

Exploring the risk factors contributing to suicide attempt among adolescents: A qualitative study

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ABSTRACT

Background: Since suicide attempt among adolescents is a major challenge and the reasons why this age group attempt suicide are complex, the aim of this study was to investigate the risk factors that contribute to suicide attempt among adolescents.

Materials and Methods: In this qualitative content analysis, 14 adolescents (12–19 years old) who were admitted in two hospitals in Shiraz, Iran, were interviewed. Participants who tried attempt suicide with medication were selected by purposive sampling and the data were gathered by semi-structured interviews. Data analysis was guided by the conventional approach of qualitative content analysis.

Results: Three major themes and 13 subthemes emerged from data analysis. The main themes were: (a) Individual factors and experiences (psycho-emotional problems, puberty, religious beliefs, stress management strategies, marriage and love, field and level of education); (b) family factors (family structure, family relationship, family economic features, family health conditions); and (c) social factors (suicidal behavior in others, media influence, professional support).

Conclusions: This study identified three major themes related to suicide attempt among adolescents in the context. As a result, suicide prevention and care provision should formulate a comprehensive method, considering the interaction of medical besides individual, familiar, and social factors in their assessment and care provision.

Key words: Adolescent, content analysis, Iran, qualitative research, risk factors, suicide attempt

INTRODUCTION

An attempted suicide is referred to as a non-fatal act in which the individual deliberately puts himself at the risk of death.^[1] The World Health Organization (WHO) estimated in 2002 that every year, almost 1 million people die from suicide and the worldwide incidence of suicide is 16 per 100,000 or one death every

40 s. However, this figure is up to 20 times more for people attempting suicide.^[2]

In addition, WHO studies in 2009 show that adolescent people are often at risk, and suicide is the second largest cause of mortality in this group.^[3] Also, in Iran, a systematic review of the research on suicide and attempted suicide shows that attempting suicide is prevalent among adolescents.^[4] In the study conduct by Haghghat *et al.* on the epidemiology of pediatric acute poisoning in Shiraz (southern Iran), prevalence of attempting suicide was estimated to be 38.5%, which was a significant increase compared to that reported in a previous study in 2005 (prevalence 15.8%).^[5]

Suicide is a multidimensional phenomenon which has different meanings among adolescents in different cultures and places.^[6,7] In recent studies, individual,

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family, psychosocial, and cultural factors contribute to adolescents attempting suicide. Also, suicide can be seen as a psychological phenomenon, social phenomenon, and as a phenomenon associated with psychiatric disorders, genetic and biologic problems.^[6,8-11] Thus, suicide is defined by many factors and a deep understanding of this issue is necessary for prevention and rehabilitation of those attempting suicide. Hence, a qualitative method of exploring suicide attempt for nurses can help them understand the depth of suffering experienced by these individuals and provide incentives for nurses to pursue a more deliberate and systematic care for these people.^[9,12,13]

A qualitative method was selected for this study to provide a deep and broad understanding of this complex, multidimensional phenomenon. Therefore, risk factors contributing to suicide attempt among adolescents in different cultures and regions must be identified with qualitative methods. Due to the lack of studies on this subject using qualitative methods in Iran, this study was carried out to explore the risk factors contributing to suicide attempt among adolescents.

MATERIALS AND METHODS

The present study was conducted using qualitative content analysis and aimed to investigate the risk factors contributing to suicide attempt among adolescents. One of the three approaches to qualitative content analysis is conventional qualitative content analysis. In this approach, coded categories are derived directly and inductively from the raw data during analysis without forcing preconceived categories or theoretical perspectives.^[14,15]

The participants were adolescents (12–19 years old) admitted to Namazi and Ali Asghar hospitals affiliated to Shiraz University of Medical Sciences from September 2013 to April 2014 after attempting suicide with medications. The diagnosis of attempting suicide was confirmed by attending physicians in the emergency wards of the hospitals. At first, the first author visited the participants in the hospitals in order to have an initial contact and take an appointment for the interview when they were discharged from the hospitals. Upon agreement, the interview was conducted 72–96 h after their discharge from the hospitals. The appropriate time for interview was determined according to the patients' medical conditions and their communication ability. Exclusion criteria were participants' inability to express their experiences due to lack of interest or suffering from acute psychosis and severe depression. Participants were selected by purposeful sampling procedure according to maximum variation approach from various genders, different cultures, and diverse socio-economical classes.

Purposeful sampling method is a common method for seeking people who have rich information about the phenomenon and can provide information needed for answering the research questions.^[16]

The interviews began with the interviewer introducing and explaining the aim and procedure of the study.

