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The Effectiveness of Acceptance and Commitment Therapy (ACT) on Suicide Risk and Emotion Regulation in Men with Substance Use Disorder

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ABSTRACT

Objective: Substance use disorder, particularly marijuana use, is associated with adverse psychological outcomes such as an increased risk of suicide and difficulties in emotional regulation. The present study aimed to determine the effectiveness of Acceptance and Commitment Therapy (ACT) on suicide risk and cognitive emotion regulation in men with marijuana use disorder.

Methods: This study employed a quasi-experimental design with a pretest–posttest control group. The statistical population included all men aged 18 to 50 years diagnosed with marijuana use disorder (based on DSM-5 criteria) who referred to addiction treatment centers in Karaj and Fardis in 2025 (approximately 2,000 individuals). From this population, 30 participants were selected through convenience sampling and randomly assigned to an experimental group (n = 15) and a control group (n = 15). Research instruments included the Beck Scale for Suicide Ideation (BSSI), the Cognitive Emotion Regulation Questionnaire (CERQ), and a DSM-5 clinical interview. The experimental group received eight 90-minute sessions of ACT, while the control group received no intervention. Data were analyzed using repeated measures analysis of variance (ANOVA) with SPSS version 22.

Results: The results indicated that Acceptance and Commitment Therapy significantly reduced suicide risk (including death ideation and active suicidal preparation) in the experimental group compared with the control group ($p < .05$). Furthermore, the intervention significantly increased adaptive emotion regulation strategies (acceptance and positive reappraisal) and significantly decreased maladaptive strategies (rumination and catastrophizing) among individuals with marijuana use disorder.

Conclusions: ACT, by emphasizing acceptance of internal experiences and cognitive de-fusion from hopeless thoughts, can serve as an effective intervention for reducing suicidal potential and improving emotional capacities in men with substance dependence. It is recommended that psychologists in rehabilitation centers utilize this approach to enhance mental health and prevent high-risk behaviors among marijuana users.

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Introduction

Substance Use Disorder (SUD) is one of the most complex mental health crises in contemporary societies, affecting not only individuals' physical health but also severely damaging their psychological and social foundations. Among those affected, men tend to show greater vulnerability to the lethal consequences of this disorder due to social roles, higher levels of impulsivity, and particular coping patterns. Addiction is not merely a physiological dependence; rather, it is recognized as a chronic and relapsing disorder associated with fundamental changes in the brain's reward and inhibitory systems (Volkow et al., 2019). Research indicates that relapse rates among men after detoxification are very high, a phenomenon largely rooted in mood disturbances and an inability to cope effectively with life challenges (Sadock & Sadock, 2021).

One of the most severe psychological consequences among men with substance misuse is the significant increase in suicide risk indicators. Epidemiological studies confirm that the likelihood of suicide attempts among individuals dependent on substances is several times higher than in the general population. This risk is particularly concerning in men because they often employ more violent and lethal methods to end their lives. Suicide in this population is frequently interpreted as a mechanism for escaping overwhelming psychological pain and existential dead-ends resulting from repeated failures in attempts to quit substance use (Borges et al., 2020). Feelings of hopelessness and perceiving oneself as a burden to others, combined with the distress of withdrawal, may push individuals toward viewing death as the only escape from their current predicament (Pompili et al., 2022).

Another key factor underlying both addiction and self-harming behaviors is emotional dysregulation. Men with substance use disorders often experience fundamental difficulties in identifying, accepting, and managing their negative emotions. From a psychopathological perspective, substance use may function as a maladaptive coping strategy or a form of self-medication through which individuals attempt to reduce the intensity of intolerable emotions such as anger, shame, and loneliness (Gratz & Roemer, 2023). When adequate emotion regulation skills are absent, even minor environmental stressors can trigger impulsive reactions, leading individuals either to relapse into substance use for immediate relief or, in more critical situations, to contemplate self-harm (Aldao et al., 2010; Khalatbari et al., 2021).

