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The Effectiveness of Cognitive Behavioral Therapy on Metacognitive Beliefs and Social Competence of Sexually Abused Girls

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ABSTRACT

Objective: Many traumatic events, including physical, psychological, and sexual abuse, occur for girls. Evidence shows that such experiences can lead to a range of psychological effects. Adolescent girls' confrontation with these traumas has negative consequences on their mental health. This study aimed to determine the effectiveness of cognitive-behavioral therapy on the metacognitive beliefs and social competence of sexually abused girls aged 9 to 13 years.

Methods and Materials: This research employed a quasi-experimental method with a pretest-posttest design and a control group. From 43 sexually abused girls aged 9 to 13 who referred to Peyvand Counseling Services and Razi Psychological Services affiliated with the Alborz Province Department of Education, a sample of 30 was selected through convenience sampling and randomly assigned into two groups of 15 (one group received cognitive-behavioral therapy and the control group received no intervention). The instruments used in this study were the Cognitive Beliefs Questionnaire (Baco et al., 1990) and the Social Competence Questionnaire (Felner et al., 2009). Data were analysed by SPSS-27 and analysis of covariance method.

Findings: The results of covariance analysis showed that cognitive-behavioral therapy led to an increase in positive metacognitive beliefs and a decrease in negative metacognitive beliefs ($p \leq 0.005$). Additionally, the results indicated that the cognitive-behavioral approach was effective in increasing the social competence of sexually abused girls ($p \leq 0.005$).

Conclusion: Based on the research findings, it is suggested to use cognitive-behavioral therapy to improve the metacognitive beliefs and social competence of sexually abused girls.

Keywords: *Cognitive-behavioral therapy, Metacognitive beliefs, Social competence, Sexually abused girls*

1. Introduction

Child abuse must be defined under statistical components; however, these components are often influenced by cultural and social factors. Different cultures have various laws regarding the interaction between guardians and children. Culture, being a pattern of behavior shown in beliefs and actions, determines how people interact with each other. From this concept, it can be inferred how much neglect or commission can be considered abuse (Dalikeni, 2021). In other words, culture helps define acceptable behaviors by caregivers towards children. Some researchers believe that adapting child abuse definitions based on culture can better distinguish normal and abusive behaviors. Factors such as age, gender, specific characteristics, personality of the guardians, family structure and resources, family size and structure, personality traits and behaviors, previous history of abuse, and family violence are involved in this matter (Thomas et al., 2020).

Child abuse, as a psychological-social issue, involves any physical, sexual, emotional, or psychological harm, as well as exploitation and neglect of basic needs, in individuals under 18 years, which disrupts their functioning in all aspects of life. In other words, child abuse is any behavior or neglect by parents or caregivers that leads to injuries like death, physical-sexual harm, or emotional-psychological distress (Gabrielli et al., 2017). Global meta-analysis studies (55 studies in 24 countries) have indicated that 31-8% of girls and 3-17% of boys report various experiences of sexual abuse (Mohammadi et al., 2014). Due to cultural reasons, the prevalence of child sexual abuse in our country has received less attention, and unfortunately, there are no exact statistics available. Only studies in three cities, Khorramabad, Tabriz, and Isfahan, have investigated the prevalence of child sexual abuse. The prevalence of sexual abuse in girls in Tabriz is reported as 2.3%, in Khorramabad as 32.5%, and in Isfahan, in both genders, as 4.1%. It seems that the statistics obtained from Khorramabad are closer to the global prevalence of sexual abuse in girls (31-8%) (Khanjari et al., 2014; Salemi et al., 2017).

Self-care tools like social-emotional competence can guarantee an individual's success in social life and enhance the quality of their relationships. The foundation of social-emotional competence is formed during childhood, during which individuals learn social-emotional skills. However, children today are emotionally immature. They have few friends, and their relationships with peers and adults are limited. This situation leads to adverse consequences like reduced social adaptability, behavioral problems, peer rejection, decreased self-esteem, and consequently, poor academic performance, anxiety, and stress (Reh et al., 2022). Therefore, teaching social-emotional skills to these children is a priority and can help compensate for the mentioned problems (Oberle et al., 2014).

