



Effectiveness of Acceptance and Commitment-Based Training in Reducing Psychological Distress and Increasing Social Adjustment in Sexually Abused Adolescent Girls

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Article Info

Article type:

Original Research

How to cite this article:

Nozari, P. (2023). Effectiveness of Acceptance and Commitment-Based Training in Reducing Psychological Distress and Increasing Social Adjustment in Sexually Abused Adolescent Girls. *Health Nexus*, 1(4), 125-131.

<https://doi.org/10.61838/kman.hn.1.4.15>



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ABSTRACT

Rape is a form of sexual violence that not only damages the body but also harms the psyche of the individual and the community. Considering this issue, there is evidence of sexually abused girls who require psychological interventions. The present study aimed to apply Acceptance and Commitment Therapy (ACT) in reducing psychological distress and increasing social adjustment in sexually abused adolescent girls. This study is applied in nature and employs a quasi-experimental design with a pre-test and post-test control group. The statistical population consisted of all adolescent girls who referred to the counseling center of the Department of Education in Tonekabon during the 2022-2023 academic year. The research sample included 12 adolescent girls selected through convenience sampling and randomly assigned to experimental and control groups. All participants completed the Kessler Psychological Distress Scale (Kessler et al., 2002) and the Weinberger Adjustment Inventory (Weinberger, 1961) in both pre-test and post-test phases. The experimental group received Acceptance and Commitment Therapy for eight sessions, once a week, over two months. After data collection, the data were analyzed using multivariate covariance analysis. The results showed a significant difference between the experimental and control groups in the post-test phase ($P < 0.01$), indicating the effectiveness of Acceptance and Commitment Therapy in reducing psychological distress and increasing social adjustment in sexually abused adolescent girls. These findings suggest that ACT is effective in reducing psychological distress scores and increasing social adjustment among sexually abused adolescent girls.

Keywords: Sexual assault, Psychological distress, Social adjustment, Acceptance and Commitment Therapy, Adolescent girls.

1. Introduction

Sexual abuse is a widespread and severe issue that can have profound and lasting impacts on the mental and social health of victims, especially adolescent girls. Research indicates that survivors of sexual abuse often experience significant psychological distress, including symptoms of anxiety, depression, and post-traumatic stress disorder (PTSD) (1-5). In addition to these psychological effects, these individuals may face difficulties in social adjustment, struggling to establish and maintain healthy relationships and interact effectively within their communities (McLean, 2016). Addressing these multifaceted challenges requires comprehensive therapeutic interventions.

One promising approach for mitigating the effects of sexual abuse is Acceptance and Commitment Therapy (ACT). ACT is a form of cognitive-behavioral therapy that focuses on helping individuals accept their thoughts and feelings rather than fighting or feeling guilty about them (6). By promoting psychological flexibility, ACT aims to enhance individuals' ability to live according to their values despite challenging emotions and experiences. Recent studies have shown that ACT is effective in treating a range of psychological issues, including anxiety, depression, and PTSD, which are common among survivors of sexual abuse (7).

In the context of sexually abused adolescent girls, ACT has the potential to reduce psychological distress and increase social adjustment by strengthening resilience and adaptive coping strategies. Adolescence is a critical developmental period characterized by significant emotional and social changes, and experiencing sexual abuse during this time can disrupt normal development (8, 9). Effective therapeutic interventions are essential to support these individuals in overcoming trauma and building a healthier future.

Empirical evidence supports the use of ACT with trauma survivors. For example, research by Follette and Pistorello (2016) highlighted the effectiveness of ACT in enhancing psychological flexibility, which is crucial for recovering from trauma. These findings suggest the potential benefits of ACT for sexually abused adolescent girls (10).

Furthermore, social adjustment, which refers to the ability to interact effectively and harmoniously with others,

is another critical area impacted by sexual abuse (11). Problems in social adjustment can lead to isolation, poor academic performance, and increased vulnerability to revictimization (12). ACT's emphasis on values-based living and mindful action can help these adolescents develop healthier interpersonal skills and rebuild their social networks.

Despite promising evidence, there is a need for more research specifically on the application of ACT for sexually abused adolescent girls. Most existing studies focus on adult populations, leaving a gap in the literature concerning younger individuals. Addressing this gap is crucial, as interventions tailored to the unique developmental needs of adolescents can be more effective in promoting long-term recovery and resilience (13).