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Despite the relative effectiveness of traditional treatments, high relapse rates highlight the urgent need for modern third-wave psychological interventions, including Acceptance and Commitment Therapy (ACT). Unlike traditional approaches that focus on changing the content of thoughts, ACT emphasizes changing the individual's relationship with their internal experiences. The central aim of this approach is to reduce experiential avoidance and increase psychological flexibility (Hayes et al., 2021). Within this therapeutic framework, patients learn to accept cravings for substances or suicidal thoughts as transient mental events rather than struggling against them, and instead take committed actions aligned with their personal values rather than surrendering to suffering (Twohig & Levin, 2022). Domestic research has also shown that this approach can reduce psychological distress and improve resilience against cravings among Iranian men (Izadi & Abedi, 2020; Mohammadi et al., 2023).

Given the research gap regarding the simultaneous examination of suicide risk and emotion regulation within the cultural context of Iran, it is necessary to determine whether the components of Acceptance and Commitment Therapy can function as a protective buffer against suicidal ideation while also enhancing the emotional capacities of these patients. Therefore, the present study was designed to scientifically examine the effectiveness of ACT in reducing suicide risk and improving emotion regulation among men with substance use disorder.

Material and Methods

The present study employed a quasi-experimental design with a pretest–posttest control group. The statistical population consisted of all men aged 18 to 50 years diagnosed with marijuana use disorder based on the DSM-5 criteria who referred to addiction treatment camps and rehabilitation centers in Karaj and Fardis during 2025 (1404). According to statistics obtained from these centers, the estimated population size was approximately 2,000 individuals.

From this population, 30 participants were selected through convenience sampling after initial screening and diagnostic evaluation. The participants were then randomly assigned to an experimental group (n = 15) and a control group (n = 15). The experimental group received Acceptance and Commitment Therapy (ACT) in eight therapeutic sessions, whereas the control group did not receive any psychological intervention during the study period.

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Research Instruments

1. Beck Scale for Suicide Ideation (BSSI)

The Beck Scale for Suicide Ideation is a 19-item questionnaire developed by Beck and Steer (1991) to assess the severity and risk of suicidal thoughts. The scale consists of two main dimensions:

Desire for death and passive suicidal thoughts (items 1–5)

Active preparation and planning for suicide (items 6–19)

Although the original version contains 21 items, the final two items have a clinical screening purpose and are not included in the scoring process. Each item is rated on a 3-point scale from 0 to 2, producing a total score ranging from 0 to 38, with higher scores indicating a greater level of suicide risk.

In the original study by Beck and Steer (1991), the Cronbach's alpha coefficient for the scale was reported as 0.89. The instrument has also been validated in several Iranian studies. For example, Anisi et al. (2005) confirmed its content and construct validity. In their research, the Cronbach's alpha coefficient for the overall scale ranged between 0.87 and 0.90, indicating satisfactory reliability and validity.

2. Cognitive Emotion Regulation Questionnaire (CERQ)

The 36-item Cognitive Emotion Regulation Questionnaire was developed by Garnefski, Kraaij, and Spinhoven (2001) and measures nine cognitive emotion regulation strategies categorized into two general dimensions.

Adaptive strategies include:

Acceptance (items 2, 11, 20, 29)

Positive refocusing (items 4, 13, 22, 31)

Refocus on planning (items 5, 14, 23, 32)

Positive reappraisal (items 6, 15, 24, 33)

Putting into perspective (items 7, 16, 25, 34)

Maladaptive strategies include:

Self-blame (items 1, 10, 19, 28)

Rumination (items 3, 12, 21, 30)

Catastrophizing (items 8, 17, 26, 35)

Blaming others (items 9, 18, 27, 36)

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Responses are scored on a 5-point Likert scale, ranging from 1 (almost never) to 5 (almost always). Scores for each subscale range from 4 to 20, with higher scores indicating greater use of that specific cognitive strategy.

In the original study by Garnefski et al. (2001), factor analysis was used to establish the questionnaire's validity, and the overall Cronbach's alpha coefficient was 0.82. The Persian version has also been used in Iranian studies by Hasani (2010) and Samani & Sadeghi (2010). In Hasani's study, Cronbach's alpha coefficients for the total scale and its subscales ranged from 0.68 to 0.82, demonstrating acceptable reliability and validity.

