

# The relationship between childhood traumas and stressors of recent year with suicide attempt and general health in adulthood

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## ABSTRACT

**Background and Objective:** Suicide is a major health problem in adult, and it is estimated that by 2020 every 20 seconds, a death due to suicide occurs on average every 20 seconds. Therefore, by comprehensive investigating of this social problem and finding ways to cope, the deaths from suicide should be minimized. Since base of adulthood has been built in childhood, this study aimed to investigate the relationship between childhood injuries and stressors of a recent year with suicidal attempts and general health in adulthood.

**Materials and Methods:** This is a case-control study. The sample of this study was 156 people referred and hospitalized to Kashani Hospital in Shahrekord city. The samples were randomly divided into two groups: control (78) and case (experiment) (78). Data were collected by Childhood Trauma questionnaire (CTQ: physical neglect, emotional neglect, sexual abuse, physical abuse, emotional abuse), General Health Questionnaire (GHQ), Holmes and Rahe Stress Scale Questionnaire and were analyzed using SPSS 20 software. In this study, Chi-square, T test, Mann-Whitney, Scheffe and variance analysis were used.

**Results:** GHQ scores in case and control groups were 45.47 and 35.34 respectively. In CTQ items results show that only emotional neglect has higher score in case group (16.33 versus 14.32 in control group). Scores of Holms and Rahe Questionnaire were 180.20 and 173.88 in case and control groups respectively. According to these results there was a significant difference between general health ( $p=0.006$ ) and emotional neglect ( $p=0.012$ ) in two groups. But there was no significant difference between two groups in terms of stressors ( $P=0.701$ ).

**Conclusion:** According to the results of this study, general health and childhood traumas especially emotional neglect are effective on attempt to suicide in adulthood.

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**Keywords:** suicide, stressors, psychological traumas, childhood injuries

## Introduction

Suicide is among the top ten causes of death in different countries of the world, and annually more than 1 million people per year suicide<sup>1</sup>. The suicide rate in Iran, though lower than that of other countries, but a survey conducted in the country shows that it has increased by 6 times in the years 1986-1997, regardless of population growth over recent years<sup>2</sup>. The number of people who commit suicide in Iran is about 5,000 in a year, in addition to the number of people who commit suicide in different parts of the country, but are not included in the annual statistics. Since every person who commits suicide is a member of a six-member Iranian household, at least 30,000 people in our country somehow deal with the problem of suicide and its psychological and social consequences. Suicide prevention has always been a health issue and has always been a concern of the Ministry of Health. Therefore Plans are currently underway to "Prevent Suicide by treatment of Depression "and" Develop an Integrated Suicide Prevention Program" at PHC since 2007 with the aim of planning to reduce suicide rate through national planning. According to published statistics, the rate of suicide has increased

from 1.3 in 100,000 in 1986 to 6.4 in 2005. Suicide was the ninth leading cause of death in men with 7.6 per 100,000 populations and tenth in mortality rate of 1.5 per 100,000. In recent years, due to the increase in suicide attempt and other social problems that have caused it, it has become necessary to pay more attention to suicide prevention planning and to implement a suicide prevention integration plan in the health network<sup>2</sup>. Investigations, had detected that people with various chronic diseases such as diabetics, chronic renal failure and cancer patients are more prone to suicide<sup>3-7</sup>. Prevention of suicide has always been a health problem<sup>8</sup>. Although the rate of suicide in Iran is very low compared to other advanced (developed) industrial countries, studies from the past two decades have shown that this problem is rising<sup>9</sup>. According to data from 53 countries in 1996, the standardized suicide rate according to age was 15.1 per 100,000 people. This rate was reported 24 per 100,000 in men and 6.8 per 100,000 in women<sup>10</sup>. Today, population density in cities, heterogeneity of people together, feeling homesick, loneliness, decreasing the number of families and decreasing family affection, are among the factors of suicide attempt<sup>11</sup>. Many suicidal behaviors, especially in adolescents, are related to social