Social competence plays a crucial role in preventing physical and psychological diseases. Accordingly, an individual with social competence can effectively utilize personal abilities and environmental conditions and develop these abilities and skills. A similar approach states that social competence enables a person to perform desired social behaviors and strengthen interpersonal relationships while respecting others' interests and benefits. If a person can influence others' behavior in a socially acceptable way, they are considered socially competent (Monadi et al., 2018).

Research shows that abused children, due to the lack of healthy social relationships and individual and group conflict resolution methods, tend to engage in aggressive and violent acts (Gabrielli et al., 2017; Khanjari et al., 2014; Korbin, 1991; Lippard & Nemeroff, 2020; Mohammadi et al., 2014; Salemi et al., 2017; Thomas et al., 2020). Social-emotional competence can guarantee an individual's success in social life and enhance the quality of their relationships. The foundation of social-emotional competence is formed during childhood, during which individuals learn social-emotional skills and metacognitive beliefs. However, children today are emotionally immature. They have few friends, and their relationships with peers and adults are limited. This situation leads to adverse consequences like reduced social adaptability, metacognitive beliefs, behavioral problems, peer rejection, decreased self-esteem, and consequently, poor academic performance, anxiety, and stress. Therefore, teaching social-emotional skills to these children is a priority and can help compensate for the mentioned problems (Oberle et al., 2014).

On the other hand, metacognitive control strategies are responses individuals use to control cognitive system activities, aiding in emotional and cognitive self-regulation. These strategies can enhance or reduce thinking strategies and help increase monitoring processes. In psychological disorders, patients feel they have lost control. Thought control strategies often involve efforts to control the nature of thinking or the flow of consciousness. In anxiety disorders, for example, panic disorder and generalized anxiety disorder, mental events are often interpreted as signs of psychological breakdown. Individuals may attempt to inhibit specific thoughts or think in ways to prevent disaster.

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For instance, patients suffering from obsessive-compulsive disorder experience intrusive and repetitive evil images. Their metacognitive beliefs are such that they believe these images are dangerous, and to protect themselves and their families, they try hard to control their minds during worship. This strategy includes full concentration on every word of prayer and keeping a perfect image of the mosque in mind. Here, examples of specific coping strategies (metacognitive control processes) and increased monitoring, such as checking unpolluted (clean) images of the mosque, exist. Any failure in such strategies is accompanied by a compulsive act to return and restart worship, repeating these processes until they are complete. When the goal is achieved, these strategies can reduce the threat and anxiety. However, in such patients, the strategy's necessity and the goal's nature are such that achieving them without repeated actions and constant effort is difficult (Farahmand Mehr et al., 2014).

Studies show that suppression and inhibition of unpleasant thoughts lead to an increase and recurrence of suppressed thoughts. Therefore, in the long run, it is not a constructive strategy (Wegner et al., 1987; Wells, 2011; Wells & Morrison, 1994). Overall, research examining the relationship between metacognitive beliefs, thought control strategies, and psychological disorders shows a persistent positive relationship between metacognitive beliefs, emotional vulnerability, and a wide range of psychological disorders (Wells, 2011). Cognitive-behavioral therapy (CBT) is the most recognized and accepted method of psychotherapy globally. CBT, due to its valuable features, adheres to scientific methods, and its findings are supported by empirical research. Additionally, the cognitive-behavioral approach is structured both for therapy sessions and for training. Clients undergoing CBT are well aware of the therapy's goals, the number of sessions, and the objectives to be achieved at the end. Thus, with the help of CBT, efforts are made for abused children to become aware of their negative thoughts and emotions, the very thoughts that lead to distress and avoidance during interactions with others (Freeman et al., 2005).