3. DSM-5 Based Semi-Structured Clinical Interview

This diagnostic interview and checklist was developed by the American Psychiatric Association (2013). The Persian version has also been utilized by Mohammadi et al. (2020). The substance use disorder assessment section of this instrument includes 11 diagnostic criteria, grouped into four major domains:

Impaired control (criteria 1–4)

Social impairment (criteria 5–7)

Risky use (criteria 8–9)

Pharmacological criteria (criteria 10–11)

Scoring is based on a clinical evaluation of the presence or absence of symptoms during the past 12 months. Meeting at least two criteria was required for participants to qualify for inclusion in the study.

Previous research has assessed the validity of this tool using inter-rater agreement methods. In Iran, the content validity of the interview has been confirmed by clinical psychologists, and the inter-rater reliability coefficient (kappa) for diagnosing substance use disorders has been reported to be above 0.80, indicating high reliability for participant selection and diagnostic confirmation.

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ACT Intervention Protocol (Experimental Group)

Session	Content
Sessions 1–2	Establishing a therapeutic alliance, introducing the concept of creative hopelessness, and identifying ineffective attempts to control marijuana cravings
Sessions 3–4	Teaching acceptance instead of experiential avoidance and practicing cognitive de-fusion from suicide-related thoughts
Sessions 5–6	Mindfulness exercises and training in awareness of the observing self in the present moment
Sessions 7–8	Clarifying personal life values, commitment to value-based actions, and developing a relapse-prevention plan

Ethical Considerations

All participants took part in the study voluntarily and were fully informed about the purpose and procedures of the research prior to participation. Informed consent was obtained from all individuals. Participants were assured that their personal information and responses would remain confidential and would be used solely for research purposes. They were also informed of their right to withdraw from the study at any stage without any negative consequences. Additionally, after completion of the study, participants in the control group were offered the opportunity to receive the therapeutic intervention sessions to ensure ethical fairness and access to psychological support.

Results

Table 1 presents the means and standard deviations of suicide risk and emotion regulation scores at the pretest, posttest, and follow-up stages for the experimental and control groups.

Table 1. Descriptive indices of pretest, posttest, and follow-up for the study variables in the experimental and control groups

Variable	Stage	Group	Mean	Standard Deviation
Suicide Risk	Pretest	Experimental	88.60	9.27
		Control	85.80	8.90
	Posttest	Experimental	71.93	10.81
		Control	83.80	10.09
	Follow-up	Experimental	73.46	10.66
		Control	82.86	10.63
Emotion Regulation	Pretest	Experimental	21.06	5.57
		Control	19.46	4.86
	Posttest	Experimental	28.80	6.20
		Control	20.20	4.55
	Follow-up	Experimental	30.66	4.99
		Control	22.20	5.19

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As shown in Table 1, the experimental group demonstrated a reduction in suicide risk scores and an increase in emotion regulation scores from pretest to posttest and follow-up, whereas the control group showed no meaningful changes across the three measurement stages.

Assumptions of Repeated Measures ANOVA

Prior to conducting the repeated measures analysis of variance, the underlying assumptions were examined. Normality of the dependent variables was assessed using the Kolmogorov–Smirnov test, and the results indicated that none of the tests were statistically significant across the measurement stages ($p > .05$), confirming the normal distribution of the data.

In addition, Levene's test was employed to examine the homogeneity of variances. The results showed that variance homogeneity was satisfied for all study variables ($p > .05$). Therefore, the assumptions required for conducting repeated measures ANOVA were met.

Results of Repeated Measures ANOVA

Table 2. Results of repeated measures ANOVA for suicide risk and emotion regulation

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Suicide Risk	Time	1688.02	2	844.01	80.71	.001	.742
	Group	1200.28	1	1200.28	59.05	.001	.720
	Time × Group	925.08	2	462.54	44.23	.001	.612
Emotion Regulation	Time	596.86	2	298.43	90.15	.001	.763
	Group	314.85	1	314.85	35.71	.001	.608
	Time × Group	240.42	2	120.21	36.31	.001	.565

According to the results presented in Table 2, the main effect of time was significant for both suicide risk ($F = 80.71$) and emotion regulation ($F = 90.15$) ($p < .05$), indicating significant differences in mean scores across the pretest, posttest, and follow-up stages. The main effect of group was also significant for both variables ($p < .05$), demonstrating significant differences between the experimental and control groups in suicide risk and emotion regulation. Moreover, the interaction effect of time × group was significant for all variables ($p < .05$), suggesting that the pattern of change across time differed between the two groups.

