The Survey of Relationship between Perceived Stress, Coping Strategies and Suicide Ideation among Students at University of Guilan, Iran

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Abstract

The purpose of the current study was to investigate the relationship between perceived stress, coping strategies and suicide ideation among students at University of Guilan, Iran. The research method was a descriptive study kind of correlation. To accomplish this goal, in a correlation study, 300 university students (144 female and 156 male) were selected from Humanities Faculty University of Guilan through a cluster random sampling in the 2012-2013 academic years. The following measures were administered on them: Cohen Perceived Stress, Billings and Moos Coping Strategies Questionnaire and Beck Scale for Suicidal Ideation. Research results showed that there was significant positive relationship between suicide ideation with perceived stress, emotion- oriented strategies with perceived stress and emotion- oriented strategies with suicide ideation. Also the results showed that there were significant negative relationships between perceived stress with problem- oriented strategies and suicidal ideation with problem- oriented strategies. Results of the multiple stepwise regressions in this study show that all independent variables in equation during three steps allocate 18 percent of suicide ideation variance.

Keywords: stress, coping strategies, suicide ideation, students

Introduction

Nowadays, suicide is a major problem for social and mental health in many countries (Asghari et al., 2013; Mohammadnia et al. 2012; Platt and Hawton, 2000). A number of others, especially in the younger age groups, suicide deaths after accidents, are ranked as reasons for death and for many years, suicide is considered as a psychotropic urgency by researchers. Ways of committing suicide occur in different countries base on cultures, religions and symbols (Ahmadi, 2005). In 2000, suicide was the third leading cause of death among 15 to 24 years old, following unintentional injuries and homicide (Minino et al., 2002 & Berdi Ozouni Davaji et al., 2010). Further, there are between 8 to 25 suicide attempts per suicide death (Moscicki, 2001 & Berdi Ozouni Davaji et al., 2010). Suicide Ideation is a term that refers to the occurrence of any self-destructive thought. These ideas are a whole gamut of vague ideas to suicide. The annual incidence of suicidal thoughts in adults has been reported between 2.3 and 5.6 percent. An estimated 24 percent of people, who reported that they had suicidal thoughts, commit suicide at the end of the process (Van Heeringen, 2001). In other words, suicide ideation is considered a risk factor for suicide (Groleger, Tomori, and Kocmur, 2003). Every year, suicide claims the lives of more than 800,000 people worldwide (Peden et al., 2002). According to results of American College Health Association (2008), more than 1.3 of students has announced that they feel depression in doing academic work and one person out of 10, attempted suicide seriously in the last year. A certain study appeared that 6 percent of BA students and 4 percent of MA students have attempted suicide seriously during the last year. Suicide rates among students in the world have increased significantly in the last decades (Collins & Paykel, 2000). In a survey conducted by Asghari et al (2013), it was found that 22 percent of the students who being evaluated, were suspicious of psychological disorders. Results showed that self-concept and mental health of the students have a meaningful relationship with suicidal ideas. Results of systematic regression analysis showed that self-concept and mental health significantly explain 23 percent of the variance

in suicidal ideas. In a research, which was conducted by Mousavi et al (2008), in Iran, results showed that 10.33 percent of whole students had suicidal thoughts. In other study about suicide, 26.4 percent of students had suicide thoughts in which 17 percent just had suicidal thinking and 9.4 percent had tendency for committing suicide (Mohammadnia et al., 2012). In another study conducted in Spain, suicidal thoughts in senior students were 3.6 percent (Calvo and Associates, 2003). Hossein Pour et al (2004), investigated the causes of suicide in adolescents referred to Golestan Hospital in Ahwaz city in Iran stated that the suicide rate among adolescents has raised dramatically in recent years. The phenomenon of suicide, especially in teenagers is a growing problem of public mental health. Dyrby et.al (2008), indicated that about 11 percent of students have reported suicide ideation in the last academic year. Researchers count several psychological factors on the phenomenon of suicide and Suicide ideation. The lifetime risk of suicide in depressed patients is 15%. Reasons for depressed patients are celibacy, divorce, widowhood, and those who have record in suicide (Richard, 1999). Another study by Berdi Ozouni Davaji et al (2010), suggested that there is a positive association between insecure attachment style and suicidal ideation in college students, and there is a negative correlation between secure attachment style and suicidal ideation in college students. The results revealed that attachment style as a predictor variable is an important factor for suicidal thoughts. Stress as a psychotropic variable has a direct relationship with tendency toward committing suicide and having suicide thoughts.

