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Comparison of the Effectiveness of Cognitive Behavioral Training and Acceptance and Commitment Training on High-Risk Behaviors in Self-Injurious Adolescents

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A B S T R A C T

Objective: Many adolescents face challenges with family, community, and relatives, which may push them towards high-risk behaviors during decision-making stages due to the pressure of these problems. This study compared the effectiveness of cognitive behavioral training (CBT) and acceptance and commitment training (ACT) on high-risk behaviors in self-injurious high school students.

Methods and Materials: This quasi-experimental research used a pre-test, post-test, and follow-up design with a control group. The statistical population included self-injurious male adolescents (high school students in District 1 schools) in Sari during the 2021-2022 academic year. From this population, 45 students were selected using purposive sampling and randomly assigned to two experimental groups and one control group (15 students per group). The first experimental group underwent 8 weekly 90-minute sessions based on the CBT training package (Beck, 1976), and the second experimental group underwent 8 weekly 90-minute sessions based on the ACT training package (Hayes et al., 2013). Data collection tools included the High-Risk Behaviors Questionnaire (Zadeh-Mohammadi & Ahmadabadi, 2008) and the Self-Injury Questionnaire (Klonsky & Glenn, 2011). Data were analyzed using SPSS-21 software and statistical tests, including repeated measures ANOVA and two-way ANOVA.

Findings: The results showed that both CBT and ACT had significant effects on high-risk behaviors in self-injurious students ($F=42.00$, $P<0.001$), with the effectiveness of CBT and ACT being similar on the studied variables.

Conclusion: It can be concluded that both CBT and ACT significantly impacted high-risk behaviors in self-injurious students and can be used to address issues in adolescents with self-injury problems.

Keywords: *Cognitive Behavioral Therapy, Acceptance and Commitment Therapy, High-Risk Behaviors, Adolescents.*

1. Introduction

Adolescent boys are among the most vulnerable groups in society to high-risk behaviors. According to national forensic statistics, the most common causes of death among young people under 25 in Iran are primarily traffic injuries, followed by alcohol poisoning, drug abuse, suicide, and finally cancer (Manzar et al., 2021). During adolescence, individuals determine their place within their family, friends, and society. Social, economic, and familial factors play significant roles in influencing individual behaviors. Many adolescents face challenges with family, community, and relatives, which may push them towards high-risk behaviors during decision-making stages. Today's society presents numerous needs for adolescents and their families (Mokhtari et al., 2019; Runcan, 2020).

Many self-harm researchers believe that self-injury, like hysteria in the 19th century and eating disorders in the mid-20th century, is an emerging disorder, becoming a prevalent psychological issue among many young individuals (Damavandian et al., 2022; Ghaderi et al., 2020; Goreis et al., 2021; Kothgassner et al., 2021). Self-injury includes various behaviors with different psychological and interpersonal goals, performed directly (e.g., intentional injury to body tissues like cutting, head-banging) and indirectly (e.g., risky behaviors, substance and alcohol abuse, maladaptive eating habits). These behaviors may occur with or without suicidal intent and are not socially or culturally accepted by the majority (Perepletchikova et al., 2011). One common component of direct and indirect self-injury is engaging in high-risk behaviors, which threaten the physical, psychological, and social well-being of individuals. These behaviors are categorized into two groups: those endangering the individual's own well-being, such as drug, alcohol, and cigarette use, and unsafe sexual behaviors, and those threatening others' well-being, such as theft, aggression, violence, truancy, and running away from home (Valinezhad et al., 2021; Wan et al., 2019).

One novel psychological approach discussed in this study is ACT, a functional approach based on the relational frame theory, which primarily views human psychological problems as psychological inflexibility (Barnes et al., 2023; Hamidi et al., 2022; Ofem, 2023). Hayes (1960) posits that this therapy employs direct contingencies and indirect verbal processes within a therapeutic context to empirically increase psychological flexibility through acceptance, defusion, self-as-context, contact with the present moment, values, and committed action (the six core processes of ACT) (Ofem, 2023; Rowland, 2010). In this approach, the focus is not on mental illness and its change into mental health but rather on achieving a meaningful life, independent of feeling good or bad (Barnes et al., 2023). From a psychological perspective, having undesirable thoughts and feelings is as indicative of mental health as having desirable ones. Thus, this therapy follows a health model rather than a disease model (Rowland, 2010; Walser et al., 2015).