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The reported eta squared values indicate that a substantial proportion of variance in suicide risk and emotion regulation can be attributed to the ACT intervention.

Bonferroni Post-Hoc Comparisons

Following the significant differences observed across measurement stages, Bonferroni post-hoc tests were conducted to examine pairwise comparisons between pretest, posttest, and follow-up scores in the experimental and control groups.

Table 3. Bonferroni post-hoc test for pairwise comparisons across measurement stages

Variable	Stage	Group	Pretest	Posttest	Follow-up
Suicide Risk	Pretest	Experimental	—	*16.66	*15.13
		Control	—	0.12	2.00
	Posttest	Experimental	*-16.60	—	-1.53
		Control	-2.00	—	0.93
Emotion Regulation	Pretest	Experimental	—	*-7.33	*-9.60
		Control	—	-0.73	*-2.73
	Posttest	Experimental	*7.73	—	*-1.86
		Control	0.73	—	*-2.00

* $p < .05$

Based on the results of Table 3, significant differences were observed in the experimental group between the pretest and posttest, as well as between the pretest and follow-up, for both suicide risk and emotion regulation ($p < .05$). These findings indicate that Acceptance and Commitment Therapy had a significant effect on reducing suicide risk and improving emotion regulation. Furthermore, the results demonstrate that the therapeutic effects of ACT were maintained at the follow-up stage, suggesting the stability and persistence of treatment outcomes over time.

Discussion

The present study represents an innovative step toward understanding the mechanisms of therapeutic change among men with marijuana use disorder. The findings clearly indicated that Acceptance and Commitment Therapy (ACT) is not merely a symptom-focused intervention; rather, it facilitates a structural transformation in the individual's emotional and cognitive processing system. In the final analysis, the effectiveness of this treatment in reducing suicide risk can be explained by its ability to break the link between psychological pain and suicidal action. Participants in this study learned that suicidal thoughts are not commands that must be obeyed, but rather transient mental events occurring within the stream of consciousness. Through the process

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of cognitive defusion, individuals gradually disentangled themselves from hopeless and self-destructive thoughts and created a safe psychological distance between the observing self and self-harm impulses.

This achievement is particularly critical among marijuana users, who frequently struggle with chronic emotional disengagement, apathy, or even paranoid cognitive patterns. ACT addresses these vulnerabilities by reconnecting individuals with their personal values and meaningful life directions. By shifting attention from avoidance of psychological pain to engagement with valued living, the therapy rekindles a sense of hope, meaning, and purpose, even within the psychological "ashes" created by addiction. Consequently, individuals become less likely to perceive suicide as a solution to distress and more capable of tolerating internal experiences without resorting to destructive behaviors.

In the domain of cognitive emotion regulation, the strength of ACT lies in its capacity to redirect individuals from maladaptive regulation strategies—such as self-blame, rumination, and catastrophizing—toward adaptive strategies including acceptance, mindful awareness, and positive reappraisal. Traditionally, individuals who use marijuana tend to rely on the substance as an emotional shield, attempting to escape painful feelings or stressful life experiences through chemical avoidance. The results of this study demonstrated that when psychological flexibility replaces experiential avoidance, individuals become better able to confront difficult realities without relying on substances for emotional relief. In essence, ACT does not aim to eliminate negative emotions; rather, it expands the individual's capacity to accept suffering and respond to it in a value-guided manner. From this perspective, the ability to remain open to unpleasant emotional experiences while continuing to act in accordance with personal values represents one of the highest levels of emotional regulation.

