

A META-ANALYSIS OF SUICIDE RATES IN MALE AND IN FEMALE SUICIDE IN IRAN

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Abstract

Suicide is an important cause of death in Iran. Suicide is associated to different characteristics and each suicide person has individual causes but the main reasons of suicide in Iran are family problems, economic problems, affective involvements, and psychological problem. The aim of this research is to systematically review the issue of suicide in Iran from 2000 to 2012. This investigate includes 21 relevant research articles. The population sample of this research included 10258 committed suicides and attempted suicides, and 71070 females and 3088 males. The result shows that odds ratio is less than one, meaning that the suicide was related to family problems, economic issues, affective involvements, and psychological disorders. Also this study indicates that the rate of suicide in females is higher than in males. The rate of female suicides in Iran is opposite to that in other parts of the world. Therefore, the main solution is to provide training to people at risk of suicide, especially the females. Suicide people need to focus on problems, try to solve problems and avoid emotional behaviors.

Keywords: *psychological disorder, family problem, affective problem, economic problem, suicide*

Introduction

The studies on suicide in Iran show an increased number of suicides in teenagers and young people. In some Iranian provinces such as Ilam, Kordestan, Kermansha, Lorestan and Khuzestan, there is a higher rate of suicide than in others. In 1989, for example, the rate of suicide in Ilam has been two persons per 100,000, but in 1994 the rate of suicide in this city increased to 63 people per 100,000 (Khazaei & Parvizi Fard, 2003b). The study by Zohoor and Aflatoonian (2004) illustrates that 43% of suicide attempts in Iran occurred at the ages of 19- 20 years and 52% at the ages of 20-39 years. The research by Jamshidzade (2003) shows that most of the suicides in Iran from 1994 to 1998 were committed by housewives and unemployed people. The study by Saadat, Bahaoddini, Mohabaatkar, and Noemani (2004) demonstrates the rate of suicide attempts in females above 15 years old was 34.8% and in males above 15 years old was 19.9%. Most of the studies recently conducted in Iran illustrate that the rate of suicides increased in females more than in males (Ahmadi & Haji Ahmadi, 2000; Ahmadi, 2005; Ashkani, Dehbozorgi, & Emamgholi Poor, 2003; Heidari Pahlavian, 1997; Hossein Pour, Ghaffari, & Mehrabi Zadeh, 2004; Khazaei & Parvizi Fard, 2003a; Mousavi, Shah Mohammadi, & Kaffashi, 2000; Najarian, Asghari Moghadam, & Barati, 1993; Shaykholeslmi & Fallahzade, 1997; Well-being Organization, 1996; Yasami et al., 2002; Yasemi., Sanei., & Malekpour., 1998; Zarghami & Khalilian, 2003). The above studies show that suicides are related to the issues of culture, economy, religion, and psychology; therefore, this systematic meta- analysis study focuses on the epidemiologic rate of suicide and the nature of personality suicide in Iran.

Literature review

Suicide is one important cause of death in the world and it is related to bio-sico-social factors. People who commit or attempt suicide suffer from one or more psychological disorders for a long time. An important psychological disorder in suicide persons is mood disorder. Studies in Iran illustrate that the people who commit or attempt suicide experience high sico-social stress and these people when faced with problems exhibit excited behaviors (Ferdowsi, 1996; Kykhavande, 1996; Yazdani Kipchaq, 1996).

