

# Qualitative Content Analysis of Coping Strategies among Adolescents with Suicidal Thoughts

Mohammad-Rafi Bazrafshan<sup>1</sup>, PhD;<sup>ORCID</sup> Amir Mansouri<sup>2</sup>, MSc; Zohreh Faramarzian<sup>1</sup>, MSc; Omid Soufi<sup>3</sup>, Hamed Delam<sup>4\*</sup>, MSc;<sup>ORCID</sup> Behnam Masmouei<sup>5</sup>, Esmail Kavi<sup>1</sup>, MSc

<sup>1</sup>Department of Nursing, School of Nursing, Larestan University of Medical Sciences, Larestan, Iran

<sup>2</sup>Department of Paramedical School, Gerash University of Medical Sciences, Gerash, Iran

<sup>3</sup>Student of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

<sup>4</sup>Student Research Committee, Larestan University of Medical Sciences, Larestan, Iran

<sup>5</sup>School of Nursing Hazrat Zahra (P.B.U.H) Abadeh, Shiraz University of Medical Sciences, Shiraz, Iran

\*Corresponding author: Hamed Delam, MSc; Student Research Committee, Larestan University of Medical Sciences, Larestan, Iran. Tel: +98 71 52247110; Fax: +98 71 52247111; Email: hameddelam8@yahoo.com

Received: August 27, 2021; Revised: October 24, 2021; Accepted: November 12, 2021

## Abstract

**Background:** Adolescence can be a critical period during which individuals begin to cope with self-harm behaviors, and the increasing prevalence of suicide and suicidal attempts in this period is quite tangible in different communities. Given the lack of awareness concerning tolerance strategies in individuals with suicidal behavior, we investigated coping strategies in adolescents with suicidal thoughts.

**Methods:** This qualitative research was conducted during January and February 2019 in which we used the method of qualitative content analysis. In this study, 17 adolescents with suicidal ideation referred to Larestan welfare centers, Fars province were interviewed. In addition, one psychologist and 17 parents of the adolescents participated in this research. Purposeful sampling was done. Data collection continued through semi-structured deep interviews until data saturation.

**Results:** Two main themes, namely effective coping strategies with 16 sub-themes and ineffective coping strategies with 12 sub-themes were extracted from the data.

**Conclusions:** It was concluded that using appropriate plans to strengthen positive strategies in adolescents, providing them with new positive strategies, and omitting negative strategies can be conducive to preventing suicidal thoughts.

**Keywords:** Adolescent, Coping, Suicide

**How to Cite:** Bazrafshan MR, Mansouri A, Faramarzian Z, Soufi O, Delam H, Masmouei B, Kavi E. Qualitative Content Analysis of Coping Strategies among Adolescents with Suicidal Thoughts. Int. J. School. Health. 2022;9(1):63-72. doi: 10.30476/IJSH.2022.93804.1200.

## 1. Introduction

The increasing prevalence of suicide and suicidal attempts in communities is quite tangible (1). This rise does not occur just in certain countries, and the phenomenon of suicide, especially among the adolescents, is a global health-related issue (2). An overview of previous studies suggests that adolescence can be a critical period to begin to cope with self-harm behaviors (3). It has been estimated that about 20-30% of adolescents have suicidal thoughts (4). The suicide rate in a number of Iranian provinces has also been shown to be rising among teenagers (5). Numerous studies investigated suicidal risk factors (6-8), however; many people at risk of suicide do not commit suicide. Therefore, these individuals have the capabilities that those who attempt suicide lack (9). Based on educational theory, those who have suicidal behavior should be guided to reduce unpleasant incidents and increase pleasant ones; coping method is one of these approaches. Thus, to use these techniques, we need to determine which of coping strategies people use

confronting stressful life events (10). However, factors, beliefs, and attitudes toward suicidal behavior differ in different cultures (11); qualitative research can also contribute to understanding the experiences of people who have suicidal behavior and provide helpful care (12, 13). Therefore, the researchers herein decided to conduct a qualitative research aiming at investigating life stress coping strategies among adolescents with suicidal thoughts referred to Larestan well-being centers, Fars province.

## 2. Methods

This is a qualitative research using qualitative content analysis method. In this method, the coded classes were drawn directly and inductively from raw data without any precedent or theoretical views. Finally, the codes were developed into themes and sub-themes (14). For data collection, we utilized a semi-structured interview method. In this research, the interviews were conducted with intimate communication and explanation of the purpose

of the research to the participants; the interviewer continued by asking general questions such as “If you want to describe your suicidal thoughts, what do you say?” and gradually focused on issues and problems that the participants were facing. To gather further information, the researcher used exploratory questions, such as “Can you explain more?” or “Can you give us an example? After obtaining verbal and written consent from the participants and the agreement between the interviewer and the participant, the time and place of the interview were determined. With the advancement in research and the need for further information, the interviews were conducted with parents and the psychologist. We performed the sampling to reach the level of data saturation until the classes were changed, and fully identified the properties of each floor and continued this process until no new changes were observed in the classes and their characteristics.

