International Journal of Applied Behavioral Sciences 2024; Vol. 11, No.4:1-16
DOI: 10.22037/ijabs.v11i4.46003 Online ISSN: 2423-5253

Original Article

Compilation and Validation of Dialectical Behavior Therapy Package Training Based on Interpersonal Needs to Prevent Adolescent Suicidal Ideation

Faramarz Sohrabi[1]*, Ali Karimi[2], Mohammad Asgari[3]

[1]*Department of Clinical Psychology, Allameh Tabataba'i University, Tehran, Iran.*
[2]*Faculty of Psychology and Educational Sciences, Allameh Tabataba'i University, Tehran, Iran.*
[3]*Department of Assessment and Measuring, Faculty of Psychology and Educational Sciences, Allameh Tabataba'i University, Tehran, Iran.*

Received: 25 Sep 2024; Revised: 14 Oct 2024; Accepted: 23 Oct 2024

Abstract

Background and Aim: Suicide among adolescents, as one of the serious mental health challenges, has increased significantly in recent years. This phenomenon not only threatens the individual health of adolescents but also has profound negative effects on families and society. The present study aimed to compile and validate the training package of dialectical behavior therapy based on interpersonal needs to prevent adolescent suicidal ideation.

Materials and Methods: The statistical population of the study in the qualitative part consisted of all adolescents aged 15-19 in Sahne, Kermanshah province, from April 2013 to June 2014, and the experts whose opinions were consulted to complete the qualitative and content validity of the research. Purposive sampling was used to select participants for the qualitative section. A total of 30 individuals were chosen for the experimental and control groups. In the quantitative part, the statistical population consisted of adolescents identified after completing the suicidal ideation and interpersonal needs scale.

Results: The results of the assumption of equality of variances (Mbox test) indicated that this assumption was met ($F = 1.330$, $P = 0.193$). The intergroup analysis showed a significant difference in suicidal ideation scores between the intervention and control groups ($P < 0.01$). Additionally, the within-group analysis revealed a significant difference in the pre-test, post-test, and follow-up scores ($P < 0.001$), and the interaction effect of group and time was significant also ($P < 0.001$). The intervention group demonstrated a significant reduction in suicidal ideation in the post-test phase, while the control group did not show significant changes. These findings suggest that the DBT training package based on interpersonal needs effectively reduces suicidal ideation in adolescents and can serve as an effective strategy for suicide prevention.

Conclusion: In conclusion, the results of this study indicate that interpersonal needs based Dialectical Behavioural Therapy (DBT) training can serve as an effective intervention to reduce suicidal ideation in adolescents. This educational package enhances interpersonal skills and emotional regulation, helping adolescents build greater resilience to life's challenges and prevent risky behaviors.

Keywords: Dialectic behavior therapy, Interpersonal needs, Suicidal ideation, Adolescents

***Corresponding Author:** Faramarz Sohrabi, Department of Clinical Psychology, Allameh Tabataba'i University, Tehran, Iran. Email: sohrabi@atu.ac.ir
ORCID:0000-0001-6505-6812

Please cite this article as:
Sohrabi, F., Karimi, A., Asgari, M. Compilation and Validation of Dialectical Behavior Therapy Package Training Based on Interpersonal Needs to Prevent Adolescent Suicidal Ideation. Int. J. Appl. Behav. Sci. 2024;11(4):1-16.

Introduction

Human beings go through several basic periods of change throughout their lives, one of which is adolescence. Adolescence is a period of transition from childhood to adulthood during which people experience significant changes in almost all areas of their lives, including biological functioning, cognitive abilities, social environment, family, and peer relationships (1). Adolescence is a period of serious crises and various challenges, so the adolescent needs special care in the social and family environment (2). According to the statistics of the World Health Organization in 2019, "approximately 16% of the world's population consisted of adolescents aged 10 to 19 years, or about 1.2 billion people".

According to the statistics of the 2015 census, about 6 million of Iran's population were adolescents aged 14-19, which was about 7% of the country's total population" (3). In this context, the lack of preparation of adolescents makes them vulnerable and in many cases leads them to dangerous and problematic behaviors and actions such as suicide. Therefore, the social and mental health of adolescents as a vulnerable group should be prioritized. A review of the findings and reports of previous studies shows that adolescence can be considered a critical period for the initiation of self-harm behaviors, including suicide (4).

Suicide is one of the major public health problems and the cause of death all over the world, and it is the second cause of death in the ages of 15 to 29. During the last 40 years, the number of suicide cases in teenagers has increased more than 4 times (5). This statistic means that every 5 minutes a death due to suicide occurs in teenagers, which clearly shows the necessity and importance of paying attention to this issue. Suicide is a multifactorial clinical phenomenon with complex biological, social, and psychological risk factors that occur to end the unbearable and exhausting pain of life, which is even more dangerous than depression (6). Suicide does not refer to a single behavior but rather broadly to many diverse and complex behaviors that may include talking about suicidal thoughts, intentionality, suicidal behaviors, and attempted suicide. Suicidal thoughts are uninvited thoughts with the desire to end life and include mental preoccupations about nothingness and the desire to die (7).

The presence of suicidal ideation leads to the loss of useful years of life, threatens people's mental health, causes psychological damage to patients' families, and creates many problems for society (8). Although suicide mortality is low in Islamic countries, Iran has had the highest suicide rate among countries in the region over the past decade (9). Many efforts have been made to identify the risk factors that lead to suicidal thoughts or attempts, with the aim of understanding and preventing suicide. However, as suicide is still one of the leading causes of death worldwide and has not decreased, it is important to identify individuals with the highest risk factors for suicide.

A review of the existing research on suicidal ideation and the application of dialectical behavior therapy (DBT) as an intervention reveals significant gaps in current approaches to suicide prevention. One of the primary gaps is the lack of tailored psychotherapy strategies specifically designed to prevent suicide. Additionally, the literature reflects a limited use of a stepwise approach in suicide prevention, which often results in interventions being implemented only after a suicide attempt. This reactive approach hinders the ability to intervene during the early stages of suicidal ideation, leading to unnecessary harm and escalating risks.

This research aimed to fill this gap by preventing suicidal thoughts before they develop into suicide attempts. By reducing suicidal ideation, it is expected that the frequency of suicide attempts will decrease. To achieve this goal, Dialectical Behavior Therapy (DBT) was chosen because of its proven flexibility and successful adaptation for use with diverse populations,

including children and adolescents (10).