The study by Chaman (1997) shows that 58.3% of the people who attempted suicide suffered from mood disorder; 66.9% of them suffered from depression and 33.1% of them suffered from bipolar disorder. The research by Muncie. (2002) illustrates that the prevalence of depression in suicide attempts was 40.1% and bipolar one disorder 57.7% and bipolar two disorder 2.2%. The other studies outside Iran indicate that mood disorder is the primary cause of suicide. The psychological literature shows that an average of around 50%, (in some other sources, 43% or 44%) of all suicide victims had previously suffered from a depressive disorder. In depressed people, suicide attempt is identified to be a strong predictor for suicide (Bes̃kovnik , Juric̃ ic̃ , & S̃vab, 2011; Brådvik & Berglund, 2011; Lönnqvist, 2000). Attempted suicide has been shown to be more likely when there is a high number of depressive events (Ahrens, Berghöfer, Wolf, & Müller-Oerlinghausen, 1995) or most of the time is spent in depression (Sokero et al., 2005). Additionally, if depression continues, the patient will be at high risk of more suicide attempts (van Praag & Plutchik, 1988). Nevertheless social anxiety and depression are the most commonly happening psychological disorders (Ohayon & Schatzberg, 2010). Depression and social anxiety share numerous common characteristics with cognitive biases (Wilson & Rapee, 2005), low stages of positive effects (Brown, Chorpita, & Barlow, 1998), and interpersonal dysfunction (Alden & Taylor, 2010; Coyne, 1976). Research suggests that the presence of each of these disorders tends to cause an increased risk for suicidal ideation and behavior (Cougale, Keough, Riccardi, & Sachs-Ericsson, 2009; Perroud et al., 2007). In particular, study shows that people with major depressive disorder and social anxiety disorder have higher stages of suicidal ideation, suicide attempts, specific suicide plans, and history hospitalization from attempts. Evidently, research supports the connection between social anxiety and suicide risk, mostly among those with major depression disorder.

Psychology problems are common in people who committed suicide. A majority of them have a history of suicidal behaviors (Ho, Leung, Hung, Lee, & Tang, 2000), depressive disorders (Gtould & Kramer, 2001; Yip et al., 2004) and drug abuse (Hoi Leung, Hung, Lee, & Tang, 2000). The primary predictor of suicidal ideation is depression (Chiles et al., 1989). Studies show an important mediator in the relationship between many stressors and suicidal ideation (Stewart, Lam, Betson, & Chung, 1999; Sun, Hui, & Watkins, 2006).

On the other hand, a majority of studies show that low social support such as low family and friend supports are associated with suicide. The study by Harter, Marold, and Whitesell (1992) show that less social support from parents and friends were related to suicide ideation during inducing desperation and less self-worth. The research by Prinstein, Boergers, Spirito, Little, and Grapentine (2000) similarly illustrates that psychosocial risk factors related to friends and family performance directly predict suicide ideation and depressive symptoms. If individuals at risk of suicide are supported by family members and friends, the chance of suicide will greatly decrease in them. Low family support, family conflict and dysfunction are either potential causes of suicide behaviors or directly aggravate risks throughout depressive symptoms. There is also a relationship between suicide ideation and friend performance such as social support, social self-concept, and social isolation (Gencoz & Or, 2006; Harris & Molock, 2000; Harter et al., 1992; Lewinsohn, Rohde, & Seely, 1993; McKeown, Garrison, Cuffe, Addy, & Waller, 1997; Morano, Cisler, & Lemerond, 1993; Sheeber, Hops, AJpert, Davis, & Andrews, 1997). According to Nelson (1987); Rich and Bonner (1987), understanding the variables in these domains affect individuals' emotions and suicidal ideation and this is necessary in preventing people suicidal behaviors. Social support from friends and family are important resources, but the lack of support by family and friends can predispose individuals to self-damaging cognitions and suicidal behavior during stressful living events. Therefore, a helpful family environment and robust social self-concept could serve as buffers throughout stressful times. Statistically, they are supposed to act as

moderators, affecting the stage of depressive cognitions. Although most studies have focused on finding a linear association between psychosocial variables and suicidal behaviors, more empirical evidence shows that family structure and friends support would moderate the effect of negative cognitions and emotions on suicide (Davidson & Range, 1999; Rubenstein, Halton, Kasten, Rubin, & Stechler, 1998; Sandoval & Brock, 1996; Wastell & Shaw, 1999; Wodarski & Feit, 1997).

The current study presents a systematic review of committed and attempted suicides in Iran. This study focuses on the rate of committed and attempted suicides as well as psychological problems in people to appraise, synthesize, and report evidence from their outcomes. Also, in this review study, the researcher tries to answer the following questions: 1. Is there a difference in suicide rate between males and females? 2. Is there a difference between male and female suicides in Iran? 3. Is there a psychological problem related to suicide in Iran?