Data were gathered by semi-structured interviews. The interviews began with a general question, "*How do you describe one day of your life if you decide to explain it?*," and then the interviews continued with such questions as: "*Talk about your feelings before attempting suicide,*" "*Can you talk about the relationship with parents?*," "*Take an example please.*" Some critical questions were asked such as: "*How?*," "*Why?*," And "*Please tell me more.*" Finally, the interviewer asked the participants to speak about other significant issues they did not mention during the interviews.

The participants' comfort, calmness, and private places were considered during the interviews. The duration was almost 70 min for each participant. The data collection was finalized after researchers reached saturation. After 12 interviews were conducted, the 13th and 14th interviewees did not have any extra information to offer.

Data collection and analysis were performed together. At the beginning of the analysis, all the interviews were recorded, listened to several times, and entered in MAXQDA10 qualitative software. Then every interview was read word by word and the texts were broken into units. At this point, the units that had the same meaning and content were coded and categorized together. Categories were edited and the analysis continued until the formation of the coding framework. Then, based on similarities and contents, the main categories were formed by using subcategories. Finally, the main categories were organized into three themes.

The following steps were taken to improve the credibility of the study: (1) A prolonged engagement, which means that the researchers spent 8 months for data collection and data analysis; (2) using data triangulation, i.e. the data were collected from two hospitals; (3) peer debriefing, i.e. three experienced experts in qualitative research confirmed the accuracy of analysis; and (4) also, after data coding by the researchers, member checking was done by some participants to compare the findings with their experiences. They confirmed the codes. To enhance dependability and confirmability, the participants were selected from various genders, different cultures, and diverse socio-economical classes. Finally, for enhancing transferability, we tried to provide sufficient descriptive data for others to criticize the study findings.

Ethical considerations

The research was approved by the ethics committee of Shiraz University of Medical Sciences (No. 6746). All participants signed the informed consent of the interviews which was prepared in accordance with the Declaration of Helsinki. Also, informed consent was obtained from the parents of those adolescents below 15 years of age. After the interview, if the participants requested counseling, the first author advised them and all participants referred to counseling centers.

RESULTS

In this study, 14 adolescents with a mean age of 16.64 ± 1.60 years were interviewed. All participants were single. The characteristics of the adolescents are summarized in Table 1.

The codes generated from these interviews described the statements which the adolescents expressed. Three major themes and 13 subthemes emerged from data analysis [Table 2], which are discussed subsequently.

Table 1: Participants' characteristics

Case	Gender	Age (years)	Frequency of suicide attempt	Levels of education	Places of suicide attempt
A	Male	18	2	Diploma	Home
B	Male	19	2	Pre-university	Home
C	Female	18	1	Diploma	Home
D	Male	16	1	Secondary high school	Park
E	Female	15	2	First high school	School
F	Female	19	1	University student	Home
G	Female	17	1	Senior high school	Home
H	Female	15	1	First high school	Park
I	Male	16	2	Secondary high school	Street
J	Female	14	2	Guidance school	Home
K	Male	17	1	Senior high school	Home
L	Female	18	1	Diploma	Home
M	Female	16	1	Secondary high school	Home
N	Male	15	1	First high school	Home

Table 2: Summary of the study findings

Themes	Subthemes
Individual factors and experiences	Psycho-emotional problems, puberty, religious beliefs, stress management strategies, marriage and love, field and level of education
Family factors	Family structure, family relationship, family economic features, family health conditions
Social factors	Suicidal behavior in others, media influence, professional support

Individual factors and experiences

Psycho-emotional problems that are caused by the following reasons were common in adolescents, playing an important role in their suicide attempts. Common terms that the participants applied to express their psycho-emotional problems included: Depression, hopelessness, worthlessness, shameless, guilt, anger, and hate. In these states, the psycho-emotional problems experienced by the participants led them to have a maladaptive response to their problems.

Some of the participants' quotations are as follows:

"Because of all the problems that happened to me, I got depressed and I decided to use drug..." (an 18-year-old boy). *"... Before I used the pills, I felt everything was over and the future did not exist..."* (a 19-year-old girl). *"... At that moment, I said to myself that life is worthless..."* (a 17-year-old girl). *"... At that moment, I felt ashamed for my mistakes..."* (a 19-year-old boy). *"... I wanted to kill myself because I felt guilty for the sin I committed..."* (a 17-year-old boy). *"... After quarrel with my mother, I was so angry that I had never felt before..."* (an 18-year-old girl). *"... At that moment, I hated myself..."* (an 18-year-old boy).