This present study aims to fill this gap by evaluating the effectiveness of ACT in reducing psychological distress and increasing social adjustment in sexually abused adolescent girls. Using a rigorous quasi-experimental design with a control group, this research seeks to provide robust evidence for the use of ACT in this context. The findings are expected to contribute to the development of targeted interventions that can better support this vulnerable population. Consequently, sexual abuse poses significant challenges to the mental and social health of adolescent girls. Acceptance and Commitment Therapy offers a promising approach to addressing these challenges by promoting acceptance, psychological flexibility, and values-based living. This study aims to examine the effectiveness of ACT in reducing psychological distress and improving social adjustment among sexually abused adolescent girls, thereby contributing to the broader field of trauma-informed care and interventions.

2. Methods and Materials

2.1. Study Design and Participants

The present study is a quasi-experimental design with pre-test, post-test, and follow-up phases, including a control group. The statistical population included all adolescent girls referred to the counseling center of the Department of Education in Tonekabon during the 2022-2023 academic year. The research sample consisted of 12 adolescent girls selected through convenience sampling and randomly

assigned to experimental and control groups. All participants completed the Kessler Psychological Distress Scale and the Weinberger Adjustment Inventory in both pre-test and post-test phases. The experimental group received Acceptance and Commitment Therapy (ACT) for eight weekly sessions over two months.

2.2. Measures

2.2.1. Psychological Distress

The Kessler Psychological Distress Scale was designed and developed by Kessler et al. (2002) to measure mental disorders. In Iran, it was validated by Yaqubi (2015). This questionnaire has 10 items and three components: educational presence, social presence, and cognitive presence. It measures psychological distress on a four-point Likert scale (e.g., "In the past month, how often did you feel tired for no good reason?"). To calculate the overall score, sum all the item scores (Never 0 - Always 4). The score range is 0 to 40, with higher scores indicating greater psychological distress. Validity deals with how well an instrument measures what it is intended to measure. In Yaqubi's study (2016), the content, face, and criterion validity of this questionnaire were assessed as appropriate. Reliability, the degree to which an instrument yields consistent results under consistent conditions, was determined by Cronbach's alpha, which exceeded 0.70 in Yaqubi's study (2016) (14-16).

2.2.2. Social Adjustment

This questionnaire, developed by Professor Bell in 1961, includes two versions: one for students and one for adults. Bell conducted extensive research on social adjustment and authored numerous articles, including a validation of measurement tools in 1945 with Altus. This study used only the Social Adjustment Inventory, which includes 32 yes/no/? questions. In Iran, the questionnaire was standardized for the population of athlete veterans by Dr. Ali Delavar and studied by Aghamohammadian Sharbaf, who found similar results to Bell's original findings. The questionnaire was translated and revised by Bahrami Ehsan (1992) and administered to 200 randomly selected individuals. The reliability of this test, calculated using Cronbach's alpha for 80 items covering

overall adjustment and specific areas such as home, health, social, emotional, and job/school adjustment, was 0.89 (17).

2.3. Intervention

2.3.1. Acceptance and Commitment Therapy

This intervention protocol for Acceptance and Commitment Therapy (ACT) spans eight sessions, each designed to progressively help sexually abused adolescent girls reduce psychological distress and increase social adjustment. The sessions focus on fostering psychological flexibility through the core principles of ACT, including acceptance, cognitive defusion, being present, self as context, values, and committed action. Each session builds on the previous one, ensuring a comprehensive and cohesive therapeutic experience (6-9).

Session 1: Introduction and Orientation

In the first session, participants will get acquainted with each other and the therapist. They will share their feelings before attending the session, discuss their reasons for joining, and outline their expectations from the therapy. The therapist will facilitate discussions about any similar previous experiences and introduce the session rules. The session will also include an overview of the principles of commitment and acceptance and the potential outcomes of the therapy.

Session 2: Need for Psychological Interventions

This session will focus on explaining why psychological interventions are necessary. The therapist will foster hope and set treatment expectations for reducing psychological pressures. The principles of acceptance and recognition of emotions and thoughts related to problems will be introduced. Participants will be educated on viewing thoughts as merely thoughts, emotions as merely emotions, and memories as merely memories.

Session 3: Acceptance without Judgment

Participants will discuss their feelings and thoughts. The session will teach them to accept their emotions and thoughts without judgment, focusing on neither labeling them as good nor bad. The differences between emotions, thoughts, and feelings will be highlighted, emphasizing acceptance.

Session 4: Mindfulness and Present Moment Awareness

This session will introduce mindfulness techniques and breathing exercises. Participants will learn techniques for

staying present and stopping intrusive thoughts. The session will reinforce the principle of acceptance, focusing on recognizing and understanding emotions and thoughts from a new perspective.