Methods

Sample and Data Collection

The sample population of this systematic review includes 10258 committed and attempted suicides from 2000 to 2012. This sample includes 7170 females and 3088 males. This study integrated descriptive studies that reported data on committed suicide, attempted suicide, and people at risk for suicide. This research includes events related to suicide: preparatory acts toward imminent suicidal behaviors, suicidal ideation, and self-injurious behavior. It also consists of studies adopting proxy measures to identify patients with psychological problems. The researcher searched the reference lists of relevant Iranian articles which covered a period from 2000 to 2012. The researcher examined all titles and abstracts, and obtained full texts of potentially relevant papers. Working independently, the researcher read the papers and determined whether they met the inclusion criteria. She resolved disagreement by consensus, and extracted data independently using a standardized form (www.SID.com). This study did not include articles published in languages other than Persian.

The information from the articles used in this study is collected from suicide attempt persons, families and friends are at the discretion of the researcher. The form lists several presumptive contributing causes for suicide; (mood disorder, depression, economic problems, legal problems, emotional problems, isolation, family background, and present psychiatric care) and several characteristics related to suicide itself such as suicide committed at home, a suicide note left and previous talk or gestures of suicide.

Data synthesis

The outcome measure included in this analysis was committed suicide and attempted suicide. Suicide attempts had to be sufficiently serious to have led to medical contact. A patient was considered to have made a suicide attempt if there were diagnostic psychological problems. This study included self-fired, self-inflicted injury from poisoning, hanging, submersion, firearms, cutting or piercing, jumping from high places, etc.

Results

In this study Figure 1 is a forest plot of the rate of committed and attempted suicides in males and females from 15 articles in Iran. In this research, the summary of odds ratio is less than 1.0 meaning that the rate of committed and attempted suicides is high. This figure also shows that the 95% confidence interval is .899 to 1.072. In addition in this research Figure 2 illustrates funnel plot, using data from 15 studies about the rate of committed and attempted suicides in Iran. The horizontal axis of figure 2 (odds ratio) is drawn on a log scale. The standard error of the log odds ratio is plotted on the vertical axis. The large-scales studies have the lowest standard errors. Therefore, in the current study, whose sample population is large, the vertical axis should be zero. Furthermore, Figure 3 is a forest plot

of the relationship between psychological problems of suicide attempts and committed suicides from 6 studies in Iran.

In this research, the studies by Barekatin, Tavakoli, and Taher Neshatdoost (2008), Bapiri, Bahamien, and Feizollahi (2009), Moradi, Akbari ZardKhaneh, Cheraghi, and Foladvand (2009) show that the odds ratio is lower than 1.0 meaning that the psychological problems such as depression, anxiety and mood disorder are associated with higher risk of committed and attempted suicides in Iran. Also based on this figure, the studies by Mohamadkhani (2001), Shakeri, Parvizifard, Sadagi, and Moradi (2005) and Hoseinai, Moradi, and Pazhoomand (2005) show that the odds ratio is greater than 1.0 meaning that the psychological problem is associated with lower risk of suicide. This figure also shows that the 95% confidence interval is .951 to 1.402. Finally, Figure 4 illustrates funnel plot, using data from 6 studies about the relation between psychological problems and suicides in Iran.

Discussion

This study is a systematic review of the rate of suicides between males and females and personality characteristics of female and male suicides in Iran. The researcher tries to answer these questions: 1. Is there a difference in the suicide rate between males and females in Iran? 2. Is there a difference between male and female suicides in Iran? 3. Is there a psychological problem related to suicide in Iran? The summary of results for 15 studies shows that odds ratio is less than 1. This means that there are differences in the rate of suicide between males and females, and the results of 6 studies about psychological problems show that odds ratio for 3 studies is less than 1, meaning that there is a relationship between psychological problems and suicides in Iran. In addition, the odds ratio for other 3 studies is greater than 1, meaning that psychological problems are less related to suicide in Iran.