In this research, a purpose-based sampling method was first used and according to the objective of the study, the adolescents who were willing to share their experiences with the coping strategies used in dealing with stress in life were selected as the main contributors. Furthermore, since the most important purpose-based sampling in qualitative research has the maximum variation (15, 16), we tried to select subjects with different perspectives on this behavior and had different backgrounds and history. In the present work, the participants comprised 17 adolescents with suicidal thoughts, one psychologist, and 17 parents of the adolescents. The interviews were conducted during January and February 2019. The average duration of the interviews was 30 minutes.

#### **Inclusion Criteria:**

1. Willingness to participate in the research;
2. Volunteers aged from 12 to 19 years old;
3. Familiarity with the Persian language;

4. Suicidal thoughts as confirmed by the psychiatric center of welfare.

#### **Exclusion Criteria:**

1. Unwillingness of the participants or their parents to participate in the research.

To analyze the data, the content of each interview was primarily typed in Microsoft Office Word and then entered into MAXQDA 10 software. Subsequently, the researcher read each interview word by word, and each text was divided into meaningful units. The units with the same meanings were then categorized in one class together.

The Lincoln and Guba's criteria were used to improve the accuracy and rigor of the findings (17). The long-term involvement of the researcher in the process of data collection and analysis, writing the reminders, verifying the accuracy of data analysis by qualitative research experts, and checking the initial codes by contributors increased the acceptance of the obtained data in this study. To boost the consistency and accuracy of the data, we tried to perform the sampling with the maximum variation. Finally, to increase the power of data transferability, we made an attempt to provide a sufficient description of the data for the critical study of the findings by other researchers. The Ethics Committee of Larestan University of Medical Sciences, Fars province approved the current research with the code of IR.LARUMS.REC.1397.003.

### **3. Results**

Herein, we recruited 35 subjects, out of whom 17 adolescents were referred to welfare centers of Larestan, Fars province due to suicidal thoughts. Moreover, a member of the treatment team (psychologist) and 17 parents of the adolescents participated in this study. The adolescents' age ranged from 13 to 17 with the mean age of  $15.47 \pm 1.12$  years. The codes were classified into two main themes after being summarized (Table 1).

**Table 1:** Main themes and sub-themes

Themes	Sub-themes
Effective coping strategies	Being involved in school and extracurricular activities, listening to music, reading books, watching TV and movies, playing video games, using the social media, being involved in physical activity, prayer and religious practices, counseling with experts, receiving solace from others, talking to someone, positive thinking, considering the consequences for people around them, considering the consequences for themselves, using peer support, protecting themselves from means to harm
Ineffective coping strategies	Sleeping too much, hiding problems, evading difficult situations, condemning others, being indifferent towards problems, self-injury, physical confrontation with others, isolation, shouting, destroying properties, smoking, unwillingness to resolve problems

### 3.1. *Effective Coping Strategies*

One of the coping strategies used by these adolescents for dealing with stressful situations in life included effective coping strategies. Many of these adolescents were engaged in various activities while struggling with stress and tried to get rid of distressed thoughts. In this main theme, there were 16 sub-themes as follows:

1. Being involved in school and extracurricular activities: one of the participants said “I was trying to get involved with my lessons ....” while another one stated “I’m going to attend a class in the evenings ... it reduces my suicidal thoughts.”

2. Listening to music: one of the adolescents said “I usually listen to songs when I’m having trouble ... Music gives humans a sense of comfort.”

In this regard, the psychologist mentioned that music could be a tool for reducing negative emotions and strengthening positive emotions. It has the potential to positively affect stress and negative emotions caused by some disturbing experiences in life.

3. Reading books: another one said “Reading books, especially in the field of psychology, helps me cope with my stress and solve my problems.”

One parent said “Ever since my child became more involved in reading books, he has calmed down and behaved better. I think reading books is a good distraction/emotional output.”

4. Watching TV and movies: one of the participants said “The only hobby I have is watching TV and watching movies... what else can I do?”

5. Playing video games: a subject mentioned “To calm myself, I play video games most of the times.”

6. Using the social media: another subject stated “There are a lot of social networking apps, which have a lot of content and keep me busy, so it makes me less aware of the passage of time and less likely to think about my problems.” Additionally, “My child is constantly checking her phone... ” mentioned one of their parents.

According to the psychologist, social media can be useful for adapting a person’s thoughts and behavior to deal with a problem, especially if he/she communicates with experts or support groups through the social network.

7. Being involved in a physical activity: one of the adolescents said “I have been going to different clubs in the morning and evening for some time to keep myself busy with sports because I wanted to get rid of bad thoughts.”