Psycho-emotional problems experienced by adolescents have an association with their puberty. For example, menstrual period can also increase the risk of suicide. This was highlighted by one of the participants: *"I was in the menstruation period and at this time, I am always nervous... and I argue with my parents ... these pressures persuaded me to commit suicide..."* (a 19-year-old girl).

The religious conflicts in adolescents can increase the risk of attempting suicide. One of the participants said: *"... I don't think torture exists after death and I do not believe in hell. So, if I die now or after 60 years, what is the difference between them?..."* (an 18-year-old girl).

Suicide attempters do not have effective stress management strategies to solve their problems. For example, some of participants used illegal drug, alcohol, and cigarette to make them feel better. One of the participants said: *"... when I was using cannabis, my mother grumbles didn't affect me at all..."* (an 18-year-old girl).

Undoubtedly, one of the most important experiences in a person's life is a spouse choice that leads to challenges for some persons. One of the participants said: *"... a few days ago, I had a favorite suitor, but my parents didn't give me the right to choose.... I prefer death to living with the man I am not interested in..."* (an 18-year-old girl). Also, failure in love similarly affects adolescents' life. One of

the participants said, "... I think most people like to kill themselves because of failure in attainment of love..." (an 18-year-old boy).

If educational atmosphere in the society puts great pressures on adolescents, it can be problematic. In this regard, some of the statements of the participants are as follows: "This year I took part in entrance exam of university. I was not admitted in my favorite field.... I was tired and after failing in entrance exam, I became depressed..." (a 19-year-old girl). Another participant said: "I liked physical education, but it is worthless in society.... I studied computer science.... I wasn't interested in it.... I was under pressure..." (an 18-year-old girl).

Family factors

One of the important risk factors for those adolescents who attempt suicide is the issues of family dissolution. In this study, family dissolution covers adolescents living with step-parents, parents' death, and parents' divorce. One of the participants lives with his step-mother. He said: "... I live with my step-mother who has a bad temper I was tired of living in this situation. She argues with me about everything..." (a 16-years-old boy). Another participant said: "My mother's death is the worst event in my life.... I couldn't live without my mother..." (a 14-year-old girl). Moreover, one of the participants said: "... my parents got separated... now I'm on this side and that side, like a ball... sometimes I live with my mother and sometimes with my father... this situation was unbearable for me..." (a 15-year-old girl).

Communication problems among adolescents' family members may be an important factor for those attempting suicide in this group. These problems mainly appear either in poor emotional relationships between parents and adolescents or in conflicts among parents and adolescents. One of the participants said: "... My parents don't even ask me: how are you today?... Or do you need anything?... If I had intimate parents to talk about my problems, maybe I wouldn't have attempted suicide ..." (a 19-year-old girl).

In addition, conflicts between parents and adolescents were illustrated in the following examples: "... my mother objects to my dressing and when I decided to go out, she groaned.... Therefore, I used some pill..." (a 15-year-old girl).

Adolescents' concern about the economic situation of the family can be associated with the phenomenon of suicide attempt. One of the participants said: "... Why is not our house as beautiful as our neighbors' houses?... I'm ashamed of inviting my friends to our house ..." (a 17-year-old girl).

History of family mental disorders and problems will increase the risk of attempting suicide in adolescents. Some of the statements of the participants are as follows: "My father suffered from blast wave [PTSD disorder] ... For this reason, my father gets nervous quickly.... My father takes psychiatric medication... and his behavior isn't good toward me..." (a 16-year-old boy).

One of the common problems in these adolescents' family was parent's addiction to alcohol and drugs. One of the participants said: "... my father lost his job because of his addiction.... My mother went to work but my father just wasted money.... Because of addiction he was nervous and often punished me ..." (a 17-year-old girl).

Social factors

High exposure to suicide-related events in the society, such as relatives' background and watching committing suicide by actors on TV, can induce suicidal behaviors. Some of the statements of the participants are as follows: "I have a close relationship with my aunt.... I told my secrets to her.... She had also attempted suicide..." (a 15-year-old girl). Another participant said: "I attempted suicide like the actors in old movies..." (a 19-year-old boy).

Also, lack of support, especially from the mental health professionals, and social stigma because of referring to healthcare providers contribute to adolescents' suicide attempt. One of the participants said: "... I am afraid that others would find out that I refer to a psychiatrist..." (a 19-year-old girl).

DISCUSSION

Most of the adolescents who have committed suicide show history of psycho-emotional problems before their attempts.^[17,18] In this study, individual, family, and social factors drove adolescents toward these psycho-emotional problems.