On the other hand, it has been shown that the way of controlling and regulating emotions is directly related to the development of post-traumatic stress disorder (López et al., 2009; Salemi et al., 2017; Yousefy & Khayamnekouei, 2011). During CBT sessions, abused children are taught to stop maladaptive self-talk and use optimistic interpretations, especially when facing various traumatic situations. Furthermore, during therapy, children are encouraged to question their distressing thoughts and use alternative self-talk, which helps cope with negative emotions and ruminations, preventing physical and psychological disturbances. Hence, this therapy improves the child's social behavior and enhances their self-perception and perception of others. Overall, all these factors facilitate post-traumatic growth in abused children (Freeman et al., 2005; López et al., 2009). One of the main goals of cognitive-behavioral training is to reduce anxiety in patients, enabling adolescents to recognize their cognitive errors and improve their performance in various cognitive skill areas and social-emotional competence. For this purpose, cognitive and behavioral techniques are used (Yousefy & Khayamnekouei, 2011).

Considering the above, there has been no specific research activity on sexually abused children and the impact of metacognitive beliefs and social competence that lead to improved life skills performance, achieving individual independence, self-esteem, and increased self-efficacy in these abused individuals. Conducting this research can fill the scientific gap in the field of abused children, particularly sexually abused ones, and consequently, expand broader research in this area and increase attention to the psychological rights of these individuals. Given the presented information, the researcher seeks to answer this question: Does cognitive-behavioral therapy training affect the metacognitive beliefs and social competence of sexually abused girls aged 9 to 13?

2. Methods and Materials

2.1. Study Design and Participants

This applied research utilized a quasi-experimental design with a pretest-posttest control group. The statistical population of the present study consisted of 43 girls aged 9 to 13 years who had experienced sexual abuse and were referred (along with their parents) to the specialized psychological clinics of Peyvand and Razi centers under the supervision of the Department of Education, located in the center of Karaj city, during 2021-2022. From the statistical population, a sample of 30 was selected using convenience sampling and randomly assigned into two groups of 15 sexually abused girls (one group received cognitive-behavioral therapy, and the control group received no intervention).

In this study, both descriptive and inferential statistics were used to analyze the data. Inclusion criteria included: age 9-13 years, primary education level, consent to

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participate in the study, a similar economic level, exposure to sexual abuse at least once, and all participants were female. Exclusion criteria included: taking psychiatric medications, experiencing stressors (abuse, physical and sexual harm, and depression) in the past few months, previous similar interventions in the past few months, incomplete responses to some questionnaire items, clinical illnesses affecting mood (thyroid, diabetes, etc.), and severe mood disorders (such as major depression) managed by medication.

2.2. Measures

2.2.1. Social Competence

The Social Competence Questionnaire, developed by Felner et al. (1990), consists of 47 items responded to on a 7-point Likert scale (from completely agree to completely disagree), assessing cognitive skills, behavioral skills, emotional competence, motivational dispositions, and expectations. This questionnaire was standardized in Iran by Karami and Parandian (2006), confirming four factors as the final dimensions of the questionnaire. It includes 34 items for behavioral skills, 7 for motivational dispositions and expectations, 3 for cognitive skills, and 3 for emotional competence. Karami and Parandian (2006) estimated the reliability of the scale using Cronbach's alpha, with an alpha coefficient of 0.884 indicating acceptable internal consistency. The test-retest reliability over a 4-week interval was 0.89. Construct validity was confirmed through factor analysis with a value of 0.83, indicating high external validity. Content validity was also reviewed and confirmed by experts in psychology and psychometrics based on theoretical support provided by Felner. Cronbach's alpha coefficient for this scale in Abolghasemi et al.'s (2011) study was 0.89 (Mehrajee et al., 2017; Monadi et al., 2018).