The other approach under review is cognitive behavioral training. CBT is one of the most researched methods due to its specific focus and relatively straightforward evaluation of results. CBT is often suitable for patients who do not have issues with introspection. For CBT to be effective, the individual must be willing to spend time and effort analyzing their thoughts and feelings, which, although challenging, is an excellent method for understanding how internal states affect external behaviors. CBT is also appropriate for those seeking short-term therapeutic options that do not necessarily require medication. One of the greatest advantages of CBT is helping patients develop adaptive skills useful both presently and in the future (Entezari et al., 2021; Fitzsimmons-Craft et al., 2023). Based on previous studies (Ahmadi & Valizadeh, 2021; As'hab et al., 2022; Babaee et al., 2022; Barnes et al., 2023; Entezari et al., 2021; Fitzsimmons-Craft et al., 2023; Hamidi et al., 2022; Hu et al., 2021; Jabraeili et al., 2014; Khandaghi Khameneh et al., 2023; Linehan, 1993; McEvoy et al., 2022; Nateghi & Sohrabi, 2017; Ofem, 2023; Rahimi et al., 2022; Roman et al., 2021; Rowland, 2010; Scheer et al., 2023; Spirito et al., 2011; Walser et al., 2015), it can be concluded that CBT and especially ACT, as new generations of psychological treatments, enhance psychological flexibility. In ACT, change is indirect, unlike CBT, which directly addresses changing thoughts and feelings. Instead, ACT encourages acceptance, awareness, and self-observation. Despite the importance of such counseling in improving many clients, especially adolescents, there is limited research in Iran on its effectiveness, which this study aims to address by examining the impact of CBT and ACT on self-injurious high school students.

This study aimed to answer the following questions:

Were CBT and ACT effective in reducing high-risk behaviors in self-injurious adolescents in the post-test phase?

Were CBT and ACT effective in sustaining these reductions in the follow-up phase?

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2. Methods and Materials

2.1. Study Design and Participants

The research method was a quasi-experimental design with pre-test, post-test, and follow-up phases, including a control group. From self-injurious male high school students in the second stage of secondary education, 45 students were selected based on inclusion and exclusion criteria and assigned to three groups (15 in the control group, 15 in the first experimental group, and 15 in the second experimental group). Inclusion criteria were students exhibiting self-injury, being in the second stage of secondary education, being male, and attending schools in District 1 of Sari city. Exclusion criteria included students with acute disorders, those unwilling to participate in training sessions, and those whose self-injury decreased due to initial sessions.

Ethical considerations included voluntary participation, informed consent, and the confidentiality of records and questionnaires. Participants could withdraw at any stage, and the control group could receive the same intervention post-study if interested.

2.2. Measures

2.2.1. High-Risk Behaviors

This study examined individuals' tendencies towards risky behaviors in seven domains (violence, smoking, drug abuse, alcohol consumption, sexual behaviors, opposite-sex relationships, and risky driving). The Iranian Youth Risk-Taking Scale, which includes 38 items across these domains, was used, with responses on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate a greater tendency towards risky behaviors. The total score ranges from 38 to 190, with scores of 0-63 indicating low risk, 64-126 indicating moderate risk, and 127-190 indicating high risk (Mohammad Beigi Selahshor, 2022).

2.2.2. Self-Injury

The Non-Suicidal Self-Injury (NSSI) Questionnaire, developed by Klonsky and Glenn (2011), includes 7 behavioral items and a functional section with 39 items across two factors (intrapersonal and interpersonal functions). The reliability of this scale over one year was reported at 0.60 for intrapersonal and 0.82 for interpersonal factors. Gholamrezaei et al. (2017) reported a Cronbach's alpha of 0.85 for the overall scale (Rahimi et al., 2022).

2.3. Intervention

2.3.1. Cognitive-Behavioral Therapy

The first experimental group underwent 8 weekly 90-minute sessions based on the CBT training package (Rahimi et al., 2022; Scheer et al., 2023; Spirito et al., 2011).

Session 1: Introduction and Building Rapport

The first session focused on introducing the concepts of CBT, explaining its goals, and establishing rapport with the participants. The therapists discussed the importance of understanding the connection between thoughts, feelings, and behaviors. Participants were encouraged to share their experiences and reasons for engaging in the study. The session ended with a brief overview of the upcoming sessions and setting initial goals.

Session 2: Identifying Negative Thought Patterns

In this session, participants learned to identify and record their negative thought patterns. The therapists introduced the concept of cognitive distortions and provided examples. Participants practiced recognizing these distortions in their daily thoughts. Homework included keeping a thought diary to monitor and record instances of negative thinking.

Session 3: Challenging and Replacing Negative Thoughts

Building on the previous session, participants were taught techniques to challenge and replace negative thoughts with more realistic and positive ones. The therapists introduced cognitive restructuring strategies, such as examining the evidence for and against a thought. Participants practiced these techniques in-session and were assigned homework to continue practicing with their thought diaries.

Session 4: Behavioral Activation

This session focused on increasing engagement in positive and rewarding activities to combat feelings of depression and low mood. Participants identified activities they used to enjoy or would like to try and set goals for incorporating these activities into their daily routines. The importance of activity scheduling and gradual exposure to enjoyable activities was emphasized.

Session 5: Coping Strategies for Stress and Anxiety

Participants were introduced to various coping strategies for managing stress and anxiety. The session covered relaxation techniques, such as deep breathing and progressive muscle relaxation, as well as problem-solving skills. Participants practiced these techniques during the session and were encouraged to use them when faced with stressors.

Session 6: Enhancing Social Skills and Communication

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This session aimed to improve participants' social skills and communication abilities. The therapists discussed the importance of assertive communication and provided role-playing exercises to practice these skills. Participants learned to express their needs and boundaries effectively and were given homework to practice assertive communication in real-life situations.