A survey shows that many people suffer from psychological and social stresses before committing suicide and in encountering with life difficulties; they employ emotion-focused strategy (Sadock and Sadock, 2003). People who commit suicide have experienced more stressful life events; the stress of life had a higher rating (Shakeri, 2006). Adolescents who commit suicide have tolerated high levels of perceived stress. Some studies show that pressure factors cannot predict humans' health solely and we should consider counter-skills, channel of social protection and cognitive aspects (Zolfaghari et al. 1994). A study by Kadivar et al (2007), showed that there is a significant relationship between counter-crisis styles and committing suicide among female students. These girls usually use emotion-focused style instead of problem-focused style. According to Lazarus and Folkman (1984), view stress as a function of highly demanding situations coupled with that individuals limited emotional resources for effectively coping with these demands (Abedalhafiz et al. 2010). The ability to manage stressful feelings and to deal with the unpleasant events from which those feelings originate is called coping. Coping strategies reflect a person's use of specific cognitive or behavioral techniques that assist the person to build personal resources (e.g. feelings, emotions) or manipulate environmental demands that promote stress reduction or management. Coping styles, on the other hand, reflect a person's disposition to use certain types, or categories, of coping strategies; usually the type of coping strategies the individual prefers may be predicted from his or her style (Anshel et al. 2010; Krohne 1993, Mark, 2013). In connection with the student and the sources of stress, Rezakhani et al (2009), showed that the sources of stress reported by students were interpersonal and family relationships, employment status, personal status, educational status, and environmental conditions. The stress reported by female students was much more than male students were in all cases. By getting old, the stress caused by family and interpersonal relationships, personal and professional status of students decreased. The married students had more stress about family relationships, interpersonal relationships, and profession status.

Steiner, Ericsson, and Pavlesky (2003), found that the tendency coping strategies have negative relationship with health problems and dangerous behaviors for health. However, avoidant coping strategies had a positive relationship with these issues. According to psychological theories, coping strategies play an important role in stress reduction and general health of the individuals. Holmback (1997), knows the high rate of encountering with stressful events and shortage of supporting sources as the factors, which culminate in inappropriate ways of dealing with stressful situations. Roesch and Weiner (2001), have shown that the use of emotion-focused strategies will lead to better health; however, some other studies have shown that the use of emotion-focused strategies will lead to lower health. Less stressful people use problem-focused coping more than stressful people do and the stressful people usually use emotion-focused strategies more than others (Agha Mohammadian Sherbaf et al. 2002). Besharat et al (2008), study on coping styles and psychological adaptation of the cardiovascular disease showed no positive and significant relationship between problem-focused and emotion-focused coping styles. Negative emotion-focused style had no significant correlation with objective improvement, but there was a significant positive correlation with perceived recovery. Psychological well-being was not significantly associated with patients ' perceived improvement, but the level of psychological distress was significantly negatively associated with patients' perceived recovery. Steiner et al (2002) showed that problem-focused coping way had a negative correlation with index of problems, health and risk behaviors, while avoidant coping methods had negative correlation with these aspects. Boals et al (2011), study's results show that high self-concept has a relationship with physical and mental symptoms and emotion-focused coping strategies. No significant correlations between self-concept and emotion-focused and problem-focused strategies were observed. The results of this study showed that low self-control has a significant meaning with unhealthy coping strategies (avoidance coping), which in turn

has a significant relationship with consequences of poor mental and physical health symptoms. In a prospective study of suicide, attempters in stressful situations use less problem-focused coping strategy (Shakeri, 2006). The results of a research by Zhang et al (2012), on 671 students from China showed that approximately 20 percent Chinese College students reported having suicide ideation. Life stress, active coping styles, and passive coping styles all had independent effect on the probability of suicide ideation. Passive coping styles, especially fantasizing, mediated the relation between life stress and suicide ideation. Moderation hypotheses were not supported. Implications of the findings and future directions were discussed. According to previous surveys, which included similar and different results, the goal of this study is scrutinizing the relationship among perceived stress, coping stress strategies, and suicidal ideations. In general, we are looking for which coping strategy can predict the suicidal ideations and can we consider the perceived stress and coping strategies as a predictable variable for suicidal ideations.

Methodology

The research method was a correlation type. To accomplish this goal, in a correlation study, the study subjects included about 10 present of population 300 BA University students (144 female and 156 male) were selected from Humanities Faculty university of Guilan through a cluster random sampling in the 2012-2013 academic years.

The Cohen Perceived stress

Perceived stress was defined as the degree to which situations in one's life during the past month were perceived as stressful, as measured by the 14-item Perceived Stress Scale (Cohen et al., 1983). seven positive and seven negative, and was translated into Chinese by the research team (see Additional file 1). Care was taken to ensure that each translated item retained a meaning as close as possible to the original version. The negative element is intended to assess lack of control and negative affective reactions, while the positive element measures the degree of ability to cope with existing stressors. Each item is rated on a five-point scale from 0 = 'never' to 4 = 'very often', covering the preceding month. The internal consistency of the perceived stress scale was $\alpha=.89$ (Soderstrom, 2000). The reliability of this scale in current research calculated 0.84% Chronbach Alpha.