Session 5: Acceptance vs. Surrender

The session will educate participants on the difference between acceptance and surrender. It will stress the importance of accepting things that cannot be changed and avoiding judgment of feelings. Techniques will be introduced for being mindful of emotions without judgment, encouraging participants to simply observe their emotions as they arise.

Session 6: Feedback and Commitment

Participants will provide feedback on the therapy process so far. The session will emphasize the importance of commitment in the therapeutic process. Techniques for selective attention to alleviate the onslaught of negative automatic thoughts will be introduced, along with mindfulness and body scanning exercises.

Session 7: Review and Behavioral Commitment

The session will summarize topics covered in previous sessions, address unresolved issues, and provide feedback. Participants will identify behavioral plans related to accepted issues and commit to them. The session will focus

on enhancing the ability to choose the most suitable action among various options, rather than the most convenient one.

Session 8: Final Review and Post-Test

In the final session, participants will review their assignments and summarize the therapy content. They will commit to continuing their assignments after the therapy ends. Participants will provide feedback on the therapy, and the session will conclude with the administration of the post-test.

2.4. Data Analysis

At the descriptive level, mean and standard deviation indices were used. At the inferential level, multivariate covariance analysis (MANCOVA) was employed. In this stage, post-test scores were the dependent variable, pre-test scores were the covariate, and the group was the independent variable. Wilks' Lambda was used to determine the effect of the independent variable, and Bonferroni's test was used for multiple comparisons of sub-hypotheses. Data processing and analysis were conducted using SPSS 27.

3. Findings and Results

Most participants were between 25 and 30 years old, with the fewest participants aged 35-40 years.

Table 1

Descriptive Statistics for Research Variables

Variable	Group	Pre-Test	Post-Test	Follow-Up
		M (SD)	M (SD)	M (SD)
Social Adjustment	Experimental	42.53 (11.50)	59.67 (14.71)	49.80 (15.85)
	Control	43.07 (10.26)	42.53 (11.13)	42.93 (10.68)
Psychological Distress	Experimental	28.33 (6.10)	18.80 (4.45)	17.93 (4.63)
	Control	27.60 (5.94)	27.80 (5.56)	27.73 (5.32)

To examine the significance of differences in social adjustment and psychological distress scores between the experimental and control groups, repeated measures ANOVA was used. The results of the Kolmogorov-Smirnov test indicated that the data were normally distributed. Levene's test for homogeneity of variances showed equality

of variances for the research variables across groups in the pre-test, post-test, and follow-up stages. Additionally, Mauchly's test of sphericity indicated the non-sphericity of the covariance matrix among groups, necessitating the use of the Greenhouse-Geisser correction.

Table 2

Repeated Measures ANOVA for Comparison of Pre-Test, Post-Test, and Follow-Up of Social Adjustment and Psychological Distress in Experimental and Control Groups

Scale	Source of Effect	Sum of Squares	df	Mean Square	F	Significance	Partial Eta Squared
Social Adjustment	Time	119.46	1.13	92.71	148.15	.0001	.84
	Time*Group	93.95	2.26	72.91	116.52	.0001	.80
	Group	1788.13	1	1788.13	59.45	.001	.51
Psychological Distress	Time	400.08	1.13	296.70	261.46	.0001	.90
	Time*Group	277.06	2.26	205.46	181.07	.0001	.86
	Group	1704.39	1	1704.39	144.42	.001	.42

The results in Table 2 indicate that the ANOVA for the within-subject factor (time) is significant, and the between-group factor is also significant. This means that considering the group effect, the time effect is also significant.

Additionally, the interaction between group and time is significant. Bonferroni post hoc tests were used for pairwise comparisons of groups.

Table 3

Results of Bonferroni Post Hoc Test for Comparison of Social Adjustment and Psychological Distress

Variable	Stage	Stage	Mean Difference	Significance
Social Adjustment	Pre-Test	Post-Test	-17.14	.001
		Follow-Up	-7.27	.001
	Post-Test	Follow-Up	10.13	.001
Psychological Distress	Pre-Test	Post-Test	-58.47	.001
		Follow-Up	2.40	.096
	Post-Test	Follow-Up	60.87	.001

The results in Table 3 show that social adjustment in the experimental group was higher in the post-test and follow-up stages compared to the pre-test ($p < .01$), but there was no significant difference between the post-test and follow-up stages, indicating the durability of the treatment effect. Additionally, psychological distress in the experimental group was lower in the post-test and follow-up stages compared to the pre-test ($p < .01$), but there was no significant difference between the post-test and follow-up stages, indicating the durability of the treatment effect.

be particularly beneficial for adolescents who have experienced traumatic and distressing events, as it guides them towards developing positive coping skills and social adjustment (19). In this study, significant improvements were observed in the scores of psychological distress and social adjustment questionnaires. These results indicate that ACT can be an effective intervention for improving the quality of life of sexually abused adolescent girls (20). Specifically, improvements in social adjustment can play a crucial role in increasing positive social interactions and reducing feelings of isolation in these individuals (12).