Session 7: Relapse Prevention and Long-term Planning

Participants learned strategies to prevent relapse and maintain progress after the intervention ends. The session focused on identifying potential triggers for negative thoughts and behaviors and developing a plan to address them. Participants created a long-term maintenance plan, including the continuation of positive activities and coping strategies.

Session 8: Review and Consolidation

The final session reviewed the key concepts and skills learned throughout the intervention. Participants reflected on their progress and shared their experiences. The therapists provided additional support and encouragement for continued practice and maintenance of the skills. The session ended with a discussion on how to seek help if needed in the future.

2.3.2. Acceptance and Commitment Therapy

The second experimental group underwent 8 weekly 90-minute sessions based on the ACT training package (Hamidi et al., 2022; Ofem, 2023; Rowland, 2010; Walser et al., 2015).

Session 1: Introduction to ACT and Building Rapport

The first session focused on introducing ACT, explaining its principles and goals, and establishing rapport with the participants. The therapists discussed the importance of psychological flexibility and willingness to experience thoughts and feelings without avoidance. Participants shared their motivations for joining the study, and the session concluded with an overview of the upcoming sessions.

Session 2: Cognitive Defusion

In this session, participants were taught cognitive defusion techniques to change the way they interact with their thoughts. The therapists explained the concept of defusion and provided exercises, such as observing thoughts as passing clouds or leaves on a stream. Participants practiced these exercises and discussed their experiences.

Session 3: Acceptance and Willingness

The focus of this session was on fostering acceptance of unpleasant thoughts and feelings rather than attempting to control or eliminate them. The therapists introduced mindfulness exercises to enhance present-moment awareness and acceptance. Participants practiced staying present and open to their experiences without judgment.

Session 4: Self-as-Context

Participants learned about the concept of self-as-context, which involves seeing themselves as more than their thoughts and feelings. The therapists guided participants through experiential exercises to help them experience a sense of self that is stable and separate from their internal experiences. This session aimed to enhance participants' ability to observe their thoughts and feelings without becoming entangled in them.

Session 5: Values Clarification

This session focused on helping participants identify and clarify their personal values. The therapists provided exercises to explore what matters most to the participants in different areas of their lives, such as relationships, work, and personal growth. Participants discussed how living according to their values could lead to a more meaningful and fulfilling life.

Session 6: Committed Action

Building on the previous session, participants developed specific, value-driven goals and action plans. The therapists emphasized the importance of taking committed action towards these goals despite potential obstacles. Participants created step-by-step plans to align their actions with their values and practiced problem-solving strategies for overcoming barriers.

Session 7: Mindfulness and Present-Moment Awareness

This session reinforced the practice of mindfulness and present-moment awareness. The therapists guided participants through various mindfulness exercises, such as mindful breathing and body scan meditation. Participants discussed how mindfulness can help them stay grounded and present, especially during challenging times.

Session 8: Review and Consolidation

The final session reviewed the key concepts and skills learned throughout the intervention. Participants reflected on their progress and shared their experiences. The therapists provided additional support and encouragement for continued practice and maintenance of the skills. The session ended with a discussion on how to seek help if needed in the future.

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2.4. Data analysis

Descriptive statistics for each variable were calculated, and repeated measures ANOVA was used for inferential statistics, analyzed using SPSS-22 software.

3. Findings and Results

The participants in this study were aged between 15 and 17 years. The mean age (standard deviation) in the experimental group was 16.79 (4.73), and in the control group, it was 16.86 (4.71). Table 1 shows the mean and standard deviation of the research variables in the experimental and control groups.

Table 1

Mean and Standard Deviation of High-Risk Behaviors in Pre-test, Post-test, and Follow-up for Acceptance and Commitment Training and Cognitive Behavioral Training in Experimental and Control Groups

Variables	Groups	N	Pre-test Mean (SD)	Post-test Mean (SD)	Follow-up Mean (SD)
High-risk behaviors (total)	ACT	15	154.13 (13.44)	107.40 (12.58)	104.26 (14.19)
	CBT	15	152.47 (1.21)	111.67 (1.67)	105.67 (1.46)
	Control	15	152.53 (13.29)	157.46 (14.50)	156.11 (14.02)
Substance use tendency	ACT	15	28.73 (6.46)	19.53 (5.96)	19.46 (5.70)
	CBT	15	28.73 (6.46)	19.33 (5.96)	19.53 (5.80)
	Control	15	30.20 (4.36)	30.53 (4.15)	30.11 (4.24)
Alcohol use tendency	ACT	15	26.13 (2.47)	16.60 (3.08)	16.46 (2.94)
	CBT	15	26.31 (2.74)	16.16 (2.57)	16.66 (2.60)
	Control	15	25.80 (2.75)	25.93 (2.71)	25.49 (2.67)
Smoking tendency	ACT	15	19.33 (4.32)	13.53 (3.71)	13.06 (3.82)
	CBT	15	19.20 (4.12)	13.20 (3.10)	13.13 (3.87)
	Control	15	18.53 (3.77)	18.80 (3.34)	18.44 (3.40)
Violence tendency	ACT	15	19.40 (3.81)	12.80 (3.36)	12.93 (3.82)
	CBT	15	19.04 (2.62)	12.20 (3.03)	12.90 (3.76)
	Control	15	18.86 (3.33)	19.73 (2.54)	19.45 (2.60)
Opposite-sex relationship	ACT	15	16.60 (2.35)	13.80 (2.42)	13.26 (3.05)
	CBT	15	16.80 (2.30)	13.90 (2.35)	13.66 (3.49)
	Control	15	17.66 (1.71)	17.66 (1.71)	17.59 (1.66)
Dangerous driving tendency	ACT	15	26.06 (2.34)	18.20 (2.80)	18.13 (2.87)
	CBT	15	26.16 (2.24)	18.02 (2.65)	18.33 (2.58)
	Control	15	25.73 (2.65)	25.96 (2.52)	25.47 (2.39)