2.2.2. Metacognitive Beliefs

To measure metacognitive beliefs, the Metacognition Scale for Children, a self-report scale for children and adolescents (ages 7-17) developed by Baco et al. (2009) based on the previous form (Metacognition Questionnaire for Adolescents), was used. This scale includes 24 items rated on a 5-point Likert scale (from completely disagree to completely agree) and contains four subscales: 1) Positive beliefs about worry (positive metaworry), 2) Negative beliefs about worry (negative metaworry), 3) Superstitious, punishment, and responsibility beliefs, and 4) Cognitive monitoring (awareness of one's thoughts). For this study, content and face validity were ensured by consulting with supervisors and advisors and conducting factor analysis. The Cronbach's alpha coefficients for the non-clinical sample were reported as 0.71 for the total score, 0.60 for positive metaworry, 0.76 for negative metaworry, 0.58 for superstitious, punishment, and responsibility beliefs, and 0.74 for cognitive monitoring. This scale was translated and psychometrically evaluated for use in Iranian adolescents by the researcher (Khaneghahi et al., 2020; Nateghi et al., 2019).

2.3. Intervention

2.3.1. Cognitive-Behavioral Therapy

Cognitive-behavioral therapy (CBT) is a short-term psychotherapy method used by therapists to teach individuals to change their thoughts and beliefs, thereby altering their emotions and behaviors. The essence of CBT is that our thinking patterns and interpretations of our surroundings and events lead to our behaviors and emotions. Essentially, how we think determines how we feel and act (Karimi et al., 2021; López et al., 2009; Salemi et al., 2017). The CBT protocol was implemented in 8 phases, each consisting of 3 sessions, totaling 24 sessions (each session lasting 2 hours) for the sexually abused girls.

Sessions 1 and 2: Establishing Initial Connection

Build initial rapport with participants.

Explain the goals and methodology of the intervention.

Assess existing problems among the participants.

Facilitate interaction and set specific goals.

Sessions 3 and 4: Teaching Behavioral Analysis Skills

Introduce the C-B-A (Cognitive-Behavioral Analysis) technique.

Identify irrational thoughts related to sexual issues.

Discuss the impact of these thoughts on the participants' current problems.

Sessions 5 and 6: Problem-Solving Skills

Teach problem-solving strategies.

Apply these strategies to relevant issues faced by the participants.

Sessions 7 and 8: Providing Age-Appropriate Sexual Information

Provide information on sexual matters suitable for the participants' age.

Address any misconceptions and answer questions.

Sessions 9 and 10: Coping Skills and Social Skills Training

Teach interpersonal coping skills and desirable social skills.

Focus on improving overall communication and addressing specific communication issues.

Sessions 11 and 12: Promoting Positive Thinking and Strength Identification

Encourage positive perspectives on sexual issues.

Identify participants' strengths.

Conduct group discussions and assign supplementary activities.

Sessions 13 and 14: Cognitive Restructuring

Teach cognitive restructuring by replacing irrational thoughts with logical ones.

Facilitate group discussions and assign supplementary activities.

Sessions 15 and 16: Cognitive Distortion Correction and Self-Control Techniques

Address and correct cognitive distortions.

Teach cognitive self-control techniques.

Sessions 17 and 18: Communication Skills Training

Teach communication skills.

Facilitate group discussions and assign supplementary activities.

Sessions 19 and 20: Stress and Anxiety Immunization

Provide training on stress and anxiety immunization related to sexual issues.

Facilitate group discussions and assign supplementary activities.

Sessions 21 and 22: Follow-Up and Q&A

Review the interventions conducted so far.

Conduct a Q&A session with participants and the therapist.

Sessions 23 and 24: Feedback and Closure

Summarize feedback and allow participants to express their feelings.

Conduct a final discussion and closure activities.

2.4. Data analysis

Data were analysed by SPSS-27 and analysis of covariance method.

3. Findings and Results

In this study, the demographic data of respondents regarding the distribution of respondents by age showed that in the experimental group (cognitive-behavioral approach), the ages 9, 10, 11, 12, and 13 years accounted for 3.3%, 10%, 6.7%, 3.3%, and 10% of the sample, respectively. In the control group, the ages 9, 10, 11, 12, and 13 years accounted for 6.7%, 6.3%, 10%, 6.7%, and 6.7% of the sample, respectively.