The psychologist said “It has been proven that the use of physical activity is an important strategy to maintain and promote physical and mental health, and it even has therapeutic properties.”

One parent mentioned “My daughter has become happier after participating in sports programs, her social relationships have improved, and she is even thinking about participating in sports competitions.”

8. Prayer and religious practices: another adolescent said “I have found in my experience that performing religious practices, such as prayer and supplication, can help me to find peace.” One of the parents stated “My son has been paying more attention to religious issues for some time; for example, he comes to the mosque with me, and I think he is calmer than before.”

9. Counseling with experts: a participants said “On the advice of my teacher, I referred to a psychology consultant with my family, and his talk was somewhat helpful.” The psychologist mentioned that there have been adolescents who have referred to a psychologist or psychiatrist and their help has been effective in improving behaviors, including suicide attempt.

The psychologist also said “Undoubtedly, people with mental health skills play an important role in helping people with mental health problems. In particular, with knowledge and experience, these people can develop coping strategies to help support people with a history of suicide.”

10. Receiving solace from others: one of the adolescents said “I am less anxious when there is peace in my family, and especially once my parents comfort and support me.”

One of the parents said “I have experienced that when I pay attention to my child’s concerns and support her, she becomes less anxious and cooperates more.”

11. Talking to someone: one of the adolescents said “If someone listens to me, I get very calm; that’s why I like someone to listen to me without judgment.”

12. Positive thinking: a subject stated “I try to get

rid of worrisome and sadness by thinking positively.” According to the psychologist, having a positive mindset is highly conducive to managing stress and finding solutions, which should be taught to children from the beginning of life.

The psychologist also said “Studies and my experiences have shown that certain personality traits, such as optimism and pessimism, can have a serious impact on health. Positive thinking, which is often associated with optimism, is a key part of effective stress management.”

13. Considering the consequences for people around them: one of the adolescents mentioned “I give up when I think about the consequences of my suicide for people close to me, including my mother.”

One of the parents said “If my child knows how much she hurts us by hurting herself, it might help improve her behavior.”

14. Considering the consequences for themselves: one of the subjects said “I think about suicide, but I also think about how it will benefit me. Therefore, I think about its undesirable consequences in this world and the hereafter.”

The psychologist mentioned that “if people understand their meaning in life, it causes them to seek knowledge and try to identify and solve the problem. In a way, self-worth is raised this way.”

15. Using peer support: one of the participants said “I and some of my friends are very close and I meet them when I am upset. A friend of mine is very supportive.”

The psychologist said “Evidence has suggested that peer support can improve mental well-being and is associated with improved positive coping strategies. I myself try to use peer support for my clients, especially young ones.”

16. Protecting themselves from the means which can harm: one of the adolescents said “I have thought about suicide many times, but I tried to protect myself from harm; for example, I do not keep my medicine or sharp objects in my room.”

### 3.2. Ineffective Coping Strategies

Although the use of coping strategies used by individuals in dealing with stress can reduce its severity,

some of these coping strategies can be ineffective. In this main theme, there are 12 sub- themes, which are described below:

1. Sleeping too much: an adolescents said “When I am under stress and have negative thoughts in mind, I like to be in bed and fall asleep as much as possible.”

One of the parents said “My son is asleep even for days and I think this way he wants to escape his problems.”

2. Hiding problems: when one of the subjects was asked “What do you think is the problem or problems that are bothering you?”, she answered “Why do you think I have a problem? I have no problems and I am not upset.”

3. Evading difficult situations: one of the adolescents said “When I feel I am in trouble at home and I feel nervous and anxious, I leave home quickly...”

One of the teenagers’ parents stated “Whenever we want to guide our son or give him advice, he leaves home ....”

4. Condemning others: a subject stated “There is a problem with my family ... they have to change themselves.”

One parent said “My daughter always condemns the family ... she says we blame her for her problems ... so she does not try to get better.”

5. Indifference towards problems: one of the adolescents said “For me, time and place do not matter because I have always had a problem, so I don’t care about them.”

6. Physical confrontation with others: One of the adolescents said “When my mind is disturbed, especially when I am angry, it causes me to lose control and attack those around me and hit them.”

One parent mentioned “Unfortunately, my son beats those around him whenever he gets angry. He even hit me several times, which made his father angry and beat him.”

According to the psychologist, some young people beat others to vent their anger. This can happen both indoors and outdoors. It can have serious consequences and complicate the problem.

7. Isolation: one of the adolescents said “Staying away from others calms me down ... my room is like a cave to me without anyone disturbing me, I am with myself and my thoughts.”

One parent said “My daughter isolates herself in her room and says she feels tranquil there. Previously, she used to do this when she was upset, but now she is in her room most of the times.”