factors, and these are more common in people whose family life has been stressed for a long time<sup>12-15</sup>. According to the World Health Organization (WHO), about 1 million people died due to suicide in 2000, and it is estimated that 1,530,000 people would commit suicide in 2020<sup>16</sup>. Considering the increasing rate of suicide in the world as well as in Iran, and considering the social, economic and psychological consequences of suicide, the study of the underlying causes of this problem seems necessary to prevent this global crisis. Studies conducted in other countries attest to the relationship between childhood traumatic and suicide attempts, but so far this relationship has not been studied in Iran. Despite the fact that all people with severe stressful experiences did not commit suicide, however, all those who committed suicide had experienced stress<sup>17</sup>. Research shows that children's disorders are closely linked to their parents' psychological problems and their parental practices, and spirituality affects suicide<sup>18</sup>. Several studies have also shown that long-term emotional, physical, and sexual abuse of childhood lead to cases such as personality disorders<sup>19-21</sup>. Substance abuse<sup>22</sup>, major depression and suicide<sup>20-24</sup>. These conditions may be due to previous anomalies or organ dysfunction that leads to major depression and even suicide<sup>25-29</sup>. However, there is still no specific mechanism for explaining the relationship between childhood abuse and mental health problems in adulthood<sup>21,22,24</sup>. Studies on substance abusers have shown that suicide history in the family, as well as trauma in childhood and adolescence, have been correlated with suicidal attempts in adulthood<sup>30,31</sup>. Severe traumas increase impulsivity, which results in a reduction in brain capacity to inhibit activities and control negative emotions. This impulsivity and not inhibiting negative emotions increases self-harm behaviors and suicide attempts<sup>23</sup>. The results of the studies show that in the individuals who attempted suicide several times, the family history of suicidal behavior and the rate of childhood and adolescence abuse are higher<sup>32</sup>. Child abuse is a widespread international problem and the consequences of it are different<sup>33</sup>. Emotional stress, viral, malignancy, neural and endocrine organ malfunctions may be the consequences of child abuse<sup>34-38</sup>. Child abuse is a general term used to describe all forms of abuses: negligence, physical abuse, sexual harassment, neglect and emotional harassment and, more recently, domestic violence<sup>39</sup>. Child abuse affects children of any race, color, social class, and religion, for all ages<sup>40</sup>. Of all 43 American children, one person is physically abused, particularly in the first week of life, are neglected by parents. Approximately, 500 American children in each age group will be victimized by unhealthy parenting behaviors<sup>41</sup>. The relationship between childhood traumas and increased risk of suicidal behavior has been seen in both general and clinical populations<sup>42</sup>. Childhood traumas are significantly associated with early onset of suicide attempts<sup>32</sup>. Unsafe attachment and childhood traumas are related to suicidal behavior<sup>43</sup>. In a research on people with substance abuse, it was found that the history of suicide in the family, as well as childhood and adolescent trauma, led to the prevalence of suicidal behaviors in adulthood<sup>24,30,31,41</sup>. Therefore, with the increasing rate of suicide in the world as well as in Iran, and given that suicide because of its social, economic and psychological consequences imposes abundant losses to society, studying the underlying factors in this regard in order to prevent the world crisis seems indispensable. Therefore, factors that can predict suicide behavior are very important. For this, the aim of this study was to determine the relationship between childhood traumas and stressors of a recent year with suicide attempt and general health in patients referred to Kashani Hospital in Shahrekord, Iran.

## Materials and methods

The present study is a case-control one. This project was approved at the Ethics Committee of the Research and Technology Dept.

of Shahrekord University of Medical Sciences. 156 subjects (in two groups of case and control) referred to Hospital by using convenience sampling method participated in this study. The case group included individuals who were hospitalized for attempted to suicide, and the control group were patients who were admitted for another reason in the general department of hospital. The participants were matched in age and gender.

In this study, standard questionnaires were used for data collection. They included demographic information, Childhood Trauma questionnaire (CTQ), General Health Questionnaire (GHQ), Holmes and Rahe Stress Scale. Childhood Traumatic Inventory (CTI) with Cronbach's alpha between 0.79 and 0.94<sup>44,45</sup>, the mental health status questionnaire (GHQ) with Cronbach's alpha 0.90 (46, 47) and Holmes and Rahe Stress Scale with Cronbach's alpha of 0.72<sup>48</sup>. CTQ is a 28-item self-report measure which inquires about five types of maltreatment: 1) emotional abuse, 2) physical abuse, 3) sexual abuse, 4) emotional neglect, and 5) physical neglect. A five-point Likert score is used for scoring. For the never option, the number zero is considered. For the rarely option number 1, sometimes option number 2, often option number 3 and very often option number 4 is considered. For physical neglect and emotional neglect subscales. Scoring is reversed.