The Coping Styles Questionnaire

Ways to deal with stress were conducted by Billings and Moos in 1981 in order to measure the ways of coping with stress. This Scale has 19 items. Each person chooses one of the options (never, sometimes, often, usually, and always). Scope of the survey respondents was different from zero to 57. The questionnaire has two subscales in general, problem-focused and emotion-focused coping strategies and following three minor scales, cognitive, avoidant, behavioral coping strategies. Pour Shahbaz (1995), achieved the reliability coefficient of the questionnaire 73 percent, behavioral coping 77 percent, cognitive coping 88 percent and avoidance coping 70 percent. (quoting from Sa'adat & Khodayari, 2013). The reliability of this subscale in current research calculated (problem-focused 0.78%) and (Emotion-focused 0.69%) Chronbach Alpha.

The criterion of Becks' suicide ideation

The criterion is self-assessment questionnaire, which consisted of 19 items and prepared to appear and measure the intensity of attitude and planning to attempt suicide. This criterion evaluates the cases such as wish to die, tendency towards active and inactive suicide, period and frequency of suicide ideation, range of self-control, preventive factors and readiness of person for attempting suicide (Anisi et al., 2006). This questionnaire includes *five* items of riddle. If the responder gives a positive responds, (that is one or two), especially to question number *five*, it is not necessary to continue. Score zero means nothing; score one means to some extent and score two means many. Anisi et al (2006), showed that simultaneous admissibility of suicide ideation criterion of Beck with GHQ is equal to 0.95.The calculated permanency for this test is 0.80, Alfa coefficient. The reliability of this scale in current research calculated 0.91% Chronbach Alpha.

Findings

The results show that 11.3 percent of Student humanities faculties of Guilan University had a high suicidal ideation.

Table 1: Number, Mean, and Standard Deviation

Variance	Male			Female			All		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Perceived Stress	156	26.86	7.24	144	28.46	8.99	300	27.63	8.15
Emotion oriented	156	8.32	3.24	144	7.55	3.01	300	7.95	3.15
Problem oriented	156	16.03	4.21	144	15.08	4.87	300	15.57	4.55
Suicide Ideation	156	3.76	5.88	144	2.67	5.14	300	3.24	5.55

The results shown in Table 1 show the number, the mean and standard deviation of both boys and girls, and the sum total of both sexes. In general, the standard deviation and the mean compare each variable about boys and girls separately.

Table 2: Pearson correlation coefficient between steers and subscale coping strategies with Suicide Ideation

Variance	Perceived Stress	Emotion oriented	Problem oriented	Suicide Ideation
Perceived Stress	1			
Emotion oriented	*.133	1		
Problem oriented	**-.444	**.175	1	
Suicide Ideation	**.366	**.227	**-.234	1

*. Correlation is significant at the 0.05 level **. Correlation is significant at the 0.01 level

According to Table 2, a significant positive correlation existed between the level of perceived stress in (P<0.05) level and emotion-focused coping strategies and in level (P<0.01) there is significantly positive relation with suicidal ideation in students. The negative correlation existed between the level of perceived stress in (P<0.01) level with problem-focused coping strategies. Emotion-focused coping strategies in (P<0.01) level have positive correlation with the level of suicidal ideation and problem-focused coping strategies in (P<0.01) level a significant negative association with suicide ideation.

Table3: multivariate regression for stress and coping styles with suicide tendency

Predicted model	Variable entered	R	R²	F	B	β	T	p
1	Perceived Stress	.366	.134	46.09	0.249	0.366	6.79	0.000
2	Emotion oriented	.408	166	29.66	0.320	0.182	3.40	0.001
3	Problem oriented	.429	.184	22.24	-0.187	-0.153	-2.52	0.012

To predict suicidal ideation based on independent variables of coping strategies and perceived stress the multiple stepwise regressions is used. Stepwise regression results in Table 3 show that perceived stress variable with the factor of 6.79 T has the most closely connection with suicidal thoughts. Secondly, emotion-focused coping strategy equation for the coefficient of t is 3.40. Third, problem-focused coping strategies equation for the coefficient of t is -2.52. Accordingly, we can say that independent variables in the three steps of regression explain 18 % of the variance of suicidal thoughts.