The psychologist mentioned that isolation may be experienced by people at times of stress and grief, but if it is prolonged, it is not only an abnormal behavior, but can be a sign of mental problems, such as depression.”

8. Shouting: one of them stated “I calm down myself by shouting, thereby draining my inner negative energy... although I get a bad headache later.”

9. Property destruction: a participants stated “I do not know what to do at the moment I am upset and nervous. Unwillingly, I suddenly start shouting and breaking things.”

10. Unwillingness to resolve problems: One of them stated “Do you think my problems can be solved? Suppose they are solved; it does not matter to me anymore. I am tired of everything.”

The psychologist said “When a person avoids solving a problem or considers the problem-solving process as troublesome, and he or she does not participate in identifying and solving the problem as much as he or she has to, the problem remains practically unsolvable even with the efforts of others.”

11. Smoking: an adolescent stated “Smoking calms me down. Of course, I do this secretly without my parents knowing.”

The psychologist mentioned that since nicotine creates a sense of calmness, people smoke in the belief that it reduces stress while still not addressing the main source of stress.”

12. Self-injury: one of the adolescents said “I have wounded myself several times with a knife or glass; for example, just two weeks ago, I took a knife and started cutting my wrist.”

According to the psychologist, self-harm occurs when individuals cut, burn, hit, or bite themselves to cope with emotional pain. This is frequently seen in

young people and has bad physical consequences and could even lead to disability or death.”

#### 4. Discussion

In the present study, adolescents used a variety of coping strategies to deal with stressful situations when faced stress in provocative contexts. Some of these coping methods were classified in the main theme of effective coping strategies and some were in the main theme of ineffective coping strategies.

The effective coping methods used by these adolescents were as follows:

Engaging with school activities, doing extracurricular activities, listening to music, studying books, watching TV, playing computer games, using the social media, doing sports, and religious practice.

Once these adolescents faced stress, many of them engaged in a variety of activities. This way, they tried not to think about their problems and get rid of annoying thoughts. Adolescents tried to feel more relaxed by listening to music and performing a series of religious activities, such as praying. In this regard, the results of a study by Grasdalsmoen and colleagues showed that the history of suicidal and self-harm behavior was significantly higher among adolescents who exercised less; therefore, they highlighted the need to provide the necessary facilities for adolescents to be more active (18).

The study of Spencer and co-workers showed that people who did not have religious beliefs experienced more suicidal thoughts (19). Therefore, it could be said that according to this study and the study of Gallagher and Miller, religion is a protective factor against suicidal thoughts (20). In this regard, the study of Memon and colleagues revealed that the use of social media by adolescents, although they are exposed to learning self-harming behaviors, can be used as a means to connect with friends and other people and receive social support in young people exposed to self-harming behaviors and suicide (21).

Other coping strategies used by adolescents in this study were receiving support from parents and peers, getting counseling from mental health professionals, and talking to someone. According to adolescents' words, using the counseling services of mental health professionals has been another effective coping strategy to deal with this situation. These adolescents tended to talk to someone in times of stress to be able to regain

their peace; they preferred to be supported by others, especially their peers and parents in order to be able to get through these difficult situations more easily and control their suicidal thoughts. In this regard, the study of Gillies and co-workers showed that adolescents who were involved in suicidal thoughts and self-harm, had asked for the most help and support from their friends. For this reason, this study could suggest that all preventive measures should not only be used for adolescents themselves, but also for their peers so that they could better support these adolescents in such situations (22). Grimmond and co-workers reported that improving interpersonal relationships with family members, peers, and mental health professionals can be very helpful in overcoming these stressful situations; establishing a new relationship with even one person can be effective. Such relationships sometimes help a person to rebuild their self-confidence which is a key factor in suicide prevention (23).

Having positive thoughts and considering the effects of suicide on yourself, your friends, and relatives were other coping strategies used by adolescents in this study. A number of the adolescents with suicidal thoughts tried to relieve their stress and anxiety by thinking positively since they found it useful in controlling stress and finding solutions to their problems. In this regard, O'Connor and colleagues indicated that with an increase in positive thoughts about future, suicidal behaviors are less likely to be repeated (24).

On the other hand, according to the themes extracted in this study, the participants also used several ineffective coping methods to deal with stressful situations. Ineffective coping strategies might make adolescents feel good at that moment, but will have negative consequences in the long run. In contrast, effective coping strategies may not provide immediate satisfaction, but they result in positive outcomes in the long run (25). In this regard, the results of another study also showed that people with a history of suicide and those who have recently attempted suicide mostly use ineffective coping methods when faced stress in life. The use of these ineffective coping methods are the most important risk factors for suicide in this group (26).

Ineffective coping methods used by adolescents in this study included indifference towards problems, unwillingness to resolve problems, and hiding problems.