CTQ subscale scores are noted in Table 1<sup>44,45</sup>.

GHQ-28 (28 item) is a psychometric screening tool that screen prevalent psychiatric disorders. This instrument covers four main areas: somatic symptoms, anxiety and insomnia, social dysfunction and severe depression and each domain have 7 questions.

In this scale using behavioral items with a 4-point scale indicating the following frequencies of experience: "not at all", "no more than usual", "rather more than usual" and "much more than usual". The scoring system applied in this instrument is the Likert scale 0, 1, 2, 3. The minimum score for the 28 version is 0, and the maximum is 84. Higher GHQ-28 scores indicate higher levels of distress. Participants with total scores of 23 or below should be classified as non-psychiatric, while participants with scores >24 may be classified as psychiatric<sup>46,47</sup>.

Holmes and Rahe Stress Scale: Thomas Holmes and Richard Rahe constructed a social readjustment rating scale after asking hundreds of persons from varying backgrounds to rank the relative degree of adjustment required by changing life events. Holmes and Rahe listed 43 life events associated with varying amounts of disruption and stress in average persons' lives and assigned each of them a certain number of units.

Interpretation of unites is as following:

**150 unit or less:** a relatively low amount of life change and a low susceptibility to stress-induced health breakdown

**150 to 300 unit:** 50% chance of health breakdown in the next 2 years

**300 unit or more:** 90% chance of health breakdown in the next 2 years, according to the Holmes-Rahe statistical prediction model<sup>48</sup>.

Inclusion criteria included age 18-65, lack of psychosis and physical illness, mental retardation, non-use of drugs or substances, and informed consent, and the exclusion criteria were non-cooperation and patients' death. After completing the questionnaires, the collected data were analyzed using SPSS software version 20 using Chi-square, T test, Mann-Whitney, Scheffe and variance analysis.

## Results

The results showed that there was no significant difference between the two groups in terms of sex, education, marital status and place of residence (Table 2).

The results of the study regarding the relationship rate of childhood trauma in two groups of case and control indicated that there was a significant difference in emotional negligence between the two groups ( $P < 0.05$ ). However, there is no significant difference between the two groups in terms of physical neglect, sexual abuse, physical abuse and emotional abuse (Table 3).

The results also showed a significant difference between the two groups regarding general health ( $P < 0.05$ ), so that the case group had lower general health (Table 4).

The results of the study indicate that there is a significant difference between the two groups of case and control in terms of general health components. So, in the case group, physical symptoms, anxiety, social function and depression were in a worse situation (Table 5).

In table 6 we show that the comparison of the stressors in the two case and control groups was not statistically significant, so that the two groups experienced equal stressors during the past year.

According to Table 6, the components of general health among the case and control groups are significant based on repeated suicide ( $P < 0.05$ ).

## Discussion

The results of the study showed that there are significant differences between childhood traumas in two groups. So that emotional negligence is most important. The importance of childhood traumas in suicidal ideation in adulthood in different countries has been reviewed. Afifi et al. reported that exposure to physical abuse, sexual abuse, or witnessed domestic violence during childhood increased by 16 to 50 percent the thoughts and behaviors of suicidal attempts<sup>49</sup>. Similarly, clinical studies report that childhood trauma is associated with suicidal attempts in adolescents with various psychiatric disorders<sup>20</sup>. The results of the study by Shams Alizadeh and colleagues showed that suicidal thoughts and suicide attempts are prevalent and factors such as previous history of suicide, education level, field of study, and residence have a direct and significant relationship with suicidal attempts<sup>2</sup>. The results of this study showed that there is a significant relationship between general health and spiritual health in the two groups. The results of other studies showed that the general health of people and the symptoms of depression were significantly associated with an

Table 1: subscale scores of CTQ

Severity of abuse	Physical neglect	Emotional neglect	Sexual abuse	Physical abuse	Emotional abuse
None	7≤	9≤	5≤	7≤	8≤
Low	8 -9	21 -21	6 -7	8 -9	9 -21
Moderate	21 -21	21 -27	8 -21	21 -21	21 -21
Severe	13≥	18≥	13≥	13≥	16≥

