature of this relationship is not always direct (Zhu et al., 2006). Some other researches show a significant negative relationship between resilience and hardness with anxiety and depression, and indicate that resilient people are able to overcome a variety of adverse effects (Inzlicht et al., 2006). Based on research, there is a significant relationship between age, suicidal thoughts and subsequent actions, especially in stressful situations. To escape the crisis and severe mental pain, adolescents and youth people think suicide as a way of solving the problem and sometimes choose it as the only possible solution (cited by Fadaie et al., 2011). Because of the importance of high school years in the future of their education, students experience stress in a timely manner and so the need for such research is required.

Thus, this study seeks to answer the fundamental question that whether resiliency and locus of control (internal and external) are associated with suicidal ideation in female high school students?

Materials and methods

This was a correlational study. The study population consisted of 1207 female secondary school students in Sangar in academic year 2011-2012. The subjects of the study were selected from the female high school students aged in 15-

18 in the fourth grade in Rasht. According to Morgan table, 300 students were selected using stratified random sampling through a lottery. Data collection tool includes a questionnaire. To calculate the resiliency in students, Davidson Resilience Scale (CD-Risc) was used. The questionnaire was prepared by Connor and Davidson (2003) in resilience researches (1991-1979). Connor-Davidson Resilience Scale included 25 items in a Likert scale between zero (completely false) to five (always true). Options in Davidson Resilience Scale were scored as (completely false = 0, rarely=1, sometimes true =2, mostly true = 3, always true = 4). Cronbach's alpha coefficient was reported 0/89 by Connor and Davidson for resilience scale and the final ratio of the retest at 4-week interval was 0/87. The scale was normalized in Iran by Mohammad (2005). He employed Cronbach's alpha to determine the reliability of Connor-Davidson Resilience Scale and the reliability has reported 0/89. To calculate the internal and external control, Rutter locus of control was used. Locus of control scale (internal-external) has been developed of 29 items by Rutter in 1966 and each item has a pair of questions (a) and (b) respectively. All the participants will be asked to choose and mark questions between each pair of items. Rutter developed 23 items of this questionnaire to clarify people's expectations about Locus of Control and other 6 items obscure the measured aspect for the subject. Questions 1, 8, 14, 19, 24 and 28 distract test subjects from the main goal. Scoring of subjects was based on the total scores of the number multiplied by the subjects in the questions. The total scores will be achieved by the above mentioned questions and the total score of each individual represents the degree of control. The mean of the scale and its median was computed 8/48 and 8, respectively. 23 questions that have been determined were assessed (a) a score of questions (b) zero score. Of course, the questions 4-5-10-11-12-13-15-22-26 were scored (a) one score and (b) zero, because the total score per person representing type and degree of control in subjects. Thus, only the subjects scored nine are more qualified for external locus of control, and those who scored less than 9 are qualified for internal locus of control. Basic authentication of locus of control scale was obtained equal to 0/65 using split-half coefficient and 0/73 by Kuder-Richardson and retest interval of one-month period. Discriminant validity of Locus of Control Scale (internal-external) by Rutter was determined based on its correlation scores with the scores of Marlow-Kravan social satisfaction scale and the sample consisted of students of various universities and a variety of subjects and prisoners in Ohio. The correlation coefficients were varied from 0/16 to 0/41 (Fadaie et al., 2011). To calculate the suicidal thinking, Beck Scale for Suicidal Ideation (BSSI) was used. Beck Scale for Suicide Ideation (1991) is a self-report instrument in 19 items. The questionnaire is prepared to detect and measure the intensity of attitudes, behaviors and planning to commit suicide during the last week. The scale was determined from 0 to 2 based on 3 degrees. Options are arranged by A (0), B (1), C (2), respectively. Individual total score is calculated based on the total scores from 0 to 38.

A scale has not been developed to identify the specific form of suicidal thoughts and in terms of content of the questions, the risk of suicide was scored (0-5), having suicidal ideation scored as low Risk, (6-19) preparing for suicide by high risk (20-38), suicide intention was scored very high risk. Based on the factor analysis with psychiatric patients, it was revealed that Beck Scale for Suicide Ideation is a combination of three factors: The tendency to die (5 questions), tendency for suicide (7 questions) and Actual suicidal tendency (4 questions). 2 questions related to deterrence for suicide or suicide concealment were not calculated in any of the above three factors. Beck Scale for Suicide Ideation was highly correlated with the standardized clinical tests of depression and suicidal tendency. The correlation coefficients ranged from 0/90 to 0/94 for inpatients and clinic patients, respectively. It was also correlated with Beck Depression Scale from 0.58 to 0/69 with suicide questions. In addition, the Beck Hopelessness Scale and the Beck Depression Inventory were correlated each other from 0/64 to 0/75. Beck Scale for Suicide Ideation has a high reliability. The reliability of the test has been obtained 0/97 to 0/87 using Cronbach's alpha coefficient and 0/54 using test-retest. Ennis et al (2004) in a study on 100 male subjects aged 19 to 28 years who were randomly selected assessed the validity and reliability of Beck Scale for Suicide Ideation. The results showed that Beck scale was correlated with Goldberg Depression Inventory test. As well, the validity was calculated 0/95 and 0/75 using Cronbach's alpha and split-half method, respectively. In order to analyze the data, descriptive and inferential statistics including Pearson correlation and regression analysis with SPSS software were used.