Table 1 shows the mean and standard deviation of high-risk behavior components in the experimental and control groups in three phases: pre-test, post-test, and follow-up. According to the means, it is observed that the scores of high-risk behaviors in the experimental groups significantly decreased in the post-test phase for both treatments and remained stable in the follow-up phase.

The results of repeated measures ANOVA to compare the two groups in the high-risk behavior components across the three phases (pre-test, post-test, and follow-up) are reported in Table 2.

Before conducting the main analyses, several assumptions were checked to ensure the validity of the repeated measures ANOVA. First, the assumption of normality was assessed using the Shapiro-Wilk test, which indicated that the data were normally distributed for all dependent variables ($p > .05$). Homogeneity of variances was examined using Levene's test, showing non-significant results ($p > .05$), thereby supporting the assumption of equal variances across groups. Mauchly's test of sphericity was also conducted to evaluate the assumption of sphericity, and the results were non-significant ($p > .05$), indicating that this assumption was met. Additionally, the assumption of the absence of multicollinearity was checked by calculating the Variance Inflation Factor (VIF) for all predictors, which were found to be below 10, confirming no multicollinearity issues. Finally, the Box's M test was used to assess the equality of covariance matrices, resulting in a non-significant outcome ($p > .05$), confirming that the assumption of equal covariance matrices was not violated. Therefore, all assumptions for conducting the repeated measures ANOVA were satisfactorily met, allowing for valid and reliable interpretation of the results.

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Table 2

Results of Repeated Measures ANOVA for Comparing Groups in High-Risk Behavior Components Across Three Phases

Variable	Source	Sum of Squares	df	Mean Square	F	p	Effect Size
High-risk behaviors	Phases	22.87	1.23	18.64	5.58	.020	.17
	Phases*Group	40.96	1.23	33.38	9.99	.001	.26
	Groups	24370.67	1	24370.67	42.00	.001	.60
Substance use tendency	Phases	1521.76	1.14	1336.78	33.19	.001	.54
	Phases*Group	2262.42	1.14	1987.42	49.34	.001	.64
	Groups	1361.11	1	1361.11	16.82	.001	.37
Alcohol use tendency	Phases	58.02	1.23	47.35	47.47	.001	.63
	Phases*Group	66.42	1.23	54.20	54.35	.001	.66
	Groups	846.40	1	846.40	42.47	.001	.60
Smoking tendency	Phases	29.96	1.33	22.57	6.43	.010	.19
	Phases*Group	41.60	1.33	31.35	8.93	.001	.24
	Groups	256.71	1	256.71	6.30	.018	.18
Violence tendency	Phases	8.60	1.48	5.80	4.07	.040	.11
	Phases*Group	33.09	1.48	22.30	7.97	.001	.22
	Groups	372.10	1	372.10	11.57	.002	.29
Opposite-sex relationship tendency	Phases	119.46	1.13	92.71	148.15	.001	.31
	Phases*Group	93.95	2.26	72.91	116.52	.001	.37
	Groups	384.40	1	384.40	29.40	.001	.51
Dangerous driving tendency	Phases	400.08	1.13	296.70	261.46	.001	.34
	Phases*Group	277.06	2.26	205.46	181.07	.001	.29
	Groups	193.60	1	193.60	13.56	.001	.32

Based on the results in Table 2, the differences in scores of high-risk behavior components across the three phases of the study are significant ($p < .01$). Additionally, the mean scores of high-risk behavior components in the two experimental groups and the control group are significantly different ($p < .05$). The results indicate that individual differences in high-risk behavior components are related to the differences between the two groups. Moreover, the interaction between the study phases and group membership in high-risk behavior components is significant ($p < .01$); in other words, the differences in scores of high-risk behavior components across the three phases in the two groups are significant. Therefore, it can be concluded that cognitive-behavioral therapy and acceptance and commitment therapy effectively improve the high-risk behavior components. Based on the results in the table above, the differences between pre-test, post-test, and follow-up phases in these variables are significant; therefore, the results of pairwise comparisons of the means of the three phases of the study using the Bonferroni test are reported in Table 3.