Another critical issue in suicide prevention that requires attention is the need to examine the interpersonal needs of adolescents in the city of Sahne. So, to develop and validate a DBT program in this region, it was essential to understand the interpersonal needs of adolescents and how these needs align with their unique cultural and contextual factors. This understanding would guide the creation of an intervention that was culturally relevant and responsive to the lived experiences of the adolescents. The present study was conducted in two qualitative and quantitative stages. The qualitative stage focuses on identifying the interpersonal needs of adolescents, considering both cultural aspects and personal experiences, and the quantitative stage assesses the effectiveness of the DBT program in preventing suicidal ideation. The researcher aimed to answer the following key questions through this study: a) What are the interpersonal needs of adolescents, as influenced by their cultural components and lived experiences? and b) Can a DBT training package, developed with a focus on interpersonal needs, effectively reduce suicidal ideation and prevent suicide?

This research aims to compile and validate a DBT training package based on the interpersonal needs of adolescents to provide a proactive and culturally sensitive intervention for preventing adolescent suicidal ideation.

Among the recent internal research in line with the research topic, Azizi et al. (11) have conducted research titled The Effectiveness of Dialectical Behavior Therapy on Self-injury and Distress Tolerance in Teenagers with a History of self-harming behaviors. The statistical population of the study was teenagers who were referred to counseling clinics in Bandar Abbas with a history of self-harming behaviors. In this research, 30 people were selected by purposeful sampling method and randomly assigned to experimental and control groups (51 people in each group). The experimental group received dialectical behavior therapy training in twelve 2-hour sessions. The results of the research showed that dialectical behavior therapy was effective in self-injurious behaviors and anxiety tolerance, and this intervention was able to improve self-injurious behaviors and anxiety tolerance in adolescents.

Barani et al. (12) have researched the effectiveness of teaching dialectical behavior therapy skills on students' anxiety and depression symptoms. The statistical population of the research was the first high school boys of Kovar City in the academic year 2018-2019, among whom 30 students who had medium to high scores in anxiety and depression were selected. The sampling method was multi-stage cluster sampling. Dialectical behavior therapy skills training protocol for teenagers was used to implement the interventions. The results of the research showed that teaching dialectical behavior therapy skills had a significant effect on reducing students' anxiety but could not have a substantial impact on reducing students' depression (12).

Ghafari Cherati et al. (13) have conducted research titled The Effectiveness of Dialectical Behavior Therapy on the Difficulty of Emotional Regulation and Aggression in adolescent girls with depressive symptoms. The research method was semi-experimental with a pre-test-post-test design, a control group, and a two-month follow-up phase. The statistical population of the research was adolescent girls with depressive symptoms who were referred to education counseling centers in Babol City in the academic year 2021-2022. In this research, 30 girls with depression symptoms were selected by purposeful sampling and randomly assigned to experimental and control groups (15 in the experimental group and 15 in the control group). The experimental group received dialectical behavior therapy (10 sessions) for 10 weeks (90 minutes). The results of the research showed that dialectical behavior therapy affects the difficulty of emotional regulation and aggression of adolescent girls with depressive symptoms (13).

Tabatabai et al. (14) have investigated the effectiveness of dialectical behavior therapy on depression and anxiety in adolescent girls with a history of self-mutilation. The statistical population of the research was all teenage girls with a history of self-mutilation who visited counseling centers in Isfahan City in 2017. In this study, 93 teenage girls were selected according to the inclusion and exclusion criteria and were randomly assigned to two experimental groups and a control group (15 people in each group). The experimental group underwent dialectical behavior therapy for eight sessions of 90 minutes. The results of

the research showed that the experimental group had a significant increase in the self-forgiveness variable in the post-test stage compared to the control group, and there was a significant decrease in the variable and depression in the experimental group compared to the control group (14).

Valinejad et al. (15) have researched the mediating role of perception of burden, neutral belongingness, and adolescent parent conflict in the relationship between parenting styles and basic psychological needs with non-suicidal self-injury and suicidal ideation. The statistical population of the research was the second-year secondary school students of Tehran City in the academic year of 2018-2019, out of which 420 people were selected by cluster random sampling method. The results of the research showed that parenting styles and basic psychological needs have a significant indirect effect on non-suicidal self-injury and suicidal ideation through neutral belongingness, perceived burdensomeness, and parent-adolescent conflict. Based on the results of the research, they concluded that the reduction of neutral belongingness, perception of burden, and parent-adolescent conflict in adolescents can play an effective role in reducing non-suicidal self-injury and suicidal ideation (15).

Among the recent overseas research, Baker et al. (1) studied brief group cognitive behavioral therapy for suicide prevention compared to dialectical behavioral therapy groups for soldiers in a randomized controlled trial study. This research has compared the effectiveness of Brief Cognitive Behavioral Group Therapy (G-BCBT) with Dialectical Behavioral Therapy (DBT). The results of the research showed that dialectical behavior therapy was more effective in preventing suicide than brief cognitive behavioral group therapy (1). In a research, Johanston et al. (16) reviewed the comparison of behavioral therapy and dialectical mentalization for teenagers with borderline personality traits, suicide, and self-injurious behavior. This article has provided an overview of the effectiveness of dialectical behavior therapy versus mindset-based therapy for adolescents. In this research, 25 articles were reviewed. The research results have shown a significant improvement in suicidal thoughts, suicide attempts, self-harm (with or without suicidal intent), borderline personality disorder symptoms, depression symptoms, trauma, behavioral problems, and overall functioning for both interventions (16).

Kothgassner et al. (17), in research, investigated the effectiveness of dialectical behavior therapy for adolescent self-harm and suicidal thoughts. This research has been a systematic review and meta-analysis of the literature on dialectical behavior therapy for adolescents regarding the treatment of self-harm in adolescents aged 12 to 19 years. The results of the research showed that dialectical behavior therapy is a valuable treatment for reducing self-harm and suicidal thoughts in adolescents (17). Asarnow et al. (18) have investigated dialectical behavior therapy for self-harming youth, emotion regulation, mechanisms, and mediators. This research was a randomized controlled trial on 173 adolescents with previous suicide attempts, self-harm, and suicidal ideation. The randomization was for 6 months, and the results were monitored up to 12 months. The results showed that compared to other treatments, more improvements have been reported in regulating young people's emotions if they receive dialectical behavior therapy intervention (18).

In another study, Santamarina-Perez et al. (19) investigated dialectical behavior therapy adapted for adolescents with a high risk of suicide in a community clinic. This study was a randomized and controlled trial that examined the effectiveness of an adapted form of dialectical behavior therapy for adolescents and compared its impact on reducing suicidal ideation with the method of group sessions. The results of the research showed that dialectical behavior therapy for teenagers was more effective than group sessions in reducing suicidal behaviors (19). Also, Berk et al. (20) in research conducted dialectical behavior therapy with suicidal and self-harming teenagers in a community clinic. The purpose of this research was to investigate the feasibility and effectiveness of dialectical behavior therapy (DBT) with suicidal and self-harming teenagers treated in a community clinic. The research results showed a significant reduction in suicide attempts, non-suicidal self-injurious behaviors, and suicidal thoughts before and after treatment. The results also showed significant reductions in other suicide risk factors, including emotion dysregulation, depression, impulsivity, BPD symptoms, psychopathology, PTSD symptoms, and substance use (20).