Findings

Based on the descriptive statistics, the mean of suicidal thoughts (3/66), tolerance (58/21) and locus of control (10/37) variables were obtained, respectively.

The main hypothesis: there is a relationship between the resilience and locus of control (internal and external) with suicidal ideation among female students in secondary school.

Table 1: correlation matrix between resiliency and locus of control (internal and external) with thoughts of suicide

Thoughts of suicide		Resiliency	Locus of control
Thoughts of suicide	1		
Resiliency	-0/26	1	
Locus of control	0/15	-0/23	1

As can be seen in the above Table, the correlation between resilience and suicidal ideation ($r=-0/26$) is statistically significant ($p<0/01$); furthermore, the correlation between locus of control (external) and suicidal ideation ($r=0/15$) is statistically significant ($p<0/05$).

Table 2: Variance analysis test for the meaningfulness of the model

sig	F	Ms	df	ss
Regression 0/001	11/88	396/61	2	793/22
Fraction				9682/65

As seen in the above table, $F(2,290) = 11/88$ is statistically significant ($p<0/01$); thus, we can conclude with certainty 0/99 that the relationship between resiliency and locus of control (exterior) is statistically significant with suicidal thoughts and predictors (resilience and locus of control (external) have the power of prediction criteria (suicidal ideation); therefore, we are not allowed to regression analysis. In order to determine the best predictors of suicidal ideation among predictor variables, the regression model with the simultaneous method were used.

Table 3: Results of simultaneous regression to predict suicidal thoughts based on tolerance and locus of control

	R ²	sig	Beta	SEB	b
Constant	0/08	0/001		2/04	7/59
Resiliency		0/001	-0/253	0/03	-0/10
Locus of control		0/09	0/099	0/11	0/18

Simultaneous regression results show that the significant variable in the model could just explain resilience to 8% of the variance criterion (suicidal ideation).

According to Table 3, resiliency ($b=-0/10$, $p<001$) had a significant role in predicting criterion variables (thoughts of suicide) and locus of control ($b=0/18$, $p>09$), and plays no significant role in predicting the criterion variable (suicidal ideation).

(Resiliency) 7/59-0/10 = suicidal thoughts

The following secondary hypotheses have been answered.

Table 4: Correlation between resiliency with suicidal thoughts

Variable	The correlation coefficient	Significance level
Resiliency & Suicide	-0/26	0/001
Resilience & internal locus of control	0/19	0/005
Resiliency & external locus of control	0/07	0/55

Hypothesis 1: there is an association between resilience with suicidal ideation among female students in high school. As can be seen in Table 4, there is statistically significant correlation between the resiliency and suicidal ideation ($r=0/26$), ($P<0/001$). So it can be concluded with 95% confidence that the resilience is negatively correlated with suicidal ideation among high school female students. In other words, by increasing resilience, thoughts of suicide will be decreased.

Hypothesis 2: there is an association between locus of control and suicidal ideation among female high school students. As can be seen in Table 4, there is statistically significant correlation between locus of control and suicidal ideation ($r=0/19$), ($P<0/005$). So it can be concluded with 95% confidence that the locus of control is positively correlated with suicidal ideation among high school female students. In other words, by increasing locus of control, thoughts of suicide will also be increased.

Hypothesis 3: there is an association between internal loci of control with suicidal ideation among female students in high school. As can be seen in Table 4, there is no statistically significant correlation between internal locus of control and suicidal ideation ($r=0/07$), ($P<0/55$).

Discussion and conclusion

The main objective of this study was to evaluate the resiliency and locus of control (internal and external) in suicidal ideation among female high school students in Sangar. The results of the analysis showed that the correlation between resilience and suicidal ideation ($r=-0/26$) is statistically significant ($p<0/01$); the correlation between external locus of control and suicidal ideation ($r=0/15$) is also statistically significant. The value $F(2,290) = 11/88$ is statistically significant ($p<0/01$). Therefore, with confidence level 99/0, we conclude that the relationship between resiliency and external locus of control with their thoughts is statistically significant and variables of resilience and external locus of control have the power for the prediction of criterion (thoughts of suicide). The results of research are consistent with the results by Fadaie et al., (2011), Valie Nouri et al., (1995), Jung and Hwang (2013), Casas (2012), Johnson, Godin, Wood and Tamir (2010). The research by Vali Nourie et al., (1995) showed that in all subjects (male and female), there is a significant positive correlation between external locus of control and suicidal ideation, yet by gender separation, there found no meaningful relationship between two variables. So it can be concluded with 95% confidence