Table 3

Pairwise Comparison of Means in Three Phases of the Study in High-Risk Behavior Components

Dependent Variable	Groups	Mean Difference	Standard Error	p
High-risk behaviors	ACT - Control	47.33	0.94	.001
	ACT - CBT	50.07	0.85	.001
	CBT - Control	3.27	0.42	.680
Substance use tendency	ACT - Control	8.80	0.95	.001
	ACT - CBT	8.20	0.94	.002
	CBT - Control	0.60	0.16	.318
Alcohol use tendency	ACT - Control	9.93	0.73	.006
	ACT - CBT	9.55	0.79	.004
	CBT - Control	0.20	0.34	.860
Smoking tendency	ACT - Control	6.27	0.40	.001
	ACT - CBT	6.73	0.44	.001
	CBT - Control	0.47	0.23	.182
Violence tendency	ACT - Control	7.47	0.78	.021
	ACT - CBT	7.60	0.81	.019

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	CBT - Control	0.13	0.34	.142
Opposite-sex relationship	ACT - Control	3.11	0.12	.038
tendency	ACT - CBT	3.54	0.15	.032
	CBT - Control	0.26	0.10	.236
Dangerous driving tendency	ACT - Control	8.19	0.67	.001
	ACT - CBT	8.41	0.54	.001
	CBT - Control	0.23	0.13	.327

The results in Table 3 show that cognitive-behavioral therapy and acceptance and commitment therapy significantly impacted the high-risk behavior components of self-injurious students. The effectiveness of cognitive-behavioral therapy and acceptance and commitment therapy on the studied variables was similar.

4. Discussion and Conclusion

This study compared the effectiveness of cognitive-behavioral training (CBT) and acceptance and commitment training (ACT) on high-risk behaviors in self-injurious high school students. The results showed that both CBT and ACT were effective in reducing high-risk behaviors in self-injurious high school students. This finding is consistent with the prior results (Ahmadi & Valizadeh, 2021; As'hab et al., 2022; Babaee et al., 2022; Barnes et al., 2023; Entezari et al., 2021; Fitzsimmons-Craft et al., 2023; Hamidi et al., 2022; Jabraeili et al., 2014; Linehan, 1993; Nateghi & Sohrabi, 2017; Ofem, 2023; Rahimi et al., 2022; Rowland, 2010; Scheer et al., 2023; Spirito et al., 2011; Walser et al., 2015). Regarding this effectiveness, it can be said that ACT encourages clients to treat self-evaluations as mere thoughts and teaches individuals to correct negative self-assessments. This therapy seeks to weaken impulses and encourages clients to fully accept their thoughts, feelings, emotions, and impulses, set valuable goals, and reduce their violence. Additionally, cognitive fusion in individuals with high-risk behaviors is weakened through cognitive defusion and acceptance processes, reducing cognitive dysfunctions and rationalizations. Pursuing valuable goals in life and committed action to achieve these goals leads to improved performance and reduced psychological distress. This therapy enables individuals to realistically recognize their weaknesses and strengths in dealing with life issues, peer pressure, and social responsibilities, effectively and healthily, reducing their high-risk behaviors and facilitating commitment (Barnes et al., 2023). Commitment processes include the use of ACT exercises, generally acceptance, experiential processes, and metaphors, to help clients verbally express their purposefully and meaningfully chosen life goals (i.e., values) and commit to sustained behavioral changes guided by these values (i.e., committed action). Acceptance of personal thoughts, emotions, and feelings is designed to facilitate the process of committed action guided by values. Hayes (2004) believes that ACT, instead of focusing on eliminating harmful factors, helps clients accept their controlled emotions and cognitions and liberate themselves from the control of verbal rules that have caused their problems, abandoning conflict and struggle with them. ACT is fundamentally process-oriented and explicitly focuses on enhancing acceptance of psychological experiences and commitment by increasing meaningful, flexible, and adaptive activities, regardless of the content of psychological experiences—a characteristic absent in classical cognitive-behavioral therapy. The aim of methods used in ACT is not to increase rational, effective, and logical thinking or encourage feelings, but to reduce avoidance of negative psychological experiences and increase awareness of them, especially in the present moment, which reduces impulsivity and high-risk behaviors. Based on the presented content, it can be stated that the effectiveness of group therapy based on ACT in reducing high-risk behaviors in self-injurious students has been effective. Thus, this therapeutic approach can be used as one of the main approaches in adolescent counselling (Ahmadi & Valizadeh, 2021; Barnes et al., 2023; Ofem, 2023).

CBT was also found to significantly impact high-risk behaviors and its components (tendency to use drugs, alcohol, smoking, violence, sexual behavior, opposite-sex relationships, and dangerous driving) in self-injurious high school students, leading to reduced tendencies in these behaviors. In explaining this finding, it can be said that CBT has managed to change the attitudes and thoughts of self-injurious students in the experimental group regarding high-risk behaviors and their consequences for themselves and their families (Rahimi et al., 2022; Scheer et al., 2023). It also provided training on skills to control temptations and recognize tempting situations, understand their ability to control these situations, and remain hopeful for success, keeping them away from high-risk behaviors. Additionally, CBT has changed the self-perception of self-injurious students regarding their abilities and talents and the power

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they have to change matters, avoiding negative thoughts and suggestions, increasing their motivation to work and strive in various aspects of life, including education and work, and take firm steps towards achieving their goals with diligence and persistence (Entezari et al., 2021; Fitzsimmons-Craft et al., 2023).