Table 1

Descriptive Findings of Metacognitive Beliefs and Its Dimensions in Pretest and Posttest for Control and Experimental Groups

Component	Group	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD
Positive beliefs about worry (positive metaworry)	Exp.	1.73	0.262	4.20	0.613
	Control	2.36	0.990	2.72	0.824
Negative beliefs about worry (negative metaworry)	Exp.	4.03	0.543	1.98	0.288
	Control	3.07	1.14	2.52	0.700
Superstitious, punishment, and responsibility beliefs	Exp.	4.08	0.750	2.33	0.509
	Control	3.02	0.960	2.47	0.853
Cognitive monitoring (awareness of one's thoughts)	Exp.	1.53	0.520	4.12	0.416
	Control	2.06	0.629	2.88	0.813
Positive metacognitive beliefs (positive metaworry and cognitive monitoring)	Exp.	1.63	0.352	4.16	0.459
	Control	2.22	0.661	2.80	0.718
Negative metacognitive beliefs (negative metaworry and superstitious beliefs)	Exp.	4.05	0.591	2.16	0.354
	Control	3.04	1.02	2.49	0.666
Behavioral skills	Exp.	2.49	0.581	4.18	0.339
	Control	2.15	0.221	3.30	0.488
Motivational dispositions and expectations	Exp.	2.34	0.626	4.18	0.499
	Control	2.66	0.432	3.12	0.676
Cognitive skills	Exp.	2.00	0.000	4.27	0.466
	Control	2.80	0.804	3.13	1.16
Emotional competence	Exp.	1.97	0.637	4.13	0.449
	Control	2.76	1.45	2.97	1.02
Social competence	Exp.	2.08	0.213	4.18	0.343
	Control	2.55	0.436	3.24	0.398

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As shown in Table 1, the mean "positive metacognitive beliefs" in the experimental group (1.63) and control group (2.22) in the pretest phase. However, the mean "positive metacognitive beliefs" in the posttest phase showed a significant difference between the control and experimental groups, increasing from 1.63 to 4.16 in the experimental group and only from 2.22 to 2.80 in the control group. This indicates that the mean "positive metacognitive beliefs" in the experimental group increased more than in the control group. Other findings also showed that the cognitive-behavioral therapy approach impacted the dimensions of positive metacognitive beliefs in girls, causing an increase.

The mean "negative metacognitive beliefs" in the experimental group (4.05) and control group (3.04) in the pretest phase. However, the mean "negative metacognitive beliefs" in the posttest phase showed a significant difference between the control and experimental groups, decreasing from 4.05 to 2.16 in the experimental group and only from 3.04 to 2.49 in the control group. This indicates that the mean "negative metacognitive beliefs" in the experimental group decreased more than in the control group. Other findings also showed that the cognitive-behavioral therapy approach impacted the dimensions of negative metacognitive beliefs in girls, causing a decrease.

Additionally, the mean "social competence" in the experimental group (2.08) and control group (2.55) in the pretest phase. However, the mean "social competence" in the posttest phase showed a significant difference between the control and experimental groups, increasing from 2.08 to 4.18 in the experimental group and only from 2.55 to 3.24 in the control group. Other findings also showed that the cognitive-behavioral therapy approach impacted the dimensions of social competence in girls, causing an increase.

To analyze the data and control for the pretest and posttest effects, covariance analysis was used. Normality is a prerequisite for covariance analysis. The Kolmogorov-Smirnov test was used to check the normality of the data for each variable, and with a significance level greater than 0.05, the data can be considered normally distributed. Another prerequisite for covariance analysis is the homogeneity of the variance-covariance matrices, examined using the Box's test for each hypothesis. The significance results of the Box's test in all cases were greater than 0.05, indicating homogeneity of the variance-covariance matrices. The assumption of homogeneous regression slopes for the research variables was also met, confirming the homogeneity of variances. To check the homogeneity of variances between the two groups in the posttest phase, the Levene's test was used, and with a significance level greater than 0.05, the homogeneity of error variances condition was met, allowing for the use of covariance analysis.