Table 2: Demographic characteristics of case and control groups

Variable	Group	Groups				P value
		Control		Case (experiment)		
		Number	Percent	Number	Percent	
Gender	Male	30	38.5	31	7.39	0.87
	Female	48	61.5	47	3.60	
Education	Illiterate	0	0	1	1.3	0.421
	Elementary	9	11.5	11	14.1	
	Secondary	17	21.8	18	23.1	
	High School	30	38.5	26	33.3	
	Associate degree	0	0	2	2.6	
	Bachelor	15	19.2	18	23.1	
	Master	5	6.4	2	2.6	
	Ph.d	2	2.6	0	0	
Marital status	Unmarried (single)	37	47.4	44	56.4	0.384
	Married	30	38.5	20	25.6	
	Divorced	5	6.4	8	10.3	
	Widow	6	7.7	6	7.7	
Location (Adress)	Shahrkord	41	51.3	50	64.1	0.25
	Non-Shahrkord	36	48.8	28	35.9	

Table 3: Childhood traumas scores in case and control groups

Childhood traumas	Mean± Standard deviation		P-value
	Control	Case	
physical neglect	17.47±5.08	18.5±5.46	0.425
emotional neglect	14.32±5.58	16.33±5.7	0.012*
sexual abuse	22.5±4.02	21.41±4.2	0.124
physical abuse	19.66±3.63	18.7±4.71	0.429
emotional abuse	16.35±4.99	17.74±5.8	0.066

\*: Indicates a significant difference at the level of  $p < 0.05$

Table 4: General health scores in two groups

Group	General Health (mean ± standard deviation)	P-value
Case (Experiment)	45.47 ± 22.42	<0.05
Control	35.34±21.07	

Table 5: Comparison of general health components scores in case and control groups

General health components	Groups	mean ± standard deviation	p-value
Physical Symptoms	Control	1.2674±1.765	0.00*
	Case	1.522±1.08	
Anxiety	Control	1.2673±0.779	0.001*
	Case	1.60±1.04	
Social Function	Control	1.2839±0.776	0.00*
	Case	1.6850±1.05	
Depression	Control	1.2344±0.78	0.006*
	Case	1.6868±1.08	

\*: Indicates a significant difference at the level of  $p < 0.05$

Table 6: Scores of stressors in case and control groups

Group	Mean	SD	p-value
Control	173.88	103.85	0.701
Case (experiment)	180.20	103.56	

increase in suicidal thoughts<sup>50</sup>. General health status and stress levels of students and university students are significantly related to suicidal ideation<sup>51</sup>. The results of this study, like the results of other studies, show well the relationship between general health and spiritual well-being with suicide attempt. There are many studies that report that about one in five people who commit suicide have contacted psychiatric clinics a month before committing suicide<sup>2</sup>. The results of the study by Wile et al showed that providing mental health services can reduce the suicide rate in the population, and studying this relationship can help prevent suicide in the future and improve the mental and spiritual conditions of patients<sup>52</sup>. According to Conwell et al., mental illness and spiritual anomalies are one of the most important risk factors for suicide<sup>53</sup>.

The results of Joiner et al. showed that general health in people committing suicide is much lower<sup>54</sup>. Regarding the fact that there was no difference between the last year's stressors in the two groups. It can be concluded that high stressors in the presence of good general and mental health have little role in committing suicide, although the relationship between stressors and suicide attempts has been noted in various studies, it has even been pointed out that patients who are being treated in emergency department for suicide attempt they mention at least one of the stressors in their lives<sup>55,56</sup>.

## Conclusion

Based on the results, it can be admitted that the role of various factors such as emotional neglect in childhood and general health in the attempt to suicide in different societies and individuals is different and in order to create solutions to prevent this phenomenon in the community, the role of all these factors must be carefully examined and steps taken to reduce these factors. Considering the importance of the role of the childhood, it seems to be necessary to provide parents with the necessary education for child-rearing and children's emotional education as well as paying attention to the spiritual and physical well-being of people of different ages and creating programs to improve the health status of people, it would be possible to greatly reduce suicide and its complications. Since in

Iran traditional parenting is dominant in almost families it seems that classic and academic parenting training should be integrated in to the health and education systems.

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