The obtained results herein revealed that some

participants were indifferent towards the problems they faced and they had no desire to solve the problem, and even in some cases they denied the existence of a problem to escape the tension of the situation in which they were.

Shamsi khani and colleagues believed that the common characteristics among those who commit suicide are their inability to find solutions to the problems, lack of tolerance strategies to cope with emergency stressors, lack of flexibility, and limited number of solutions offered by them (27). Gibbs showed that people who attempt suicide use more avoidance coping strategy and impulsive methods and less problem-solving coping approaches when faced stress; these people are incapable of using problem-solving skills (28). The results of the study by Pollock and Williams revealed that individuals who committed suicide had difficulty applying problem solving skills and acted in a passive way. Moreover, our results indicated that these people have much weaker problem-solving skills than others; the problem-solving skills of these people did not improve even after their depressed mood was resolved (29).

Bazrafshan and colleagues and Bapiri and co-workers also reported that teaching problem solving skills was effective in improving coping skills in adolescents who attempted suicide, and could be used to treat behavioral problems of individuals, promote health, and prevent suicide (30, 31). Moreover, the results of these studies showed that tendencies toward problem solving strategies caused the individuals to repel their own negative emotions, such as anxiety, anger, and depression; this prevented them from using problem solving strategies and showing passive responses. On the other hand, this approach can increase positive excitement, the person's perception of his competence, and the ease of solving the problem, and ultimately, helps to tackle the problems (30, 31). Such training refers to a cognitive-behavioral process that provides a variety of potentially effective and alternative responses to counteract the difficult conditions and increase the possibility of choosing the most effective response among alternative and varied responses (31).

Denying and projecting problems to others were other ineffective coping strategies applied by adolescents in this study. Our results implied that the use of inefficient coping strategies, like the aforementioned ones, in the long run caused them to escape the reality and prevents effective confrontation with the problems they will have in the future.

In this case, the results by Marty and colleagues showed some of the risk factors that might lead to the formation of suicidal ideation and thoughts in people; they included the use of ineffective coping strategies, such as avoiding the problem by denying its existence or not trying to deal with the problem when faced stressful situations (32). Bazrafshan and co-workers also reported that those who use passive coping strategies, such as denial in dealing with stressful living conditions, and blame others for their own problems were more likely to experience psychological issues, such as anxiety, depression, and aggressive behaviors, in the long run (33). In general, the use of these kinds of avoidance coping strategies when dealing with stress is associated with poor adaptability and behavioral-emotional problems, like depression and suicide attempts in adolescents (31, 34).

According to the findings of this study, some adolescents suggested that in difficult conditions, their room is known as a cave where they can regain their peace by isolating themselves; by doing this, they can be safe from the annoyance of others. In this regard, the results of a study by Grimmond and co-workers showed that physical and mental isolation was one of the main behavioral characteristics of adolescents with suicidal thoughts since they felt as if their people around could not understand their experiences or as though they were not important to those around them. Thus, these thoughts made them keep their feelings a secret and resort to self-harming or suicidal behaviors as alternative ways of expressing emotions (23).

In this study, the participants sometimes used aggression and aggressive behaviors (beating others, shouting, and running away from home) to deal with stressful situations. Based on the obtained result herein, when these adolescents were upset and angry, they lost their control, shouted, and broke the objects around them. On a number of occasions, they even beat and hurt those around them. In some cases, they ran away from home to escape the difficult situation in which they feel pressured. Zhang and colleagues reported a close relationship between physical aggressive behaviors and anger and suicidal thoughts in adolescents (35). Moreover, Conner and colleagues suggested a strong association between irritability and impulsive behaviors with suicidal thoughts. Therefore, due to the existence of this correlation, preventative measures could be used in people who were potentially prone to suicidal thoughts (36).

Unfortunately, some teenagers turn to smoking

to escape psychological stress. In this work, some teenagers who had suicidal thoughts stated they smoked in stressful situations to calm down, which is an incompatible solution. According to Huh and Cho, adolescents who smoked more often were more likely to engage in suicidal behaviors (37).

In this study, the other method used by these adolescents to escape from their psychological pains were self-harm. Epidemiologic studies have also shown that self-harm behaviors increase dramatically from the beginning of adolescence until the end of this period (38). Hamza and colleagues stated that the tendency toward self-harm and suicidal behavior (attempt to suicide and suicide) often occurs simultaneously; hence, these actions are considered as a risk factor for suicidal behaviors (39). Nock and co-workers reported that for many teenagers, self-harm is considered as a coping strategy which allows them to survive despite their painful situation. However, given the fact that this action is dangerous and incompatible, it may lead to the formation of suicidal thoughts and suicidal behavior in this group. It could be said that there is a significant correlation between self-harming actions and suicide attempts, and most teenagers with a history of suicide have a history of self-harm as well (40).