Previous studies in Iran illustrate that the rate of suicide in females is higher than in males (e.g. Anbari, 2010; Shams Alizadeh, Afkhamzada, Mohsanpor, & Salhyan, 2010; Tanomand & Avjaq, 2000). Suicide females in Iran are protesting against bad situation. In the Iranian culture, for example, divorce is an awfully bad event for the female's family and when the married wife faces a family problem with her husband, she often commits suicide to resolve the issue. The researcher believes that if divorce increases, the number of suicide will decrease. Also in Iran, poor families force the daughter into marriage to an old rich man and do not let their daughter have a marriage out of love. In Iran, marriage for a woman is not a protective support, but causes stress. Furthermore, unemployed husbands annoy their wives and children. The above reasons are the important causes of increased female suicides in Iran. Suicide is a critical determinant of death in Iran. Based on Moradi and Khademi (2002), the rate of suicide in Iran is 4.4% among 100,000 people. However, the previous studies in Iran show that the rate of suicide in young women aged 15-35 years has increased (e.g. Tabrizi., 1993; Well-being Organization, 1996; Yasemi. et al., 1998).

The earlier studies in Iran demonstrate that suicide in unmarried males and married females is higher than in single females and married males. In Iran, marriage for men provides a protective umbrella and saves them. This finding is in line with the findings by Trovato (1991). In addition, in Iran the main factors for male suicide is unemployment, economic problem, and drugs abuse but the important factors for female suicide are failure in love and education, and body punishment by family and spouse. Furthermore the results of this study illustrate that psychological problems such as mood disorder, depression, and anxiety are less related to suicide in Iran because summary of odd ratio bigger than 1.0, meaning that the psychological problems such as depression, anxiety and mood disorder are less related with higher risk of committed and attempted suicides in Iran.

Conclusion

This study is the first systematic review description of suicide in Iran. Like other countries, based on previous studies in Iran, the committed and attempted suicides are related to personality problems such

as mood disorder, depression, anxiety and schizophrenia. Furthermore, the finding of previous studies in Iran shows that the number of suicide in females is higher than in males and this is opposite to the studies in other countries, because in other countries committed suicide in males is more than in females. The important reason for a high number of suicides in females in Iran is related to limitations of culture, religion, and family freedom.