Discussion and Conclusions

One of the main objectives of the universities is to train specialized skilled human sources toward the actualization of social and economic goals and satisfaction of the needs of the community (Asghari et al, 2013). Suicide is a psychological and social problem that is increasing as the relationships become more complicated nowadays. Along with the human history, suicide has happened repeatedly and it is one of the major psychiatric emergencies. Epidemiology of suicide has an important role to determine the mental health of the population and it is a major problem in the world (Solati et al, 2000). The aim of this study was to evaluate the rate of suicidal ideation in students of University of Guilan (Iran) and the relationship between the perceived stress, coping strategies, and suicidal thoughts. According to the present results, 11/3 percent of the students tested had high suicidal ideation and therefore should be the basis for the special attention to this issue and to correct and prevent risky behaviors, thoughts, and actions. The results of the present investigation and global statistics on the prevalence of suicidal ideation among college students are consistent; a study by Steven et al (2008), approximately 11/1 percent of the students had suicidal thoughts. Dyrby (2008), reported that 11 percent of senior students had high suicide thoughts. Mousavi et al (2008) reported high rates of suicidal ideation in college students about 10/33. Wilcox et al (2010), conducted a survey on 1100 students and in that study, it was estimated that 12 % of students

have experienced suicidal ideation during the study period. Mohammad Nia et al (2012) conducted a research on medical student numbers reported 19/4 percent. In another study by Zhang et al (2012), about 20 % of students had suicidal thoughts. Asghari et al (2013), in their study reported 9 percent. Results of the multiple stepwise regressions in this study show that all independent variables in equation during three steps allocate 18 percent of suicide ideation variance. The results showed that there is a negative correlation between problem-focused coping strategies and perceived stress. In other words, when the mark of problem-focused coping strategies go up, the perceived stress reduces and there is a positive correlation between emotion-focused coping strategies and perceived stress. Similarly when the mark of emotion-focused coping strategies go up, the perceived goes up too. The findings of Holmback (1997), Agha Mohammadian et al (2002), Steiner, Ericsson and Pavelesky (2003), and Shakeri (2006), are consistent. Because they believe that, the problem-focused coping strategies cause wise people to look for an answer in stressful situations. Lavoie (2013), believes that problem-focused coping strategies efficiently reduce perceived stress and emotion-focused coping strategies are associated with high-perceived stress. We can say there is a tight relationship between coping strategies and cognitive processes and a person looks for a solution in stressful situations. Other results indicated that the problem-focused coping strategies are related to suicidal thoughts negatively and significantly. In contrast, emotion-focused coping strategies have positive and significant relationship with suicidal thoughts. The results of the present investigations of Sadouk (2003), Shakeri (2006), and Alderman et al (2007), are consistent. Mir et al (2003) stated in their research that ineffective coping strategies are positively associated with suicidal ideation and 64 percent of people who have high suicidal thoughts have used medical problems or have used alcohol. The results of the present study a positive correlation between perceived stress and suicidal thoughts there. In other words, the higher stress level is increased suicidal thoughts and suicidal ideation in patients with lower perceived stress scores continues to decrease. The results of the investigation of Shakeri (2006) are consistent with Kadivar et al (2007). Research findings of Metha and Mc Whirter (1997) done on the student suggests that symptoms of depression, alcohol and drug use, and stress related to present and past will strengthen suicidal thoughts significantly. Rich and Bonner (1987) research in which an investigation conducted on 202 students continued to imply that depression, stresses of life and loneliness would account for 30 % of the variance in suicidal ideation. According to Feskanich et al (2002), there is a positive correlation between using of diazepam and stress in the lives and suicidal thoughts among adult women. In connection with the Daily hassles, Tajalli et al (2010) concluded that there is a significant negative relationship between the pressures and conflicts of everyday life and mental health of students. The rise and fall of everyday stress can affect mental health. According to Izadinia et al (2010), anxiety disorders, depression, daily stresses, and disorders in psychological health have a significant positive association with suicidal ideation and explain 21 % of suicidal thoughts of student. The stress that students encounter during their lifetimes and their ineffective or effective coping strategies affect their suicidal ideations. Passive coping strategies, especially daydreaming can act as an intervening factor to make a connection between life stress and suicidal thoughts (Zhang et al, 2012). In general, we can conclude that suicidal thoughts have a positive relationship with perceived stress. Furthermore, emotional coping strategies have a positive relationship with perceived stress. Therefore, stress management by using active coping strategies, in particular problem-focused coping strategies can be associated with reduced suicidal ideation in college students positively. This investigation has been done in Iran, for 10 percent of students in the University of Guilan and any further generalization to other countries must be done carefully. The results of this study can be used with students in individual and group counseling and for taking a positive leap toward mental health and eliminating risky thoughts and behaviors.

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