Eventually, when adolescents think their living conditions are such that it continues to be unbearable, suicide may be used as the last resort to escape psychological stresses. Otsuki stated that all the negative events that teenagers experience in life, such as emotional failure or educational problems, coupled with the inexperience of adolescents in the face of such situations, impose a heavy burden on their coping skills; thus, maladaptive coping skills and their poor ability to solve interpersonal problems make them choose suicide as the only solution available (41). The results of the study by Gvion and Apter and Hjelmeland and co-workers also confirmed that the motive for attempting suicide was to escape an unbearable and unchangeable situation because the psychological pain of failure following life events might be so severe that the person wants to get rid of this unbearable pain by committing suicide (42, 43). Therefore, it could be said that when these teenagers think they have reached a deadlock, they may choose suicide as the last resort to a painful mental state.

One of the major limitations of the present study is the impossibility of generalization of its results due to the nature of the research and the cultural diversity of different societies. On the other hand, one of the

strengths of this work is the appropriate number of samples and sufficient content extraction.

## 5. Conclusion

The findings of the current study provided information on the common strategies applied by individuals with suicidal thoughts once confronting problems. These results provided mental health professionals with the possibility to understand what coping strategies this group of people use when facing problems. Hence, they could identify and even predict coping strategies used in this group. They can also help to strengthen positive strategies in adolescents, teach them new positive strategies, and eliminate negative and especially destructive health strategies with proper planning and assistance.

## Acknowledgment

The present study is the result of a research project approved by the Vice Chancellor for Education, Research and Cultural Student of Larestan University of Medical Sciences and Health Services No. 1396-221 and funded by this Department.

## Ethical Approval

The Ethics Committee of Larestan University of Medical Sciences, Fars province approved the current research with the code of IR.LARUMS.REC.1397.003. Also, written and verbal informed consent was obtained from the participants.

**Conflict of Interest:** None declared.

## References

- Simon M, Chang ES, Zeng P, Dong X. Prevalence of suicidal ideation, attempts, and completed suicide rate in Chinese aging populations: a systematic review. *Arch Gerontol Geriatr.* 2013;57(3):250-6. doi: 10.1016/j.archger.2013.05.006. PubMed PMID: 23791030; PubMed Central PMCID: 3750072.
- Abraham ZK, Sher L. Adolescent suicide as a global public health issue. *Int J Adolesc Med Health.* 2017;31(4). doi: 10.1515/ijamh-2017-0036. PubMed PMID: 28686572.
- Brent DA, McMakin DL, Kennard BD, Goldstein TR, Mayes TL, Douaihy AB. Protecting adolescents from self-harm: a critical review of intervention studies. *J Am Acad Child Adolesc Psychiatry.* 2013;52(12):1260-71. doi: 10.1016/j.jaac.2013.09.009. PubMed PMID: 24290459; PubMed Central PMCID: PMC3873716.
- Fuller-Thomson E, Hamelin GP, Granger SJ. Suicidal ideation in a population-based sample of adolescents: implications for family medicine practice. *ISRN Family Med.* 2013;2013:282378. doi: 10.5402/2013/282378. PubMed PMID: 24967322; PubMed Central PMCID: 4041249.
- Anisi J, Majdian M, Mirzamani SM. The factors associated with suicide ideation in Iranian soldiers. *Iran J Psychiatry.* 2010;5(3):97-101. PubMed PMID: 22952500; PubMed Central PMCID: 3430507.
- Ferrara M, Terrinoni A, Williams R. Non-suicidal self-injury (Nssi) in adolescent inpatients: assessing personality features and attitude toward death. *Child Adolesc Psychiatry Ment Health.* 2012;6:12. doi: 10.1186/1753-2000-6-12. PubMed PMID: 22463124; PubMed Central PMCID: 3342109.
- Greydanus DE, Shek D. Deliberate self harm and suicide in adolescents. *Keio J Med.* 2009;58(3):144-51. doi: 10.2302/kjm.58.144. PubMed PMID: 19826208.
- Ziaei R, Viitasara E, Soares J, Sadeghi-Bazarghani H, Dastgiri S, Zeinalzadeh AH, et al. Suicidal ideation and its correlates among high school students in Iran: a cross-sectional study. *BMC Psychiatry.* 2017;17(1):147. doi: 10.1186/s12888-017-1298-y. PubMed PMID: 28427369; PubMed Central PMCID: 5397734.
- Kostenuik M, Ratnapalan M. approach to adolescent suicide prevention. *Can Fam Physician.* 2010;56(8):755-60. PubMed PMID: 20705879; PubMed Central PMCID: 2920774.
- Moradi AR, Moradi R, Mostafavi E. A survey of the rate and effective factors on suicide in Bahar. *Journal of Research in Behavioural Sciences.* 2011;10(21):50-8. Persian.
- Carpiniello B, Pinna F. The Reciprocal Relationship between Suicidality and Stigma. *Front Psychiatry.* 2017;8:35. doi: 10.3389/fpsy.2017.00035. PubMed PMID: 28337154; PubMed Central PMCID: PMC5340774.
- Vedana KGG, Magrini DF, Miasso AI, Zanetti ACG, de Souza J, Borges TL. Emergency Nursing Experiences in Assisting People With Suicidal Behavior: A Grounded Theory Study. *Arch Psychiatr Nurs.* 2017;31(4):345-51. doi: 10.1016/j.apnu.2017.04.003. PubMed PMID: 28693869.
- Talseth AG, Gilje FL. Responses of persons at risk of suicide: A critical interpretive synthesis. *Nurs Open.* 2018;5(4):469-83. doi: 10.1002/nop.2.169. PubMed PMID: 30338092; PubMed Central PMCID: PMC6178355.
- Farzaneh E, Mehrpour O, Alfred S, Hassanian Moghaddam H, Behnoush B, Seghatoleslam T. Self poisoning suicide attempts among students in Tehran, Iran. *Psychiatr Danub.* 2010;22(1):34-8. PubMed PMID: 20305588.