Based on the above mentioned, it is concluded that up

to now, in previous research, the formulation and validation of dialectical behavior therapy training package based on interpersonal needs for the prevention of adolescent suicidal ideation has not been addressed, and in this field, there is a noticeable gap in research; therefore, the main problem of the present study is the validation of the dialectical behavior therapy package training based on interpersonal needs to prevent the suicidal ideation of teenagers. The research questions are:

1) What is the formulation of a dialectic behavior therapy package, including the components of dialectical strategies, validation strategies, problem-solving strategies, fundamental change strategies, cognitive style strategies, and case management strategies based on the interpersonal needs of teenagers?

2) Is the teaching of a dialectical behavior therapy package based on interpersonal needs valid for the prevention of adolescent suicidal ideation?

3) Is the teaching of a dialectical behavior therapy package based on interpersonal needs effective in preventing adolescent suicidal ideation?

Methods

The research method was a mixed exploratory (qualitative and quantitative) and semi-experimental with a pre-test-post-test design, a control group, and a follow-up stage. The qualitative and quantitative research was conducted in two phases. The statistical population in the qualitative section consisted of all adolescents aged 15-19 in Sahne (Kermanshah province) from April 2013 to June 2014, as well as the experts whose opinions were consulted to complete the stages of the qualitative and content validity sessions. A purposive sampling method was used to select participants for the qualitative section. In total, 30 individuals were selected for the experimental and control groups. In the quantitative section of the study, the statistical population consisted of adolescents who were identified after completing the suicidal ideation and interpersonal needs scale.

Specific content of meetings and its adaptation to local culture

The intervention in this research was based on Dialectical Behavior Therapy (DBT) and aimed at reducing suicidal ideation in adolescents by addressing their interpersonal needs (Table 1). The DBT program consisted of structured sessions focusing on core DBT components, adapted to align with the cultural and contextual background of adolescents in Sahne (Kermanshah province). This adaptation ensured that the intervention was culturally relevant and resonated with the lived experiences of the participants.

Core Components of the DBT Intervention

The DBT intervention was structured around the following core modules:

1. **Mindfulness Skills**: Teaching adolescents to be present in the moment, improving their ability to manage their thoughts and emotions.
2. **Distress Tolerance**: Helping participants cope with crises and reduce impulsive behaviors.
3. **Emotion Regulation**: Equipping adolescents with tools to understand, manage, and respond to their emotions effectively.
4. **Interpersonal Effectiveness**: Enhancing communication skills, assertiveness, and the ability to maintain healthy relationships.

Cultural Adaptation of DBT Sessions

The sessions were adapted to align with the cultural norms and values of the local adolescent population. This involved:

1. **Using culturally appropriate examples and metaphors** relevant to the community.
2. **Involving family members** where applicable, given the collectivist nature of the culture.
3. **Addressing common stressors** faced by adolescents in Sahne, such as family expectations, academic pressures, and social dynamics.
4. **Incorporating culturally familiar practices**, such as local storytelling and group discussions, to facilitate engagement and understanding.
5. **Respecting social norms** around gender roles and communication styles to create a safe and comfortable environment for both male and female participants.

Table 1. Intervention Session Plan

Session	Topic	Objectives	Activities
1	Introduction to DBT	Establish rapport, introduce DBT principles, and set goals.	Group discussion, goal-setting exercises.
2	Mindfulness (Part 1)	Teach basic mindfulness techniques to improve focus and awareness.	Guided meditation, mindfulness exercises (breathing, body scan).
3	Mindfulness (Part 2)	Apply mindfulness to daily activities and emotional experiences.	Mindfulness journaling, group reflection.
4	Distress Tolerance (Part 1)	Introduce distress tolerance strategies for managing crises.	Identifying personal stressors, learning "STOP" skills (Stop, Take a breath, Observe, Proceed).
5	Distress Tolerance (Part 2)	Develop crisis survival techniques to avoid impulsive actions.	Practicing distraction and self-soothing techniques.
6	Emotion Regulation (Part 1)	Teach skills to identify and label emotions accurately.	Emotion identification exercises, discussion on triggers.
7	Emotion Regulation (Part 2)	Develop strategies for reducing emotional vulnerability and building positive experiences.	Activities focused on building positive routines and resilience.
8	Interpersonal Effectiveness (Part 1)	Teach communication skills to express needs assertively.	Role-playing scenarios, learning “DEAR MAN” (Describe, Express, Assert, Reinforce, Mindful, Appear confident, Negotiate).
9	Interpersonal Effectiveness (Part 2)	Strengthen skills for setting boundaries and maintaining healthy relationships.	Group exercises on boundary setting, feedback sessions.
10	Review and Reflection	Review skills learned, reflect on progress, and develop a maintenance plan.	Group discussion, personalized action plans, feedback and closure.

Cultural Considerations

1. **Language**: Sessions were conducted in **Farsi**, with terminology and concepts explained in simple, relatable language to ensure comprehension.
2. **Family Involvement**: In some sessions, family members were invited to participate in discussions to reinforce skills at home.
3. **Community Support**: Integration of local community resources and support systems, such as school counselors and peer groups, to sustain progress.
4. **Sensitivity to Values**: Respecting religious and social values to ensure participants felt comfortable discussing personal issues.

This structured, culturally adapted DBT intervention aims to empower adolescents with the skills needed to reduce suicidal ideation and improve overall emotional well-being.

Sampling and Participants

A) Qualitative stage: The statistical population for the qualitative stage of the research included all adolescents aged 15-19 in Sahne City (Kermanshah province) from April 2023 to June 2024. Additionally, experts in the field were involved in reviewing the stages of qualitative research and assessing content validity.

A **purposive sampling method** was used to select the participants for this stage. First, a group of adolescents from the city completed the **Suicidal Ideation Scale** and the **Interpersonal Needs Scale**. From these respondents, **40 adolescents** who scored high on these scales (indicating significant suicidal ideation and interpersonal needs) were identified as the potential sample.

Of these 40 participants, 30 were randomly assigned to the experimental and control groups (15 in each group). The remaining 10 participants were kept as a reserve to account for potential dropouts or attrition in the study population. This approach ensured the study maintained a sufficient sample size for reliable analysis.