4. Discussion and Conclusion

The aim of this study was to investigate the effectiveness of Acceptance and Commitment Therapy (ACT) in reducing psychological distress and increasing social adjustment in sexually abused adolescent girls. The results indicated that ACT significantly reduced psychological distress and improved social adjustment in these individuals. These findings are consistent with previous research showing that ACT can be an effective method for reducing symptoms associated with sexual trauma (18).

Acceptance and Commitment Therapy (ACT) is a modern therapeutic approach specifically designed to help individuals deal with difficult thoughts and emotions. Unlike more traditional approaches that focus on changing the content of thoughts, ACT helps individuals accept these thoughts and emotions while focusing on their personal values and goals (Hayes, Strosahl, & Wilson, 2016). This approach is based on six key processes: acceptance, cognitive defusion, being present, self as context, values, and committed action. These processes help individuals increase their psychological flexibility and move towards a values-based life instead of avoiding unpleasant experiences.

One strength of ACT is its emphasis on acceptance of negative thoughts and emotions, encouraging individuals to live according to their personal values (6). This approach can

Numerous studies have shown that ACT can effectively reduce psychological distress. For example, a meta-analysis by A-Tjak et al. (2015) demonstrated that ACT significantly reduces symptoms of anxiety, depression, and PTSD in affected individuals. These positive effects are particularly important for survivors of sexual abuse, who face a complex array of psychological challenges (7). By emphasizing acceptance and flexibility, ACT helps these individuals view their unpleasant emotions and memories as part of the human experience while moving towards their important goals and values (20).

In addition to reducing psychological distress, ACT can also improve social adjustment. Social adjustment refers to an individual's ability to establish and maintain positive relationships and effective social interactions. Studies involving sexually abused adolescents frequently report problems in this area (11). By strengthening individual values and committed action, ACT can help these adolescents enhance their social skills and rebuild healthy relationships. This can lead to reduced feelings of isolation and increased social support, which acts as a protective factor against further psychological problems (12). Overall, the effectiveness of ACT in improving the quality of life of individuals affected by sexual trauma is well-documented due to its focus on acceptance, psychological flexibility, and values-based living.

However, this study also faced limitations. One limitation was the small sample size, which limits the generalizability of the results. Additionally, the use of convenience sampling may have introduced bias in sample selection. Future research should be conducted with larger samples and random sampling methods to strengthen the study's findings. Another limitation was the short duration of the intervention. Although significant improvements were observed, long-term evaluation of the effects of ACT on psychological distress and social adjustment is needed to better understand the sustainability of these improvements. Therefore, long-term follow-ups and reassessment after several months post-intervention are necessary.

Future research should also explore the precise mechanisms of ACT. A better understanding of these mechanisms can help improve therapeutic protocols and enhance the effectiveness of interventions (21). Additionally, examining the combination of ACT with other

therapeutic approaches such as Cognitive-Behavioral Therapy (CBT) could be beneficial. More research is also needed to assess the impact of ACT on other aspects of mental health, such as self-efficacy and self-esteem, in sexually abused adolescent girls. These aspects can play a crucial role in the overall improvement of quality of life. Based on the obtained results, the implementation of ACT in counseling centers and psychology clinics for sexually abused adolescent girls is recommended. This method can be an effective and efficient intervention for reducing psychological distress and increasing social adjustment. Finally, policymakers and authorities should pay special attention to the importance of providing psychological and counseling services to sexually abused adolescent girls. Providing these services can help reduce the long-term negative effects of sexual trauma and improve the quality of life for these individuals.

Authors' Contributions

Not applicable.

Declaration

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

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethics Considerations

The study placed a high emphasis on ethical considerations. Informed consent obtained from all participants, ensuring they are fully aware of the nature of the study and their role in it. Confidentiality strictly maintained, with data anonymized to protect individual privacy. The study adhered to the ethical guidelines for research with human subjects as outlined in the Declaration of Helsinki.

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