Puberty is initiated by hormonal changes and menstruation is a biological marker for initiation of these changes.^[19] These changes after puberty can influence girls' behavior and can correlate with a number of detrimental outcomes.^[20] There is evidence that attempting suicide by women was significantly associated with the menstrual week and attempts made under these conditions are associated with greater severity.^[21,22]

Religious beliefs act as buffers against psychological and emotional distress and provide a factor of comfort to distressed individuals.^[23] Thus, it can be said that religion serves as a protective factor against suicide attempts.^[24]

Nevertheless, in our study, the protective effect of religion was not found.

Paying attention to the ways suicide attempter use to solve their problems is an important issue. In our study, most of the participants used ineffective stress management strategies when they were faced with problems. The results of the studies of Sun *et al.*,^[25] Kumar and George^[26] indicate that a high percentage of suicide attempters have used ineffective strategies when they were encountered with problems. The results of these studies support our findings.

One of the most prevalent psychological changes among adolescents is establishing an intimate relationship with the opposite sex to form a new family. Findings of this study as well as the results of Keyvanara and Haghshenas's^[9,27] studies revealed that difficulties in marriage and love are one of the reasons for attempting suicide by adolescents.

Field and level of education are one of the major factors in defining the social class and prestige. So, the importance of this issue in the society causes adolescents to bear great psychological pressures. Finally, if the adolescent is unable to tolerate this pressure, he/she may use unreasonable methods such as suicide to escape from such pressures.^[9]

The family is very influential in the life of adolescents. Emotional distance between adolescents and their parents, weak communication and conflict between parent and adolescent child, and significant changes in the family, such as living with step-parents, death of parents, and parents' divorce, are some of the most significant contributing factors to adolescences' tendency toward suicide.^[17,18,28] Also, several studies in Iran and other countries indicated that financial problems, poverty, and unemployment in the family contribute to adolescents' suicide.^[9,18,27]

The relationship between family health condition and suicide in adolescents has been considered in several studies. The results of these studies show that family health condition, including parental positive history of mental illnesses and parental addiction, does have an adverse impact on adolescents and may cause them to attempt suicide. The findings of these studies are congruent with our study findings.^[29-31]

Suicide can be contagious. Research shows that attempting suicide by a person can influence another person's suicidal thoughts or behavior, and this is particularly seen among adolescents. This person may be a close relative of the adolescent or the person who is talking in the media.^[32,33] A lot of suicide cases might be preventable through medical intervention. According to some evidence, professional support can have a definite role

in prevention of suicide.^[34,35] But stigma is one of the obstacles in treatment and in regaining the mental health of people with psycho-emotional problems. Stigma can arise from a person's perception or the public perception. Research shows the experience of stigma because of psycho-emotional problems being high in Iran and other countries.^[36-38] In this regard, in our study, the majority of participants expressed that either they did not receive any professional support or the received support was very little and insufficient.

In brief, this study has helped to enhance our knowledge of suicide, especially among adolescents. On the other hand, because of the significant role of context-related factors in suicide attempts, our findings are remarkably worthwhile. In Iran, there are just a few studies exploring the context-related factors of attempting suicide among adolescents. Also, this study can be advantageous beyond the Iranian context. It is possible that healthcare providers and researchers in other cultural contexts face with similar challenges like we found in this study. It is important to confirm the multiplicity and interconnection of different factors in suicide attempt in a given individual, familiar, and social situation. As a result, suicide prevention and care provision should formulate a comprehensive method, considering the interaction of medical besides social, cultural, and family factors in their assessment and care provision.

Difficulty in data collection due to social stigma toward suicide, selection of participants only from hospital-admitted cases, sampling strategy, and inability to generalize the findings to the target population were the limitations of this study.

CONCLUSION

With respect to the fact that attempting suicide by adolescents is influenced by numerous factors, the purpose of primary prevention is to identify individuals predisposed to attempting suicide based on the risk factors found in this study. In this stage, researchers suggest that the most rational strategies are educating the adolescents, families, and community, especially the schools, about the risk factors through workshops, brochures, seminars, media, promoting effective stress management strategies, and providing a support system for this group by healthcare providers. In secondary prevention, we should attempt to identify and treat psycho-emotional problems in the early stages before they become troublesome for adolescents. Also, since a history of attempting suicide is a risk factor for attempting suicide again, in tertiary prevention, these adolescents should be under control and support after discharge from the hospital to avoid a recurrence.

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Conflicts of interest

There are not any conflicts of interest in financial issues with any individual or third party.

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