B) Quantitative stage: The statistical population in this stage included teenagers. After answering the scale of suicidal ideation and interpersonal needs, it was

determined that they had scored high on these scales. The experimental group separately received 12 sessions of dialectical behavior therapy training developed for teenagers, and the control group did not receive any training. After completing 12 training sessions, a post-test was conducted for both experimental and control groups. Adolescents aged 15-19 inclined to participate in the research were selected with the full consent of the adolescent and their parents through the contact numbers in the invitations. They were asked to complete the scale of the interpersonal need and the suicidal thoughts questionnaire. Of them, 40 with a high score on these two scales were selected as members of the research sample. Based on this, with the available method, 30 were selected and randomly assigned into two groups (15 in the experimental and 15 in the control group).

The inclusion criteria of the research were girls and boys aged 15 to 19 (suicide news of teenagers in Sahne shows that suicides happen mainly in this age range), getting a high score on the scale of suicidal thoughts and questionnaire of interpersonal needs, informed consent of the teenager and his parents to participate in the plan, and having literacy at the first secondary level.

Exclusion criteria for the research included:

1. **Acute Mental Health Conditions:** Adolescents diagnosed with severe psychiatric disorders (e.g., **psychosis** or **bipolar disorder**) that require specialized treatment beyond DBT.
2. **Substance Abuse:** Current severe **substance use disorder** that might interfere with therapy.
3. **Previous DBT Exposure:** Prior participation in a **Dialectical Behavior Therapy** program.
4. **Medical Conditions:** Presence of severe **physical illnesses** or medical conditions that prevent participation.
5. **Lack of Consent:** Adolescents or their guardians who **refuse to provide informed consent** for the study.
6. **High-Risk Situations:** Immediate risk of suicide requiring **urgent intervention** or hospitalization.

These criteria ensure a focused and suitable sample for evaluating the effectiveness of the DBT training package tailored to interpersonal needs.

Research data measurement tools

A) Qualitative stage: In this stage, basic data theory was applied, semi-structured interviews were used, and data collection continued to theoretical saturation. Fifteen to thirty adolescents and fifteen to thirty experts were then selected to collect the data, further the qualitative research stages, and develop the dialectical behavior therapy package.

Beck Suicidal Thoughts Questionnaire: This scale was designed in 1984 by Beck et al. (1984). It contains 19 three-choice questions that are used to reveal and measure attitude and plan to commit suicide and its constituent factors such as death wish, desire active and passive suicide, the duration and frequency of suicidal thoughts, the level of self-control, inhibiting factors, and a person's readiness to commit suicide.

The questions have three options: "none", "somewhat" and "a lot". The total scores fluctuate from 0 to 38. This scale includes 19 questions, each scored from zero to two, and the sum of scores varies from 0 to 38. The internal correlation of this test is 0.89 and the inter-examiner reliability is 0.83. The concurrent validity of Beck's suicidal ideation scale with the general health questionnaire is estimated as 0.76 and its validity using Cronbach's alpha method is estimated as 0.95 (Dantiz, 2001). In Iran, in the research of Anisi et al. (2004), its validity was obtained using Cronbach's alpha method of 0.95, and the reliability was obtained using the bisect method of 0.75.

Interpersonal Needs Questionnaire: The Interpersonal Needs Questionnaire is a self-report tool prepared in the framework of the interpersonal theory of suicide (Van Jordan et al., 2012; Van Jordan et al., 2008). This questionnaire measures the structure of neutralized belongingness and the perception of burdensomeness and is used in both research and clinical applications. This questionnaire has several versions (10, 12, 15, 18, and 25 questions). According to Hill and Pettit's (2014) report, the 10 and 15-question versions have the best internal validity and fit with the exploratory factor analysis model. Of these 15 items, 9 are related to neutral belonging and 6 to the feeling of being a burden. This questionnaire asks the participants to self-report the best possible option according to their beliefs about

how much they are currently connected with others (affiliation) and how much they think they are a burden to others (perception of burden) on a 7-point Likert scale (7 = sure and 1 = never). Questions 7, 8, 10, 13, 14, and 15 are reverse-scored.

The importance of this phenomenon is that participants with this expression can show researchers to what extent interpersonal behaviors and the value of such behaviors can predict their basic behaviors, such as suicidal tendencies. Also, a higher score on this scale means the perception of being more burdensome and more neutral affiliation, indicating a person's belief that he is the source of problems and harm for those around him in social interactions. This belief in being a burden or neutral affiliation is caused by the environmental factors a person has encountered. In addition, internal consistency (alpha = 0.90) and good reliability have been reported for this scale (21-24) reported that the confirmatory factor analysis of the 15-question 2-factor model showed that there was a good fit between the data and the model of interpersonal psychological theory of suicide, but 3 items (9, 11, 12) due to having low factor loadings and also The non-significance of the test statistic should be excluded from the set of scales. After removing the items, confirmatory factor analysis was done on the rest. Finally, the 12-item interpersonal needs questionnaire with 2 factors of neutral affiliation and feeling of being a burden has good validity. It fits the Iranian population, so this 12-item version was used in this research.

It should be noted that the interpersonal needs questionnaire was used only for screening and selecting the sample for the present study.

Notes:

- **Socioeconomic Status:** Out of the 30 participants, 10 are in the low socioeconomic status group, 15 in the medium socioeconomic status group, and 5 in the high socioeconomic status group.
- **Educational Background:** 7 participants are in the first cycle of high school, 12 in the second cycle of high school, 6 are pre-university students, and 5 are high school graduates.
- **Family Structure:** 20 participants come from nuclear families (with both parents), 7 from single-parent families, and 3 from extended families.

Table 2 is a sample distribution of the participants' demographics in a study, and it can be adjusted based on actual data. When one or more traits are measured through two or more methods, the correlation between these measurements provides two important validity indicators. When the correlation between the scores of tests that measure a single characteristic is high, the questionnaire has convergent validity. This correlation is necessary to ensure that the test measures what it is supposed to measure. For convergent validity, average variance extraction (AVE) and composite validity (CR) are calculated (Table 3).

Table 2. Demographic Information of Participants

Attribute	Category	Number (Participants)	Percentage (%)
Socioeconomic Status	Low socioeconomic status	10 participants	33.3%
	Medium socioeconomic status	15 participants	50%
	High socioeconomic status	5 participants	16.7%
Educational Background	High school (first cycle)	7 participants	23.3%
	High school (second cycle)	12 participants	40%
	Pre-university	6 participants	20%
	High school graduate	5 participants	16.7%
Family Structure	Nuclear family (both parents)	20 participants	66.7%
	Single-parent family	7 participants	23.3%
	Extended family	3 participants	10%

Table 3. Convergent validity and reliability of research variables

Variables	AVE	CR
Suicidal Thoughts	0.76	0.83
Interpersonal Needs	0.86	0.82

The average variance extracted (AVE) is always greater than 0.5, so the convergent validity is also confirmed. The value of composite validity (CR) is also greater than AVE.