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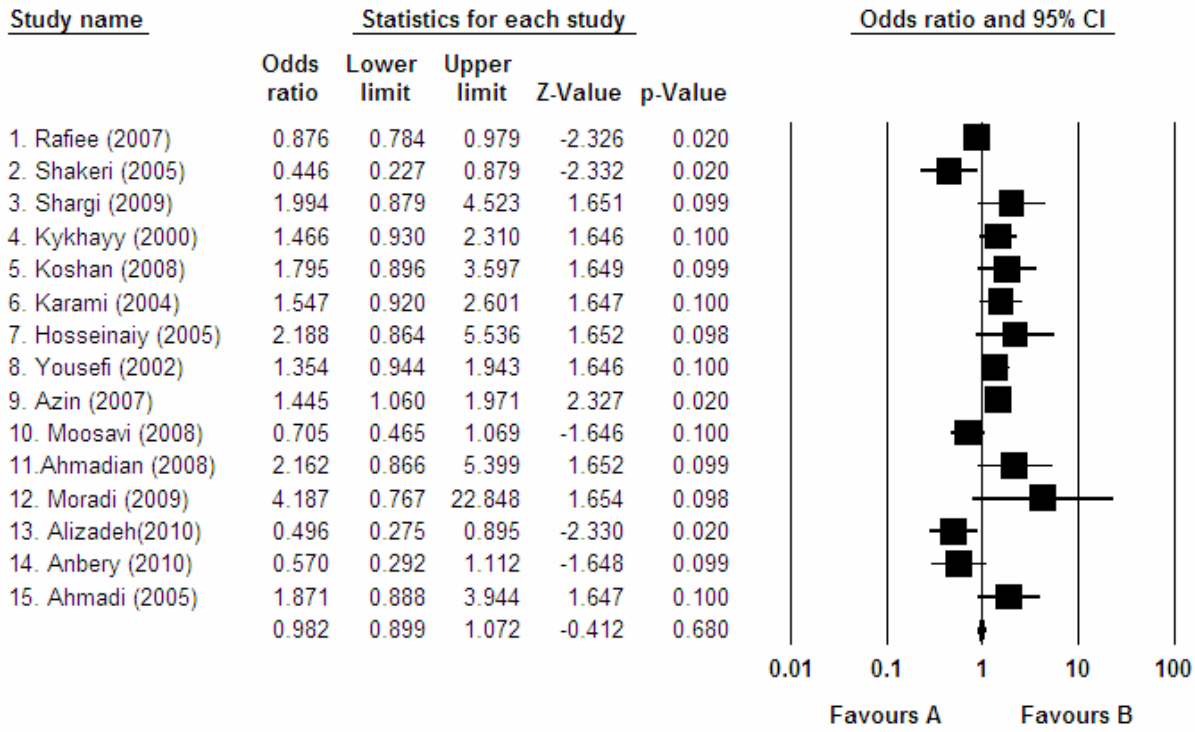
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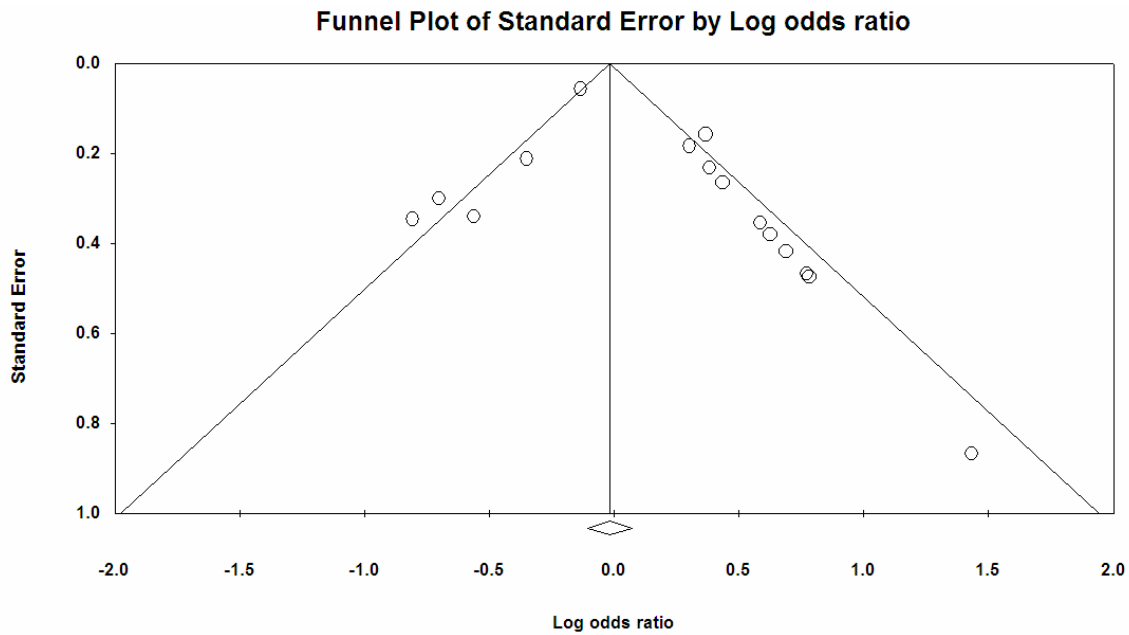
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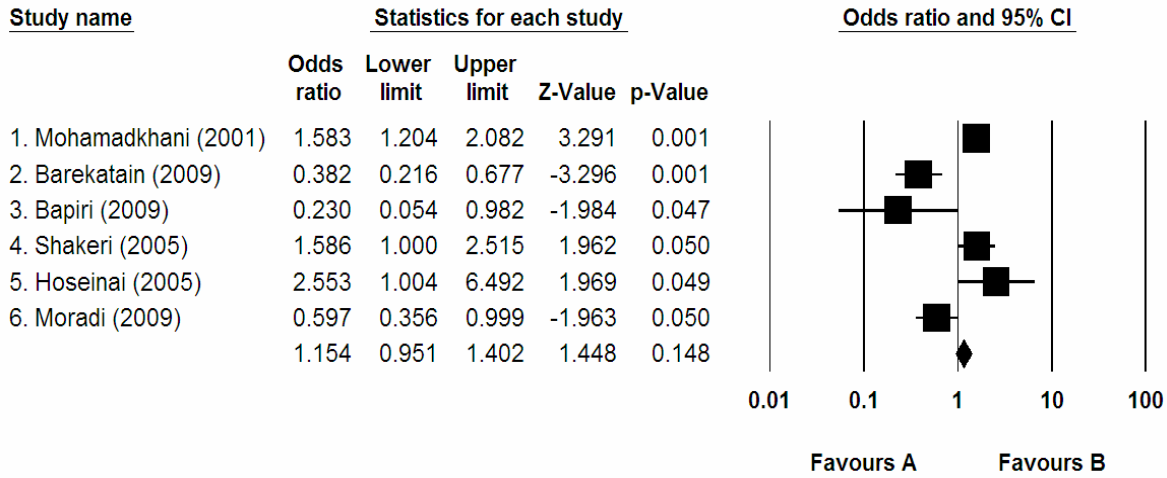
The data analysis of 15 studies is shown in Figure 1.