Considering the increasing prevalence of marijuana use among young and middle-aged men (18–50 years) in urban areas such as Karaj and Fardis, the findings of this study suggest that traditional addiction treatment models based primarily on control, suppression, and behavioral restraint may be insufficient. Instead, therapeutic models grounded in acceptance, mindfulness, and psychological flexibility appear to offer more sustainable outcomes. The present findings therefore encourage clinicians and policymakers in the field of addiction treatment to consider integrating

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ACT protocols as a core intervention within rehabilitation and treatment centers. Emphasizing the development of a meaningful and value-driven life, rather than focusing solely on resisting substance use, may serve as a central clinical pathway for reducing suicide risk and preventing relapse among this vulnerable population.

Limitations

Despite its valuable contributions, this study has several limitations that should be acknowledged. First, the sample size was relatively small (n = 30) and was selected through convenience sampling from addiction treatment centers in Karaj and Fardis, which may limit the generalizability of the findings to broader populations. Second, the study relied primarily on self-report psychological questionnaires, which may be influenced by response bias or social desirability. Additionally, several potentially influential variables—such as severity of substance dependence, duration of marijuana use, co-occurring psychiatric conditions, family support, and socioeconomic status—were not fully controlled in the research design. These factors may interact with treatment outcomes and should therefore be considered when interpreting the results.

Suggestions for Future Research

Future research is recommended to replicate the present findings with larger and more diverse samples, including both men and women and individuals with different types of substance use disorders. Longitudinal studies with longer follow-up periods could also provide deeper insight into the long-term stability of ACT's therapeutic effects. Furthermore, future investigations may explore the mediating mechanisms of change, such as psychological flexibility, mindfulness, self-compassion, and value-based living, to better understand how ACT produces its therapeutic benefits. Finally, integrating ACT with complementary therapeutic approaches—such as mindfulness-based relapse prevention or emotion regulation training—may further enhance treatment outcomes and contribute to the development of comprehensive intervention models for substance use disorders and suicide prevention.

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Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

Aldao, A., Nolen-Hoeksema, S & ,.Schweizer,(2010) Emotion-regulation strategies across psychopathology: A meta-analytic review .Clinical Psychology Review, ۳۰(۲), ۲۳۷-۲۱۷.

Borges, G., Bagge, C. L., & Orozco, R. (2020). A review of methods for research on alcohol and drug use and suicidal behavior. Alcoholism: Clinical and Experimental Research, 44(10), 1934-1947.

Gratz, K. L., & Roemer, L. (2023). Multidimensional Assessment of Emotion Regulation and Dysregulation. Guilford Publications.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2021). Acceptance and Commitment Therapy: The Process and Practice of Mindful Change (3rd ed.). New York: Guilford Press.

Izadi, R., & Abedi, M. R. (2020). *Acceptance and commitment therapy (ACT).* Isfahan, Iran: Kavosh Pardaz Publications.

Khalatbari, J., Ghorban-Shiroudi, S., & Salehi, M. (2022). The effectiveness of acceptance and commitment therapy on emotion regulation and resilience in individuals dependent on narcotic substances. *Quarterly Journal of Clinical Psychology and Counseling Research, 12*(1), 45–62.

[Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21]

Mohammadi, A., Rostami, R., & Nosrati, F. (2023). Comparing the effectiveness of third-wave therapy (ACT) on reducing craving and impulsivity in men undergoing substance withdrawal. *Iranian Journal of Psychiatry and Clinical Psychology, 29*(3), 310–325.

Pompili, M., Erbuto, D., & Innamorati, M. (2022). Suicide Risk in Substance Use Disorders: A Systematic Review. Frontiers in Psychiatry, 13, 856-871

Sadock, B. J., & Sadock, V. A. (2021). Kaplan and Sadock's Synopsis of Psychiatry. Wolters Kluwer Health.

Twohig, M. P., & Levin, M. E. (2022). Acceptance and Commitment Therapy as a Treatment for Substance Use Disorders. Current Opinion in Psychology, 46, 101-137.

Volkow, N. D., Jones, E. B., & Einstein, E. B. (2019). Prevention and Treatment of Opioid Misuse and Addiction: A Review. JAMA Psychiatry, 76(2), 208-216.

[Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21]