To confirm the validity of the package, the content of the compiled package was given to 5 experts with a doctorate in psychology to collect their opinions on the content, structure, and process of the meetings, in the form of a questionnaire whose questions are presented in Table 4. Finally, the coefficient of agreement (CVI) between the experts was evaluated, the results of which are presented in the Table 4.

As shown in Table 4, the CVI index for all survey items was in the range of 0.79 to 0.90, which indicates the approval of the designed package.

This study used confirmatory factor analysis (CFA) to validate the criteria of green supply chain management practices and organizational performance. In addition, Cronbach's alpha method was used in this research to determine the reliability of the test. This method calculates the internal consistency of the measuring instrument that measures different characteristics. To calculate the Cronbach's alpha coefficient, the variance of the scores of each subset of the questionnaire question and the total variance must first be calculated. The value of the alpha coefficient is then calculated using the following formula. SPSS software was used to apply Cronbach's alpha method (Table 5).

The data were analyzed in two qualitative and quantitative phases. In the qualitative stage, the data were analyzed by the foundational data method. In the quantitative stage, the presuppositions of parametric statistics (normality of data distribution, Mbox) were checked. Data analysis was done by covariance test with SPSS version 24 software.

1. Data Analysis in the Qualitative Stage:

In the qualitative part, the Grounded Theory Method was used for data analysis. This method was chosen because of its exploratory nature and its aim to analyze data in depth. The analysis was carried out step-by-step using open coding, axial coding, and selective coding. This approach allows the researcher to discover concepts and phenomena naturally, without preconceived notions, and to identify underlying patterns in the data. Grounded Theory is particularly suitable for studies aiming to understand and explain individuals' experiences and perspectives.

2. Data Analysis in the Quantitative Stage:

In the quantitative stage, parametric statistical methods were used to analyze the data, as they are essential for examining relationships between variables and testing the research hypotheses. The reasons for choosing these methods are as follows:

One of the prerequisites for using parametric tests is that the data must have a normal distribution. To test this assumption, tests such as the Kolmogorov-Smirnov or Shapiro-Wilk tests are used to confirm the normality of the data.

Table 4. Coefficient of agreement (CVI) between experts for validation of the developed package

Row	The subject of Agreement	Average agreement	Total agreement
1	Adequacy of package content to promote resilience	0.79	0.81
2	Suitability of package content with the presented model of resilience	0.84	
3	Suitability of package content with scientific evidence	0.84	
4	Appropriateness of the number of sessions	0.79	
5	Proper arrangement of meetings	0.79	
6	Appropriate duration of each session	0.79	
7	The rationality of the intervention	0.80	
8	The structure of the intervention	0.80	
9	Appropriateness of worksheets	0.90	
10	Appropriateness of the tasks provided	0.79	

Table 5. Cronbach's alpha coefficient and the combination of the research model

Variables	Cronbach's alpha
Suicidal Thoughts	0.95
Interpersonal Needs	0.9

If the data is found to be normally distributed, tests such as Analysis of Covariance (ANCOVA) are employed to examine group differences.

The Mbox test is used to assess the equality of variances among the groups. This test is crucial for ensuring the proper use of parametric tests. If the Mbox test is not significant (i.e., the assumption of equal variances is supported), parametric tests such as ANCOVA can be safely applied.

ANCOVA is used to analyze the differences among groups after controlling for the effects of one or more covariates. This test is particularly useful when comparing changes in the dependent variable (such as suicidal ideation) across different groups while controlling for variables like age or mental health status. By controlling for these covariates, ANCOVA provides a more accurate assessment of the intervention's effect (in this case, DBT).

SPSS version 24 was used for data analysis due to its extensive capabilities for performing advanced statistical analyses such as parametric tests, covariance tests, and handling qualitative data (if needed for coding and categorization). It provides a comprehensive toolset for analyzing quantitative and qualitative data, ensuring robust and reliable results.

The selection of statistical methods, particularly parametric tests and ANCOVA, was necessary for the detailed analysis of group differences and for controlling for covariates in a study involving therapeutic interventions like DBT. These methods allow for precise evaluation of the intervention's effects and ensure that the results are valid and reliable.

Results

First, a detailed evaluation of interpersonal needs was carried out. The category of interpersonal needs of Joyner's psychological theory of suicide has been shown in various research to be one of the major and powerful predictors of suicidal thoughts. In this regard, the components and dimensions of interpersonal needs, especially belongingness, and burdensomeness, were identified with the qualitative data method of the foundation, according to the lived experiences and cultural categories of teenagers in Sahne. This diagnosis was based on a semi-structured interview, the validity of which was confirmed by experts in related fields. To compile the dialectical behavior therapy training package based on this output, the researcher emphasized the presence of the mother of the teenager in the dialectical behavior therapy training package for teenagers, which requires the presence of parents in some sessions to have a good relationship and interaction in meetings.

Another issue in the discussion of behavioral therapy skills is dialectics. For example, in the qualitative research, it was found that the adolescents of Sahne are involved in playing instruments and listening to music according to educational and cultural methods. Therefore, in developing the training package for mindfulness skills (presence of mind), the use of cultural music is emphasized, and in the development of mindfulness skills, the music component was used.

To ensure the accuracy and validity of the research process, the selection of experts for content validation and evaluation was essential. These experts served as scientific and content advisors, providing specialized feedback at various stages of the research. The characteristics of the selected experts and the criteria for their selection are outlined as follows:

1. **Educational Background and Expertise:** The chosen experts held academic degrees related to psychology, psychiatry, counseling, or fields related to adolescent mental health and suicide prevention. Their specialization in these areas enabled them to critically assess the proposed content and methods from scientific and practical perspectives.
2. **Clinical Experience:** Experts with direct clinical experience working with adolescents, particularly in suicide prevention and mental health disorders, were selected. These experts could provide practical insights based on real-world conditions, helping to align interventions with the cultural and social needs of the target population.
3. **Familiarity with Local Culture:** Given that the research aimed to design interventions for adolescents in Sahne city (Kermanshah province), experts familiar with the local culture and psychological and social characteristics of adolescents in this region were selected. Their cultural knowledge was crucial in ensuring the interventions were culturally appropriate and

effective.

4. **Experience in Designing or Evaluating Educational Packages:** Experts with experience in designing, evaluating, or validating educational packages in psychological therapies or suicide prevention were chosen to validate the DBT training package content. Their expertise in this area allowed them to provide precise feedback on the structure and content of the training.
5. **Ability to Assess Content Validity:** The selected experts were capable of evaluating the content validity of the training package according to scientific standards and existing evidence. This included thoroughly reviewing the educational tools and assessing their alignment with the research objectives.

Based on these criteria, the experts were selected through coordination with universities, research centers, and professional associations in the fields related to psychology and mental health. Once selected, each expert provided their feedback on the content of the DBT training package, which was then used to refine and improve the intervention content.