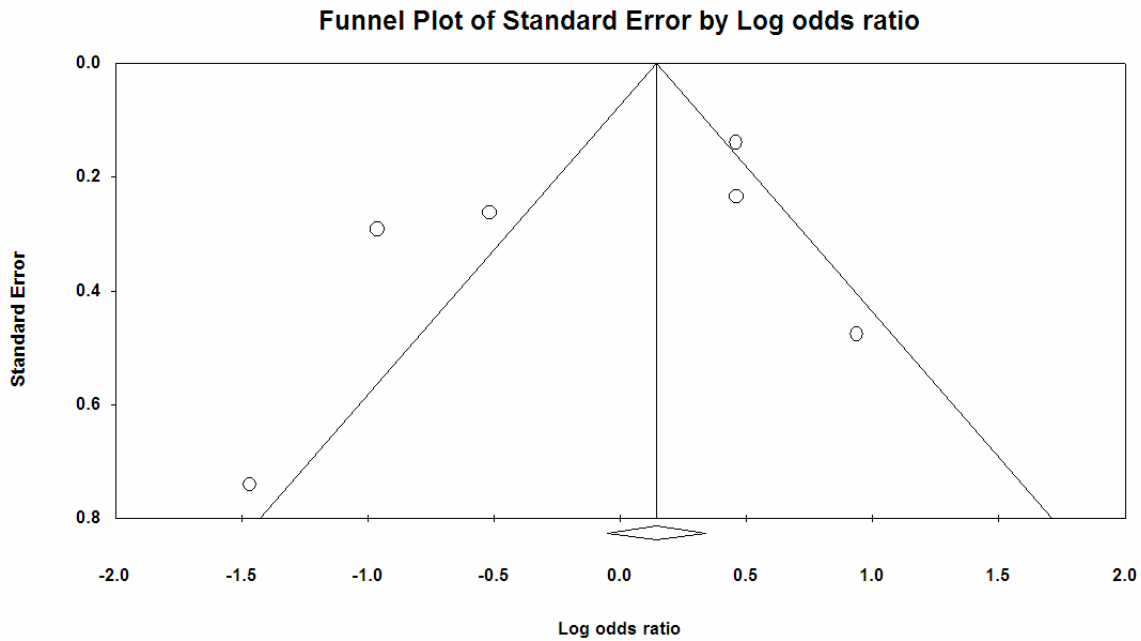
Meta Analysis



The data analysis of 6 studies is shown in Figure 3.



Meta Analysis



Article received: 2013-10-09