Table 2

Multivariate Covariance Analysis Results: Differences Between Variables Across Groups (Effect of Cognitive-Behavioral Therapy on Metacognitive Beliefs Dimensions)

Dependent Variable	Sum of Squares	df	Mean Square	F	Sig	Effect Size
Positive beliefs about worry (positive metaworry)	8.676	2	4.338	6.240	0.000	0.356
	2.701	2	1.350	4.969	0.026	0.264
Negative beliefs about worry (negative metaworry)	2.942	2	1.471	6.866	0.007	0.382
	3.204	2	1.602	5.219	0.017	0.308
Superstitious, punishment, and responsibility beliefs	0.592	2	0.296	0.601	0.559	0.044
	0.092	2	0.046	0.053	0.948	-0.111
Cognitive monitoring (awareness of one's thoughts)	6.115	2	3.058	5.778	0.012	0.335
	1.295	2	0.647	0.736	0.494	0.129
Behavioral skills	3.548	2	1.774	8.560	0.003	0.443
	2.592	2	1.296	7.351	0.005	0.401
Motivational dispositions and expectations	4.705	2	2.352	5.444	0.015	0.319
	0.662	2	0.331	0.555	0.584	0.049
Cognitive skills	9.764	2	4.882	7.787	0.004	0.417
	9.784	2	4.892	5.673	0.013	0.330
Emotional competence	5.417	2	2.708	3.641	0.048	0.250
	6.067	2	3.034	4.159	0.034	0.218

The results of the covariance analysis in Table 2 indicate significant differences between groups in the dimensions of metacognitive beliefs. This implies that the cognitive-behavioral approach effectively increased positive beliefs

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about worry (positive metaworry) (0.264), cognitive monitoring (awareness of one's thoughts) (0.129), and decreased negative beliefs about worry (negative metaworry) (0.308) in the experimental group compared to the control group. However, there was no significant impact on superstitious, punishment, and responsibility beliefs.

The results also indicate significant differences between groups in the dimensions of social competence. The cognitive-behavioral approach effectively increased behavioral skills (0.401), cognitive skills (0.330), and emotional competence (0.218) in the experimental group compared to the control group, but had no significant impact on motivational dispositions and expectations.

4. Discussion and Conclusion

This study aimed to determine the effectiveness of cognitive-behavioral therapy (CBT) on the metacognitive beliefs and social competence of sexually abused girls aged 9 to 13 years. The results indicated that the cognitive-behavioral approach had a significant positive impact on the dimensions of positive metacognitive beliefs. Additionally, the findings showed that the CBT approach also had a significant effect on negative metacognitive beliefs. In this context, the results align with previous research findings (Bahrami et al., 2019; Freeman et al., 2005; Ghasemi et al., 2013; Karimi et al., 2021; López et al., 2009; Salemi et al., 2017; Wells & Morrison, 1994; Yousefy & Khayamnekouei, 2011).

In a study conducted by Bahrami et al. (2019) on the effectiveness of cognitive-behavioral therapy for anxiety in children from restructured families, it was shown that the persistence of problems in abused children in restructured families could significantly increase anxiety disorders due to cognitive skill impairment, having lasting effects on their lives (Bahrami et al., 2019). The results of this study demonstrated that CBT could effectively reduce anxiety in abused children and improve cognitive and metacognitive skills in restructured families.

Given the results related to the dimensions of metacognitive skills, it was shown that CBT could effectively improve positive beliefs about worry, reduce negative beliefs about worry, and enhance positive cognitive monitoring. Therefore, the cognitive-behavioral method can effectively improve the metacognitive skills of adolescent girls. One of the critical components in this area is worry and its positive and negative beliefs. Most theorists distinguish between two aspects of metacognition: "metacognitive beliefs and metacognitive monitoring." Metacognitive knowledge is the information individuals have about their cognition and learning strategies, affecting them. Metacognitive monitoring refers to several executive functions, such as attention, control, planning, and error detection in performance (Badali et al., 2022; Badali et al., 2018). Additionally, metacognitive beliefs encompass two broad content areas. Positive metacognitive beliefs include the belief that worrying about the future helps one plan for a better future. Negative metacognitive beliefs are related to the uncontrollability and danger of thoughts and cognitive experiences. Examples of negative metacognitive beliefs include the inability to remember names, indicating poor memory. Metacognition is a critical variable that becomes disrupted during illness and significantly exacerbates psychological symptoms. The role of metacognition in psychological disorders has been developed through the information processing model by Wells and Matthews (1996) (Wells, 2011).