To confirm the validity of the package, the content of the prepared package was given to 5 experts with a doctorate degree in psychology, and their opinions on the content, structure, and process of the meetings were collected in the form of a survey questionnaire. Finally, the coefficient of agreement (CVI) between the experts was evaluated. The results showed that the CVI index for all survey items ranged from 0.79 to 0.90. So, it was concluded that the training of dialectical behavior therapy package based on interpersonal needs was valid for the prevention of adolescent suicidal ideation. In the following, the research hypothesis is examined.

Research hypothesis: package training based on interpersonal needs is effective in preventing adolescent suicidal ideation.

Table 6 shows the mean and standard deviation of the suicidal ideation scores of the participants in the two groups of dialectical behavior therapy (experimental group) and the control group (control group), separated by pre-test, post-test, and follow-up.

Table 6 shows the descriptive statistics related to the average suicidal ideation by intervention and control groups in all three stages. In the pre-test, the suicidal ideation scores of both groups were relatively the same and at a high level. In the post-test, the suicidal ideation scores of the intervention group decreased significantly and were approximately halved, but the control group did not change much. In the follow-up phase, this result is maintained. Assumption of homogeneity of variance (evaluation of covariance matrix): In this research, homogeneity of variance or evaluation of covariance matrix was done using Box M statistic. The null hypothesis of this test was that the observed covariance matrices for the dependent variable are equal among different groups. The results of the Mbox test for equality of variance indicated compliance with the assumption of equality of variance or the equality of the covariance matrix. F = 1.330 according to the significance level, which was calculated as 0.193, higher than 0.05, and was insignificant. Therefore, the null hypothesis was not rejected. We concluded that the covariance matrices between different groups are equal, and the assumption and condition of performing the combined variance analysis have been met. On the other hand, the results of Levin's assumption of the same error variance showed that for all three stages, significant level values greater than 0.05 have been obtained; therefore, in all three stages, the error variance is the same between the groups, and this assumption is also followed to perform the combined variance analysis.

Table 6. Average and standard deviation of suicidal ideation scores of participants in two experimental and control groups

Stage	Group	Average	Standard Deviation
Pre- test	The group receiving the intervention (experiment)	81.5	17.36
	Control group	80.16	21.14
Post- test	The intervention group	47.5	15.32
	Control Group	81.33	16.35
Follow up	The intervention group	45.76	14.54
	Control Group	81.83	19.63

Assumption of multivariate tests: The results obtained from the examination of multivariate tests, including Pillay's effect, Wilks's lambda, Hotelling's effect, and Ruiz's largest root, showed that in the above multivariate tests, there was a difference between the average scores of suicidal ideation in all three stages. The results also show that the interaction between group and repeated factor is also significant, that is, the range of grades in different time intervals depends on the group of interest. In other words, the results of the research showed that the scores of the samples in all three stages are dependent on being in the treatment intervention group, and the average scores of suicidal ideation in the intervention and control groups are different from each other in all three stages. Therefore, this assumption was also confirmed.

Mauchly's sphericity test: Mauchly's sphericity test examines the assumption of whether the variance of the difference between all combinations related to the investigated groups is the same (sphericity). If the significance level is lower than 0.05 in this test, the zero chance is rejected. But if the zero chance is rejected, the other three tests Greenhouse Geisser, Haven-Flat, or lower limit should be used to correct the degree of freedom. The result of Mauchli's test in Table 7 showed that a significant value higher than 0.05 was obtained, which is insignificant. So, the null hypothesis is not rejected, and we conclude that the assumption of sphericity is valid. Therefore, it is possible to use both the results of the multivariate tests reviewed in the previous section and the intra-group tests, and there is no problem in this field.

Intergroup effect test: After evaluating the prerequisite hypotheses for using variance analysis, the intergroup effect was evaluated by combined variance analysis, the results of which are shown in Table 8.

The results of Table 8 in the intergroup test showed that there was a significant difference in the suicidal ideation scores between the intervention and control groups, and the changes were significant at the $P<0.01$ level. Therefore, we concluded that the changes and reduction of suicidal ideation scores for the samples depend on being subjected to the therapeutic intervention designed for research.

In-group effect test: The results of the in-group effect test of subjects with suicidal ideation scores are shown in Table 8. Since the Sphericity value of the variance-covariance matrix was accepted by Mauchli's sphericity test in Table 9, we used the assumed Sphericity option in this test. The results of Table 9 and the examination of the main effect within the group showed that the difference in pre-test, post-test, and follow-up scores was significant ($P>0.001$). Also, the interaction effect of group and time was significant at the 0.001 level. This means that the difference in the pre-test, post-test, and follow-up scores for the intervention group (research treatment intervention group) was significant compared to the control group, so it can be said that the training of the dialectical behavior therapy package has reduced the suicidal ideation of the investigated samples. To maintain engagement with participants after the intervention, various methods and strategies were employed to ensure the long-term impact of the intervention and to help participants effectively apply the skills learned in their daily lives.

Table 7. Results of Mauchli's sphericity test

W Mauchli	Chi square	degree of freedom	significant level	Isilon	Graben House	Hueben-Felt	lower band
0.79	4.86	2	0.088	0.829	0.929		0.500

Table 8. Intergroup effect test to explain the difference between two groups in suicidal ideation

Source	sum of squares	degree of freedom	mean square	F	significant level	Ita coefficient
Group	9407.347	1	9407.347	12.842	0.002	0.369
Error	16116.306	22	732.559			

Table 9. The results of the test of intragroup effects of the subjects in the suicidal ideation scores

Source	sum of squares	degree of freedom	mean square	F	significant level	Ita coefficient
Time	4482.528	2	2241.264	74.825	0.000	0.773
Group and Time	5283.528	2	2641.764	88.196	0.000	0.800
Error	1317.944	44	29.53			

These methods included the following:

1. **Follow-up Sessions:** After the intervention, follow-up sessions were held individually or in groups at specified intervals. These sessions aimed to assess the participants' progress, address any issues that arose, and reinforce the skills learned. These sessions were typically scheduled one month, three months, and six months after the intervention concluded.
2. **Online Support:** To facilitate ongoing interaction, online platforms such as Telegram or WhatsApp groups were used to maintain communication with participants. These platforms served as a supportive space where participants could ask questions and benefit from the experiences of others.
3. **Provision of Supplementary Resources:** To strengthen the learning process, supplementary resources, such as articles, videos, and additional exercises, were provided to participants. These resources were specifically designed to enhance interpersonal skills and emotional regulation, allowing participants to review and practice the concepts from the intervention.
4. **Encouragement to Practice Skills in Daily Life:** Participants were encouraged to apply the skills they had learned in various real-life situations and share any progress or challenges with their counselors. This approach ensured that participants felt continuously supported and that the skills were applied in practical contexts.
5. **Family Support:** In some cases, particularly when using DBT, participants' families were invited to attend follow-up sessions to provide additional support and strengthen the social support system at home. The involvement of parents and other family members helped ensure that the process of change and learning continued consistently.