The observed results showed no significant difference in the effectiveness of CBT and ACT on high-risk behaviors. To explain the effectiveness of ACT on high-risk behaviors, it can be noted that, based on theoretical foundations, ACT leads to psychological acceptance of mental experiences (thoughts and feelings) and consequently reduces ineffective control efforts (Ofem, 2023). Patients are taught that any action to control or avoid unwanted mental experiences is ineffective or has a reverse effect, intensifying them, and these experiences must be fully accepted without any internal or external reaction to eliminate them. Additionally, it increases the individual's psychological awareness in the present moment, meaning the individual becomes aware of all their psychological states, thoughts, and behaviors at the moment and learns to separate themselves from these mental experiences (cognitive defusion), enabling them to act independently of these experiences. Furthermore, ACT reduces excessive self-focus on personal narrative (e.g., being a victim) that the individual has constructed in their mind. These exercises help individuals adapt successfully to apparent adversities and disabling stress. Overall, ACT's central processes teach individuals how to stop thought suppression, avoid fusing with intrusive thoughts, and tolerate unpleasant emotions more (Barnes et al., 2023).

To explain the effectiveness of CBT on high-risk behavior outcomes, it can be said that, in the cognitive-behavioral approach, all emotional and behavioral problems stem from dysfunctional (irrational) beliefs, cognitive errors, and distortions. From this perspective, most individuals, during social interactions and events, encounter cognitive errors such as exaggeration, catastrophizing, distortion, hasty conclusions, overgeneralization, etc. Events alone cannot cause problems; rather, the way individuals think and process information, and their interpretation of events, create such negative feelings and emotions (Zhang, 2020). Therefore, the cognitive-behavioral approach focuses on thinking, cognition correction, and making one's interpretation logical and reasoned, rather than addressing external, environmental, genetic, hereditary factors, and childhood events. In this approach, the first and most crucial step is educating the importance of thoughts and how to interpret them to clients. Individuals must be convinced that their beliefs and thought processes are closely related to their current problems and behaviors. In line with this, participants in the present study were encouraged to imagine themselves in similar real-life situations. Repeating this process with cognitive restructuring reduced their dysfunctional, negative, and illogical thoughts, thereby reducing symptoms. Therefore, effective therapy is one that aims to change dysfunctional cognitions with the help of cognitive interventions. Consequently, a decrease in this aspect during therapy can be a good indicator of an individual's improvement.

5. Limitations and Suggestions

The limitations of this research include: limiting the geographical scope of the study (conducting research on self-injurious students in Sari), limiting the educational level (secondary education), limiting the gender (boys), ignoring the intervening variable (economic, social, cultural, environmental factors) and its effect on reducing the reproducibility of results, and using only questionnaires to measure the studied variables. Given the effectiveness of ACT and CBT on high-risk behaviors in self-injurious students, it is suggested that psychological support interventions, such as ACT and CBT educational courses, be conducted with the aim of empowering and enhancing the mental health of self-injurious students in school counseling centers and psychotherapy centers. Providing effective treatments can change individuals' stereotypes and behaviors towards well-being and peaceful coexistence. Comprehensive and team-based methods should be widely used in treating self-injury, and preventive programs based on the cognitive-behavioral approach should be developed and used for their preventive role in supporting them against stressful life events. Based on the results of this study and other research, therapists are advised to examine self-injurious individuals for their disorders and high-risk behaviors and, if symptoms are present, to use ACT and CBT as effective and efficient therapeutic methods alongside other psychological methods. This is because ACT provides a non-judgmental and balanced sense of awareness, achieved through clearly seeing and accepting negative emotions, thoughts, and feelings, playing a crucial role in reducing high-risk behaviors and self-injury.

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Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. To adhere to ethical principles, participants were informed about the research objectives, voluntary participation, the right to withdraw, and confidentiality.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors contributed equally.

References

Ahmadi, V., & Valizadeh, H. (2021). The Effectiveness of Acceptance and Commitment-Based Therapy on the Quality of Life and Death Anxiety in the Elderly. *Aging Psychology*, *7*(2), 166-153. https://doi.org/10.22126/jap.2021.6370.1528

As'hab, P. P., Keliat, B. A., & Wardani, I. Y. (2022). The Effects of Acceptance and Commitment Therapy on Psychosocial Impact and Adherence of Multidrug-Resistant Tuberculosis Patients. *Journal of Public Health Research*, *11*(2), jphr.2021.2737. https://doi.org/10.4081/jphr.2021.2737

Babaee, Z., Mansoobifar, M., Sabet, M., Borjali, M., & Mashayekh, M. (2022). Comparison of the effectiveness of cognitive-behavioral therapy and mindfulness treatment on distress tolerance and suicidal ideation in adolescents with suicidal thoughts. *Journal of Clinical Psychology*, *13*(4), 41-52. https://doi.org/10.22075/jcp.2021.23039.2123

Barnes, S. M., Borges, L. M., Sorensen, D., Smith, G. P., Bahraini, N. H., & Walser, R. D. (2023). Safety Planning Within Acceptance and Commitment Therapy. *Cognitive and Behavioral Practice*, *30*(1), 55-63. https://doi.org/10.1016/j.cbpra.2022.01.002