15. Ames H, Glenton C, Lewin S. Purposive sampling in a qualitative evidence synthesis: a worked example from a synthesis on parental perceptions of vaccination communication. *BMC Medical Research Methodology*. 2019;19. doi: 10.1186/s12874-019-0665-4.
16. Palinkas LA, Horwitz SM, Green CA, Wisdom JP, Duan N, Hoagwood K. Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Adm Policy Ment Health*. 2015;42(5):533-44. doi: 10.1007/s10488-013-0528-y. PubMed PMID: 24193818; PubMed Central PMCID: PMC4012002.
17. Lincoln YS, Guba EG. *Naturalistic inquiry*. SAGE Publications; 1985.
18. Grasdalsmoen M, Eriksen HR, Lønning KJ, Sivertsen B. Physical exercise, mental health problems, and suicide attempts in university students. *BMC Psychiatry*. 2020;20(1):175. doi: 10.1186/s12888-020-02583-3. PubMed PMID: 32299418; PubMed Central PMCID: PMC7164166.
19. Spencer RJ, Ray A, Pirl WF, Prigerson HG. Clinical correlates of suicidal thoughts in patients with advanced cancer. *Am J Geriatr Psychiatry*. 2012;20(4):327-36. doi: 10.1097/jgp.0b013e318233171a. PubMed PMID: 21989317; PubMed Central PMCID: PMC3258476.
20. Gallagher ML, Miller AB. Suicidal thoughts and behavior in children and adolescents: an ecological model of resilience. *Adolesc Res Rev*. 2018;3(2):123-154. doi: 10.1007/s40894-017-0066-z. PubMed PMID: 29904718; PubMed Central PMCID: PMC5995470.
21. Memon AM, Sharma SG, Mohite SS, Jain S. The role of online social networking on deliberate self-harm and suicidality in adolescents: A systematized review of literature. *Indian J Psychiatry*. 2018;60(4):384-392. doi: 10.4103/psychiatry.IndianJPsychiatry\_414\_17. PubMed PMID: 30581202; PubMed Central PMCID: 6278213.
22. Gillies D, Christou MA, Dixon AC, Featherston OJ, Rapti I, Garcia-Anguita A, et al. Prevalence and characteristics of self-harm in adolescents: meta-analyses of community-based studies 1990–2015. *J Am Acad Child Adolesc Psychiatry*. 2018;57(10):733-41. doi: 10.1016/j.jaac.2018.06.018. PubMed PMID: 30274648.
23. Grimmond J, Kornhaber R, Visentin D, Cleary M. A qualitative systematic review of experiences and perceptions of youth suicide. *PloS One*. 2019;14(6):e0217568. doi: 10.1371/journal.pone.0217568. PubMed PMID: 31188855; PubMed Central PMCID: 6561633.
24. O'Connor RC, Smyth R, Williams JMG. Intrapersonal positive future thinking predicts repeat suicide attempts in hospital-treated suicide attempters. *J Consult Clin Psychol*. 2015;83(1):169-76. doi: 10.1037/a0037846. PubMed PMID: 25181026; PubMed Central PMCID: 4321534.
25. Bazrafshan MR, Jahangir F, Mansouri A, Kashfi SH. Coping strategies in people attempting suicide. *Int J High Risk Behav Addict*. 2014;3(1):e16265. doi: 10.5812/ijhrba.16265. PubMed PMID: 24971300; PubMed Central PMCID: 4070193.
26. Hosseinpour M, Ghaffari SM, Mehrabizadeh M. A study on the incentives of suicide attempts among adolescents referred to golestan hospital of ahwaz in 1379-1380. *Jundishapur Scientific Medical Journal*. 2004;41:24-30. Persian.
27. Shamsi khani S, Rahgoo A, Fallahi Khoshknab M, Rahgozar M. Effects of problem solving training on coping skills of suicidal clients. *IJNR*. 2007;1(3):31-9. Persian.
28. Gibbs LM, Dombrovski AY, Morse J, Siegle GJ, Houck PR, Szanto K. When the solution is part of the problem: problem solving in elderly suicide attempters. *Int J Geriatr Psychiatry*. 2009;24(12):1396-404. doi: 10.1002/gps.2276. PubMed PMID: 19405045; PubMed Central PMCID: PMC3044335.
29. Pollock LR, Williams JMG. Problem-solving in suicide attempters. *Psychol Med*. 2004;34(1):163-7. doi: 10.1017/s0033291703008092. PubMed PMID: 14971637.
30. Bazrafshan MR, Jahangir F, Shokrpour N. What protects adolescents from suicidal attempt: A qualitative study. *Shiraz E-Med J*. 2017;18(9):e57574. doi: 10.5812/semj.57574.
31. Bapiri OA, Bahamin Gh, Feyz Elahi A. Impact of Group Problem Solving Training on Some Psychological Characteristics of Adolescents Attempting Suicide. *Journal of Ilam University of Medical Sciences*. 2010;18(1):16-22. Persian.
32. Marty MA, Segal DL, Coolidge FL. Relationships among dispositional coping strategies, suicidal ideation, and protective factors against suicide in older adults. *Aging Ment Health*. 2010;14(8):1015-23. doi: 10.1080/13607863.2010.501068. PubMed PMID: 21069608.
33. Bazrafshan MR, Sharif F, Molazem Z, Mani A. Cultural concepts and themes of suicidal attempt among Iranian adolescents. *Int J High Risk Behav Addict*. 2015;4(1):e22589. doi: 10.5812/ijhrba.22589. PubMed PMID: 25883919; PubMed Central PMCID: PMC4393560.
34. Carlen P, Bengtsson A. Suicidal patients as experienced by psychiatric nurses in inpatient care. *Int J Ment Health Nurs*. 2007;16(4):257-65. doi: 10.1111/j.1447-0349.2007.00475.x. PubMed PMID: 17635625.
35. Zhang P, Roberts RE, Liu Z, Meng X, Tang J, Sun L, et al. Hostility, physical aggression and trait anger as predictors for suicidal behavior in Chinese adolescents:

- A school-based study. *PloS One*. 2012;7(2):e31044. doi: 10.1371/journal.pone.0031044. PubMed PMID: 22359563; PubMed Central PMCID: 3281042.
36. Conner KR, Meldrum S, Wiczorek WF, Duberstein PR, Welte JW. The association of irritability and impulsivity with suicidal ideation among 15-to 20-year-old males. *Suicide Life Threat Behav*. 2004;34(4):363-73. doi: 10.1521/suli.34.4.363.53745. PubMed PMID: 15585458.
  37. Huh Y, Cho H-J. Associations between the type of tobacco products and suicidal behaviors: a nationwide population-based study among Korean adolescents. *Int J Environ Res Public Health*. 2021;18(2):367. doi: 10.3390/ijerph18020367. PubMed PMID: 33418893; PubMed Central PMCID: 7825150.
  38. Obando Medina C, Dahlblom K, Dahlgren L, Herrera A, Kullgren G. I keep my problems to myself: pathways to suicide attempts in Nicaraguan young men. *Suicidology Online*. 2011;2:17-28.
  39. Hamza CA, Stewart SL, Willoughby T. Examining the link between nonsuicidal self-injury and suicidal behavior: a review of the literature and an integrated model. *Clin Psychol Rev*. 2012;32(6):482-95. doi: 10.1016/j.cpr.2012.05.003. PubMed PMID: 22717336.
  40. Nock MK, Prinstein MJ, Sterba SK. Revealing the form and function of self-injurious thoughts and behaviors: A real-time ecological assessment study among adolescents and young adults. *J Abnorm Psychol*. 2009;118(4):816-27. doi: 10.1037/a0016948. PubMed PMID: 19899851; PubMed Central PMCID: PMC5258190.
  41. Otsuki M. Youth suicide. Southern California center of excellence on youth violence prevention: University of California, Riverside; 2002.
  42. Gvion Y, Apter A. Suicide and Suicidal Behavior. *Public Health Reviews*. 2012;34(2):1-20.
  43. Hjelmeland H, Nordvik H, Bille-Brahe U, De Leo D, Kerkhof JF, Lönnqvist J, et al. A cross-cultural study of suicide intent in parasuicide patients. *Suicide Life Threat Behav*. 2000;30(4):295-303. PubMed PMID: 11210055.