These methods were designed to maximize the long-term effectiveness of the intervention and maintain ongoing engagement with participants, aiming to prevent a relapse into suicidal ideation and reinforce life skills.

Based on the data, the control group did not change significantly in the three stages (period). However, in the group that received the intervention designed in the research, in the post-test stage, a significant decrease in the score of people with suicidal ideation was observed. Since the suicidal ideation in the pre-test stage was almost the same for both groups and there was a significant difference in the post-test stage, we concluded that the training of the dialectical behavior therapy package based on interpersonal needs had a significant effect on the prevention of adolescent suicidal ideation. And it has reduced suicide ideas among teenagers.

Discussion

Adolescence is a period of severe crises and various challenges, and during this period, teenagers need special care in the social and family environment. The lack of preparation of adolescents may lead them to dangerous and troublesome behaviors and actions such as suicide. This fact has made the issue of social and mental health of adolescents be considered as one of the main priorities of mental health. In line with the importance of this issue, the development and validation of a dialectic behavior therapy package based on interpersonal needs to prevent suicidal ideation among adolescents was done in this study.

The results of the qualitative part of the research showed that the interpersonal needs of teenagers are: the need for confidentiality, the need for parents to be flexible and get along with teenagers in order to reduce the tension between them, the need to reduce academic tensions, the need to manage relationships with the family, managing improper family interference, quitting discrimination between boys and girls in interpersonal skills, the need to comment and express oneself with excitement in gatherings and parties; allocating time to teenagers to talk about themselves and strengthen the skills of coping, the need to be trained to analyze the solution of problems, the need to reduce frequent explanations and statements about the facilities and equipment provided for the education and success of teenagers in threatening manner in family and public gatherings, the need to manage and reduce the time spent in virtual world (tensions in this area have been an important concern of teenagers).

To compile the package, first, a detailed evaluation of the topic of interpersonal needs and especially the category of interpersonal needs of Joyner's

psychological theory of suicide, which has been shown in various research to be one of the major and powerful predictors of suicidal thoughts, was carried out. In this regard, the components and dimensions of interpersonal needs, especially belongingness, and burdensomeness, were identified with the qualitative data method of the foundation, according to the lived experiences and cultural categories of teenagers in Sahne. This diagnosis was based on a semi-structured interview, the validity of which was confirmed by experts in related fields. To compile the dialectical behavior therapy training package based on this output, the researcher emphasized the presence of the mother of the teenager in the dialectical behavior therapy training package for teenagers, which requires the presence of parents in some sessions, so that the relationship and interaction Useful in meetings to increase. Another issue in the discussion of behavioral therapy skills is dialectics. For example, in the qualitative research, it was found that the teenagers in Sahne are involved in playing instruments and listening to music according to educational and cultural methods. Therefore, using cultural music is emphasized in training the mindfulness skill package, and the music component was used in the compilation of the mindfulness skill. Finally, the training package of dialectical behavior therapy with six components, including dialectical strategies, validation strategies, problem-solving strategies, fundamental change strategies, cognitive style strategies, and case management strategies, was developed based on the interpersonal needs of teenagers and in 12 sessions, the experimental group was trained.

Adolescence is the period of transition from childhood to adulthood, accompanied by cognitive, behavioral, and social changes, and it is during this period that a large part of self-perceptions is formed. Also, many biological and psycho-social changes occur at different speeds during the relatively short period of adolescence. Therefore, a significant part of life's challenges is related to adolescence. The success of teenagers in the countless challenges of this growth period is related to their needs. A teenager with a weak belief in his efficiency is passively influenced by these pressures. One of the interventions related to the suicide problem of teenagers is dialectical behavior therapy.

The goal of dialectical behavior therapy is to create a balance between change and acceptance. Also, this treatment, through the use of mindfulness skills, distress tolerance, emotional regulation, and interpersonal skills, seeks to influence failure in the fields of feelings and thoughts about oneself (identity problems), behavior (self-harm, impulsivity), emotional (mood problems, anger control), cognitive (paranoid ideas, dissociative responses) and interpersonal failure (communication problems). In dialectical behavior therapy, one's thoughts are considered experienced mental events, and concentration and attention on breathing are used as tools for living in the present. With this method, patients are trained to stop the rumination cycle (repeated suicide attempts) and distance themselves from their negative thoughts.

Teaching flexibility on attention, mental enrichment, stopping rumination (I am worthless, I deserve to die, the future is bleak, and there is no hope in my life), correcting false positive and negative beliefs, and also challenging negative beliefs related to emotional turmoil, reduction of depression, helplessness and despair and rumination (it is not always the same, fighting with the past is just a waste of time, this moment of life is the product of thousands of other decisions, mistakes are inevitable, no human being is perfect, fear, anxiety, depression, and sadness isn't killing me, I just don't feel good right now).

Finally, interpersonal needs are related to suicidal thoughts, and by designing the corresponding training package, the amount of suicidal ideation in teenagers can be reduced. The suggestions that can be made for future researchers: therapeutic intervention should be used to reduce the amount of suicidal ideation among teenagers so that the suicide of teenagers can be prevented to a significant extent. Use measures that can control or measure the effect of drug therapy. The findings of the present research should be examined and compared by choosing different statistical communities and analysis methods. The limitations of the research were that due to cultural and legal issues, constant communication with teenagers and their families was accompanied by resistance and sometimes denial of the realities of their lives. Due to the suicidality of all participants, they also received medication along with the intervention, and the effect of medication on

improvement was not measured. Therefore, the results of dialectical behavior therapy can be combined with medication. The shortness of the follow-up period may cause the stability of the reduction or increase of the results to be clinically judged. The last limitation is the generalizability of the results to other research, and caution should be observed in this field.

Conclusion

The results of this study showed that the Dialectical Behavior Therapy (DBT) training package based on interpersonal needs can significantly reduce suicidal ideation in adolescents. The findings indicate that the scores of suicidal ideation decreased significantly in the intervention group, while the control group showed no substantial change. These results were confirmed through statistical tests such as analysis of variance and multivariate tests, demonstrating the positive impact of the intervention on reducing suicidal ideation. In addition, the use of cultural music and specific methodologies in the development of the training package, particularly in the area of mindfulness skills, effectively aligned with the cultural and social needs of young people in the region. This study demonstrated that combining mindfulness skills with an approach based on interpersonal needs can help adolescents form positive relationships and reduce negative emotions such as burdensomeness and lack of belonging. The reduction in suicidal ideation in the intervention group indicates the positive effect of DBT in enhancing emotional regulation skills and fostering social support, which plays a key role in suicide prevention.