Furthermore, based on the study's findings, it can be concluded that the cognitive-behavioral approach effectively impacts the dimensions of social competence in sexually abused girls aged 9 to 13 years. According to the results, the CBT approach had a significant and positive impact on the dimensions of social competence. Supporting this study, Karimi, Chinaveh, and Fereidouni (2021), in a study comparing the effectiveness of CBT and psychodrama on externalizing disorder symptoms in children, showed that psychodrama was more beneficial than CBT in improving aggressive and rule-breaking behaviors and enhancing social competence (Karimi et al., 2021). Based on the results related to the social competence dimensions in sexually abused adolescent girls, this therapeutic approach can positively and effectively improve behavioral skills, motivational dispositions and expectations, cognitive skills, and emotional competence (Hutto & Gallagher, 2017). In a study by Salemi et al. (2017) on the effectiveness of trauma-focused CBT on post-traumatic growth in sexually abused children, the findings indicated that trauma-focused CBT could significantly enhance emotional and psychological post-traumatic growth in abused children (Salemi et al., 2017). This therapy helps the child regain a sense of control over situations, create a coherent narrative of the sexual trauma, and engage in cognitive restructuring of the conditions, leading to increased positive psychological components like post-traumatic growth and improved coping with traumatic events.

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In conclusion, cognitive-behavioral therapy is a new treatment in this field that has been used in recent years to reduce problems in abused children. Given that child abuse is a widespread issue with short-term and long-term negative impacts on children's mental, physical, cognitive, social, and behavioral development, early intervention can prevent severe damage to children's mental health and reduce the likelihood of destructive behaviors in adulthood. The term cognitive-behavioral therapy refers to behavior therapy, cognitive therapy, and a combination of both based on fundamental principles and behavioral and cognitive research. Many therapists use cognitive and behavioral methods to address issues such as anxiety and depression, acknowledging that some behaviors may not be controllable through rational thinking alone (Guthrie et al., 2009). In CBT, flourishing in social competence dimensions is defined as the ability to achieve individual goals in social interactions while maintaining positive relationships with others in all situations and times. Social competence includes four aspects: positive and constructive relationships with others, accurate social cognition, lack of maladaptive behaviors, and effective social behaviors (Mehrajee et al., 2017).

5. Limitations and Suggestions

This study had some limitations, the most significant being the data collection through self-reports from sexually abused girls, which might be influenced by social desirability effects. Another limitation of experimental and quasi-experimental research is the issue of generalizability. As the study population was limited to sexually abused girls aged 9 to 13 years who attended psychological clinics in Karaj city, the generalization of the results to other children and regions is not possible or should be done with caution. Future research should examine the impact of cognitive-behavioral therapy on metacognitive beliefs and social competence among children and adolescents of different ages and genders in various communities. Researchers are also encouraged to conduct future studies with larger samples. Additionally, researchers should investigate other factors influencing metacognitive beliefs and social competence, utilizing qualitative and mixed-method approaches for comprehensive examination. This research should also be conducted on children with other problems or disorders to determine the generalizability of the results more accurately. Given that the participants in this study were sexually abused girls, interventions used in this study, particularly the training on cognitive errors, should also be applied to other types of depression and anxiety for comparison. Researchers are encouraged to conduct future studies with larger samples and examine other factors influencing social competence and metacognitive beliefs, using qualitative and mixed-method approaches.

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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. This article is derived from the first author's doctoral dissertation at Islamic Azad University, Central Tehran Branch, completed with ethics code IR.IAU.CTB,REC.2023.064. The authors declare no conflict of interest.

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.

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