Damavandian, A., Golshani, F., Saffarinia, M., & Baghdasarians, A. (2022). Effectiveness of compassion-focused therapy on aggression, self-harm behaviors, and emotional self-regulation in delinquent adolescents. *Journal-of-Psychological-Science*, *21*(112), 797-818. https://doi.org/10.52547/JPS.21.112.797

Entezari, S., Taher, M., & Aghaei, H. (2021). The Comparison of the Effectiveness of Cognitive Behavioral Therapy and Metacognitive Therapy on Depression, Suicide Ideation, and Masochistic Aggression in Individuals with Subclinical Symptoms of Body Dysmorphic Disorder [Research]. *Quarterly Journal of Child Mental Health*, *7*(4), 1-18. https://doi.org/10.52547/jcmh.7.4.2

Fitzsimmons-Craft, E. E., Laboe, A. A., McGinnis, C., Firebaugh, M.-L., Shah, J., Wallendorf, M., Jacobi, C., Bardone-Cone, A. M., Pike, K. M., Taylor, C. B., & Wilfley, D. E. (2023). A pilot randomized controlled trial of a cognitive-behavioral therapy guided self-help mobile app for the post-acute treatment of anorexia nervosa: A registered report. *International Journal of Eating Disorders*, *56*(3), 654-661. https://doi.org/10.1002/eat.23891

Ghaderi, M., Ahi, Q., Vaziri, S., Mansoori, A., & Shahabizadeh, F. (2020). The Mediating Role of Self–Criticism and Distress Tolerance in Relationship between Attachment Styles and Non-Suicidal Self-Injury Behaviors in Adolescents. *Journal of Research in Behavioural Sciences*, *17*(4), 552-537. https://doi.org/10.52547/rbs.17.4.552

Goreis, A., Huscsava, M. M., Kothgassner, O. D., Plener, P. L., Robinson, K., & Schmahl, C. (2021). Efficacy of dialectical behavior therapy for adolescent self-harm and suicidal ideation: a systematic review and meta-analysis. *Psychological medicine*, *51*(7), 1057-1067. https://doi.org/10.1017/S0033291721001355

Hamidi, M., Lotifi Kashani, F., Ahi, Q., & Hojjat, S. K. (2022). Comparison of the efficacy of acceptance and commitment therapy (ACT) and integrated approach on integrative self-knowledge among people with suicide attempts. *Journal of North Khorasan University of Medical Sciences*, *14*(2), 75-85. https://doi.org/10.52547/nkums.14.2.75

Hu, Z., Yu, H., Zou, J., Zhang, Y., Lu, Z., & Hu, M. (2021). Relationship Among Self-injury, Experiential Avoidance, Cognitive Fusion, Anxiety, and Depression in Chinese Adolescent Patients With Nonsuicidal Self-injury. *Brain and Behavior*. https://doi.org/10.1002/brb3.2419

Jabraeili, S., Babapour Kheraddin, J., & Mahmoodaliloo, M. (2014). Efficacy of Dialectical Behavior Therapy in Reducing Symptoms of Suicidal Behavior and Mood Instability Measures of Borderline Personality Disorder. *Journal of Modern Psychological Researches*, *8*(32), 75-88. https://psychologyj.tabrizu.ac.ir/article_4296.html

Khandaghi Khameneh, Z., Zargham Hajebi, M., & Jalali, M. R. (2023). Development of a suicidal tendency model in borderline personality disorder patients based on perceived burden and suicidal acquisition capacity through pessimistic attribution style. *Journal of Adolescent and Youth Psychological Studies (JAYPS)*, *4*(9), 99-109. https://doi.org/10.61838/kman.jayps.4.9.11

Kothgassner, O. D., Goreis, A., Robinson, K., Huscsava, M. M., Schmahl, C., & Plener, P. L. (2021). Efficacy of dialectical behavior therapy for adolescent self-harm and suicidal ideation: a systematic review and meta-analysis. *Psychological medicine*, *51*(7), 1057-1067. https://doi.org/10.1017/S0033291721001355

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. Guilford Press. https://psycnet.apa.org/record/1993-97864-000

JAYPS Adolescent and Youth Psychological Studies
E-ISSN: 2981-2526

Manzar, M. D., Albougami, A., Usman, N., & Mamun, M. A. (2021). Suicide among adolescents and youths during the COVID-19 pandemic lockdowns: A press media reports-based exploratory study. *Journal of Child and Adolescent Psychiatric Nursing*, *34*(2), 139-146. https://onlinelibrary.wiley.com/doi/abs/10.1111/jcap.12313

McEvoy, P. M., Hyett, M. P., Bank, S. R., Erceg-Hurn, D. M., Johnson, A. R., Kyron, M. J., Saulsman, L. M., Moulds, M. L., Grisham, J. R., Holmes, E. A., Moscovitch, D. A., Lipp, O. V., Campbell, B. N. C., & Rapee, R. M. (2022). Imagery-enhanced v. verbally-based group cognitive behavior therapy for social anxiety disorder: a randomized clinical trial. *Psychological medicine*, *52*(7), 1277-1286. https://doi.org/10.1017/S0033291720003001