that the resilience of suicidal ideation among female high school students is negatively correlated. In other words, by increasing resilience, thoughts of suicide decrease. The results of research are consistent with the results of Han Jung (2013), Casas (2012), Johnson, Godin, Wood and Tamir (2010). Resiliency is among the factors that protect an individual from the trauma. High levels of resiliency help these people to utilize experienced and positive emotions in order to relieve themselves from undesirable situations. In the study by Seyed Mahmoodie et al., (2011), it was demonstrated that positive emotions can effectively enhance coping with life's problems. This means that the positive emotions increase resilience. More resilient individuals often perceive and feel better about themselves and their abilities. On the contrary, a person who does not have the necessary resilience is due to the difficulties of life not having the necessary capabilities to surrender problems. Thus he experiences a host of negative emotions such as frustration, low self-esteem, negative self-concept, general inefficiency, depression, blame-casting, etc. In such a situation, the person is seeking to escape from these feelings and since the person does not have the ability to solve problems, he chooses inefficient and wrong solutions that can double personal problems. Suicidal thoughts are usually caused by the inability of people to deal with life problems. However, a person who has high resiliency, feeling of helplessness and despair are less likely to occur. Thus increasing the resiliency can be effective in reducing suicidal thoughts because the individual becomes more intractable against the problems. The results also showed that the correlation between external locus of control with suicidal ideation ($r=0/19$) is statistically significant ($P<0/05$). So it can be concluded with 99% confidence that there is a significant positive relationship between the external locus of control with suicidal ideation among female students in secondary school. In other words, by increasing external locus of control, suicidal ideation increases. The results are consistent with the results by Fadaie et al., (2011), Vali Nouri et al., (1995), Richardson, Bergen, Martin, and Allison (2005).

Locus of control refers to how people control their environment. In other words, locus of control is considered as a system of beliefs that helps person evaluate his/her successes, failures based on strengths and weaknesses. Some people find their external orientation, believing that events are determined through luck, miscellaneous and unknown and uncontrollable factors. To such people, behavior and outcome are independent of each other and since they believe that outcomes are not relevant to belief, conclude that they are outside the control of their personal and irresponsible behavior, lack of skills, lack of attempt to come leading to negative consequences (Rutter, 1966). Persons with external control think that the problems are beyond his control and encounter them in a passive and irresponsible manner and because they do not have the ability to solve problems, they become disappointed. Unsuccessful experiences in various problems reduce self-confidence and control of external sources and if these resources are not available, the person's mind will be preoccupied with negative thoughts leading to purposelessness, meaninglessness of life to extreme frustration, depression and suicidal thoughts and negative self-concept. The results by Heidari, Pahlavian, Mahboob, Zarabian (1999) showed that suicidal ideation and hopelessness about the future of the students having a tendency to locus of control were higher than students with an internal locus of control. Lefkoort (1992) showed that people with external locus of control experience more social, occupational and educational problems and give up in competitive situations very soon. In addition, they have many difficulties in social interaction and show aggressive behavior and irritability in the face of social pressures. Finally, the results showed that there was a correlation between locus of control and suicidal ideation ($r=0/07$), which was not statistically significant ($P.0/55$). As one of the personality characteristics, locus of control has an important impact on the behavior of individuals. There is some research evidence indicating that many of human-induced problems stemmed from the locus of control (Sohrab & Javanbksh, 2007). Many of the negative thoughts that invade people's minds are the facts that people believe about themselves, others and their world. Part of the plan to aid people feel and perform better in their daily lives is through training to control and change their negative or wrong thoughts (Khodayarifard, 2009). People with an internal control believe that their behavior depends on the reward. They are seeking to control their destiny (Toni, 2003). Renan et al (2007) showed that students with high self-control skills show less aggressive behavior and poor or less self-actualization. A person with internal locus of control is in charge of his activities and thoughts and tries to take control of his life and makes endeavor to achieve this goal. Each person with internal locus of control successfully strengthens sense of control over his life and as a result, decreases his negative thoughts and emotions. According to the results of research suggesting that resiliency had an inverse relationship with suicidal thoughts; so educational programs can be designed to increase the resiliency of students in the hope of preventing suicidal thoughts in them. According to the results, some resiliency interventions may be implemented in all counseling centers to reduce suicidal thoughts in patients

prone to suicidal thoughts. The limitations of the present study include lack of understanding and awareness especially about psychological research, caused some students to show resistance against testing and refrain from cooperation and implementation and showing no reaction.

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