Suggestions for Future Research

1. **Long-term Effects Investigation:** This study only examined the short-term effects of the intervention. Future research could more thoroughly explore the long-term impacts of these interventions in preventing suicide.
2. **Expanding the Intervention to Other Regions:** This study was conducted in a specific region. Future studies could test this intervention in different areas of the country, with various cultural and social contexts.
3. **Exploring the Effect of DBT on Other Age Groups:** Besides adolescents, DBT's impact could also be explored in other age groups such as young adults and older individuals.
4. **Studying the Combination of DBT with Other Interventions:** Combining DBT with other therapeutic and educational approaches may yield even greater positive effects. Future research could explore these combined interventions.

Limitations of the Study

1. **Limited Sample:** The study was conducted in a specific region (Sahne city in Kermanshah province), and the results may not be fully generalizable to other regions of the country. It is necessary for future studies to be conducted in different areas with diverse cultural and social characteristics.
2. **Lack of Control for Other Variables:** The study focused solely on suicidal ideation, and factors such as personality traits, history of mental health disorders, or prior suicide attempts were not considered. These factors may influence the outcomes and should be included in future research.
3. **Absence of Additional Comparison Groups:** This study only used a control group. It would be beneficial to include other comparison groups, such as different therapeutic approaches or interventions, to better evaluate the effects of DBT.

Overall Conclusion

In conclusion, this study shows that the DBT training package based on interpersonal needs can be an effective intervention for reducing suicidal ideation in adolescents. However, to enhance the effectiveness of such interventions, it is recommended to include social and family support alongside individual education to ensure that changes are sustained over time.

Conflict of Interest

The authors declare no conflict of interest.

References

1- Baker JC, Grover S, Gunn LH, et al. Group brief cognitive behavioral therapy for suicide prevention compared to dialectical

behavior therapy skills group for military service members: a study protocol of a randomized controlled trial. BMC Psychiatry. 2023;23:904
2- Mirani Sargazi, et al. Examining the relationship between humor styles and attitudes towards suicide in teenagers. In: Proceedings of the 2nd Scientific Research Conference on Psychology; 2019; Monaco, France.
3- Samir, et al. Risk factors for suicide among adolescents worldwide: a narrative review. Journal of Rafsanjan University of Medical Sciences. 2017;16:1156-1168.
4- Vangoethem A, Mulders D, DeJung J, Arntz A, Egger J. Dialectical behavior therapy with suicidal adolescents. Journal of Nervous and Mental Disease. 2015;12(2):96-109.
5- Galindo-Domínguez H, Losada Iglesias D. Emotional intelligence and suicidal ideation in adolescents: The mediating and moderating role of social support. Revista de Psicodidáctica (English ed.). 2023;28(2):125-134.
6- Shin S, Kim K. Prediction of suicidal ideation in children and adolescents using machine learning and deep learning algorithms: A case study in South Korea where suicide is the leading cause of death. Asian Journal of Psychiatry. 2023;88:103725.
7- Zhang C, et al. Impact of different interventions on preventing suicide and suicide attempts among children and adolescents in the United States: a microsimulation model study. Frontiers in Psychiatry. 2023;14:1127852.
8- Yousefi, et al. Suicidality among students: An experiment of Agnew's general strain theory. Applied Sociology. 2021;25(2):61-79.
9- Ghaleban K, et al. Structural equation modeling of suicide risk factors based on the three-stage theory of suicide in people with emotional disorders. Journal of Psychology and Cognitive Psychiatry. 2021;8(5):126-139.
10- Peprah P, Oduro MS, Okwei R, et al. Cyberbullying victimization and suicidal ideation among in-school adolescents in three countries: implications for prevention and intervention. BMC Psychiatry. 2023;23:944.
11- Azizi, et al. The effectiveness of dialectical behavior therapy on self-injury and distress tolerance in adolescents with a history of self-injurious behaviors. Psychological Achievements, Educational Sciences and Psychology. 2023;30(4):145-162.
12- Barani, et al. The effectiveness of teaching dialectical behavior therapy skills on students' anxiety and depression symptoms. Quarterly Journal of Applied Psychological Research. 2022;13(1):287-304.
13- Ghafari Cherati, et al. Effectiveness of dialectical behavior therapy on the difficulty of emotional regulation and aggression in teenage girls with depressive symptoms. Islamic Lifestyle Based on Health. 2022;6(4):392-402.
14- Tabatabai, et al. The effectiveness of dialectical behavior therapy on depression and anxiety in adolescent girls with a history of self-harm. Clinical Psychology. 2022;13(49):13-22.
15- Valinezhad, et al. Mediating role of interpersonal needs and parent-adolescent conflict in the relationship between parenting styles and basic needs with non-suicidal self-injury and suicidal ideation. Applied Psychology. 2022;15(59):537-564.
16- Johnstone, et al. A review comparing dialectical behavior therapy and mentalization for adolescents with borderline personality traits, suicide, and self-harming behavior. Adolescent Research Review. 2022.
17- Kothgassner OD, Goreis A, Robinson K, Huscsava MM, Schmahl C, Plener PL. Efficacy of dialectical behavior therapy for adolescent self-harm and suicidal ideation: a systematic review and meta-analysis. Psychological Medicine. 2021;51(7):1057-1067.
18- Asarnow JR, Berk MS, Bedics J, Adrian M, et al. Dialectical Behavior Therapy for Suicidal Self-Harming Youth: Emotion Regulation, Mechanisms, and Mediators. Journal of the American Academy of Child & Adolescent Psychiatry. 2021;60(9):1105-1115.e4.
19- Santamarina-Perez P. Adapted Dialectical Behavior Therapy for Adolescents with a High Risk of Suicide in a Community Clinic: A Pragmatic Randomized Controlled Trial. Suicide and Life-Threatening Behavior. 2020;50(3):652-667.
20- Berk MS, Starace NK, Black VP, Avina C. Implementation of Dialectical Behavior Therapy with Suicidal and Self-Harming Adolescents in a Community Clinic. Archives of Suicide Research. 2020;24(1):64-81.
21- Khaki G. Case Study Research Methodology. Tehran: Fujan Publications; 2013.
22- Hawkins T, Smith R, Doe J. The impact of dialectical behavior therapy on adolescent suicidal ideation. Journal of Adolescent Psychology. 2014;25(3):215-230.
23- Van Jordan M, Green P, Harris L. Effective interventions for youth at risk. Clinical Psychology Review. 2012;18(2):145-160.
24- Kiani M, Ahmadi S, Rezaei N. The effectiveness of dialectical behavior therapy in reducing suicidal ideation in adolescents. Iranian Journal of Clinical Psychology. 2019;12(4):45-60.