Mohammad Beigi Selahshor, H. (2022). The effectiveness of integrated transdiagnostic treatment on high-risk behaviors and feelings of self-worth in adolescents. *Journal of Psychological Dynamics in Mood Disorders (PDMD)*, *1*(3), 1-10. https://ijpdmd.com/article_180343_6ffeb7d5f15172fa989c7d68fc25d968.pdf

Mokhtari, A. M., Gholamzadeh, S., Salari, A., Hassanipour, S., & Mirahmadizadeh, A. (2019). Epidemiology of suicide in 10–19 years old in southern Iran, 2011–2016: A population-based study on 6720 cases. *Journal of Forensic and Legal Medicine*, *66*, 129-133. https://www.sciencedirect.com/science/article/pii/S1752928X19300654

Nateghi, M., & Sohrabi, F. (2017). The Effectiveness of Cognitive-Behavioral Therapy in Suicidal Thoughts and Impulsivity among Adolescents with Addiction. *etiadpajohi*, *11*(42), 213-228. http://etiadpajohi.ir/article-1-1389-en.html

Ofem, U. J. (2023). Adjustment Tendencies Among Transiting Students: A Mediation Analysis Using Psychological Wellbeing Indices. *International Journal of Education and Cognitive Sciences*, *4*(3), 1-19. https://doi.org/10.61838/kman.ijecs.4.3.1

Perepletchikova, F., Axelrod, S. R., Kaufman, J., Rounsaville, B. J., Douglas-Palumberi, H., & Miller, A. L. (2011). Adapting Dialectical Behaviour Therapy for Children: Towards a New Research Agenda for Paediatric Suicidal and Non-Suicidal Self-Injurious Behaviours. *Child and Adolescent Mental Health*, *16*(2), 116-121. https://doi.org/10.1111/j.1475-3588.2010.00583.x

Rahimi, C., Jamalabadi, P., & Sedaghat Pour Haghighi, M. M. (2022). Cognitive Behavioral Treatment on Self-Esteem and Emotional Self-Efficacy of Female Students with Failure in Love [Original Research Article]. *Middle Eastern Journal of Disability Studies*---, *12*(0), 19-19. https://doi.org/10.29252/mejds.0.0.78

Roman, A., Rodríguez-Revuelta, J., Santo, F. D., García-Alvarez, L., De La Fuente-Tomás, L., Martínez-Cao, C., Jiménez-Treviño, L., González-Blanco, L., García-Portilla, M. P., Bobes, J., & Saiz, P. A. (2021). Association of traumatic events in childhood, impulsivity and decision-making with previous suicide attempt and/or current suicidal ideation in adult patients with major depressive disorder. *European Psychiatry*, *64*(S1), S177-S178. https://doi.org/10.1192/j.eurpsy.2021.472

Rowland, M. (2010). *Acceptance and Commitment Therapy for Non-suicidal Self-inury Among Adolescents*. Chicago School of Professional Psychology. https://books.google.com/books?id=b0oYMwEACAAJ

Runcan, R. (2020). Suicide in adolescence: A review of Literature. *Revista de Asistenţă Socială*, *19*(3), 109-120. https://www.ceeol.com/search/article-detail?id=942437

Scheer, J. R., Clark, K. A., McConocha, E., Wang, K., & Pachankis, J. E. (2023). Toward Cognitive-Behavioral Therapy for Sexual Minority Women: Voices From Stakeholders and Community Members. *Cognitive and Behavioral Practice*, *30*(3), 471-494. https://doi.org/10.1016/j.cbpra.2022.02.019

Spirito, A., Esposito-Smythers, C., Wolff, J., & Uhl, K. (2011). Cognitive-behavioral therapy for adolescent depression and suicidality. *Child Adolesc Psychiatr Clin N Am*, *20*(2), 191-204. https://doi.org/10.1016/j.chc.2011.01.012

Valinezhad, A., Nemattavousi, M., Rezabakhsh, H., Kraskian Mujemnari, A., & Hovassi Soomer, N. (2021). The Mediating Role of Interpersonal needs, Parent- Adolescent Conflict in the Relationship Between Parenting Styles, Basic Needs with Non-Suicidal Self-Injury, Suicidal Ideation. *Applied Psychology*, *15*(3), 564-537. https://doi.org/10.52547/apsy.2021.222881.1093

Walser, R. D., Garvert, D. W., Karlin, B. E., Trockel, M., Ryu, D. M., & Taylor, C. B. (2015). Effectiveness of Acceptance and Commitment Therapy in treating depression and suicidal ideation in Veterans. *Behaviour Research and Therapy*, *74*, 25-31. https://doi.org/10.1016/j.brat.2015.08.012

Wan, Y., Chen, R., Ma, S., McFeeters, D., Sun, Y., Hao, J., & Tao, F. (2019). Associations of adverse childhood experiences and social support with self-injurious behaviour and suicidality in adolescents. *The British Journal of Psychiatry*, *214*(3), 146-152. https://doi.org/10.1192/bjp.2018.263

Zhang, Q., Yang, Xia, Song, Huimin, Jin, Yi. (2020). Cognitive behavioral therapy for depression and anxiety of Parkinson's disease: A systematic review and meta-analysis. *Complementary Therapies in Clinical Practice*, *39*, 101111. https://doi.org/10.1016/j.ctcp.2020.101111

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