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The Effectiveness of Cognitive Behavioral Therapy on Symptoms of Depression among Syrian Children Refugees in Kurdistan Region of Iraq

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Abstract

Background: Cognitive behavioral therapy is helpful verbal therapy to reduce symptoms of depression in children. It always includes parent involvement, teaching skills that are practiced at home or school, and measures of progress that are tracked over time. **Objective:** This study aimed to assess the effectiveness of the psychoeducational program for reducing symptoms of depression in Syrian children. **Methods:** We used a quasi-experimental research design to survey 272 children living in Arbat Campus Refugee, Kurdistan Region-Iraq, from Nov. 5, 2020, until Nov. 20, 2021 (data collection and program intervention). Sociodemographic data were collected from the participants/parents using a specific questionnaire, and CBT was applied to the experimental group. **Results:** A non-probability, purposive sample size of 272 children were divided into experimental and control groups with 136 children each aged 5-13 years, using the simple random sampling approach. The socio-demographic data revealed that most children were 11-13 years, and most were females, and also appears that most of the families have 4-6 children. Additionally, most of the parents have a basic level of education with psychological distress among their parents very highly. Additionally, highly frequent behavioral characteristics were found in the sample response table 2 (88.2%). **Conclusion:** We concluded that the Cognitive behavioral therapy intervention is effective in reducing symptoms of depression among Syrian refugee children living on the Arbat campus that might be due to their parent's significant psychological distress.

Introduction

Depression is a severe illness that negatively affects how people feel, behave, and think. Clinical depression differs from regular melancholy because it lasts longer, frequently involves a person's capacity to enjoy or anticipate pleasure, and considerably impairs everyday functioning ***[1].*** There may be a functional impairment at work, school, or in interpersonal relationships. In contrast to adults, irritability rather than sadness may be the predominant mood alteration in children. Therefore, it can be challenging to recognize major depressive disorder (MDD) in kids aged 5 - 12 years ***[2].***

Attention has been focused on psychiatric diseases due to their rising incidence rates ***[3].*** Depression is predicted to be the second-largest worldwide illness burden until 2021, according to the World Health Organization (WHO). However, the prevalence of depressive disorders has increased among children aging <13 years with a range of 0.3-7.8% ***[4].***

A depressive mood can manifest in school-age children between the ages of 6-12 years, and what is frequently transmitted is sadness, irritability, or boredom. They have a sad appearance, cry easily, are tired, lonely, and do poorly in school, which may lead to school refusal, separation anxiety, phobias, and death wishes. They might also complain of poor attention, physical issues, weight loss, sleeplessness, and psychotic symptoms consistent with their mood (depreciative auditory hallucinations and less frequently delusions of fault or guilt) ***[5].***

A drop in performance may be caused by a lack of interest or focus, which are signs of depression. It is typical for a child to hear from friends that peers dislike him/her or have an extreme attachment to animals ***[6].*** Anhedonia, poor relationships with peers, low self-esteem, and self-talk that labels one as foolish or unpopular can all be present. It is important to stress that teachers frequently become aware of these kids' sadness as it progresses ***[7].***

There are now treatment options available to help with depression symptoms by emphasizing the development of children's knowledge of primary and secondary control. These treatments aim to reduce symptoms immediately and are more effective in children with mild to moderate depression symptoms ***[8].***

Talking treatment called cognitive-behavioral therapy (CBT) can assist kids in managing their problems by modifying their attitudes and behaviors ***[9].*** It is frequently recommended to young individuals with depression because it is more effective in children with mild to moderate depression. The children with the therapist explore cognitive restructuring techniques and coping mechanisms for uncomfortable circumstances ***[10].***

Parental involvement, teaching skills practiced at home/school, and tracking progress measurements are essential components of effective CBT for children. A program is a way of living that enhances the quality of life for children, makes it easier to enjoy life with kids, maintains physical health by promoting exercise and relaxation, keeps the brain healthy, and uses problem-solving techniques for everyday challenges ***[11].***

The number of refugees has increased globally since the start of the Syrian civil conflict in 2011 ***[12].*** Children outnumber local populations, which remains true whether they are internally or externally displaced into low/high-income countries. Most children shocked by adverse war-related events experience persistent symptoms of depression and anxiety ***[13].***

The neighboring Syrian nations (Turkey, Jordan, Egypt, and Iraq) registered 5.4 million Syrian refugees as of 2017 ***[14].*** Around 250000 Syrian refugees were living in Iraq as of March 2018, according to the United Nations High Commissioner for Refugees (UNHCR) ***[15].*** They were mostly housed in camps or urban areas in the Kurdistan Region of Iraq. Therefore, the main objective of this study was to assess the effectiveness of CBT in reducing symptoms of depression in Syrian refugee children living on the Arbat Campus.

Materials and methods

A. Study setting and sample size

The quasi-experimental design, a non-probability, purposive sample size of 272 children were divided into experimental and control groups with 136 children were used to conduct this study at Arbat Campus Refugees, Kurdistan region – Iraq.

B. Inclusion criteria

Children of both gender, aged between 5-13 years with depression symptoms were included in this study after an agreement between family and children.

C. Exclusion criteria

According to the confirmative medical diagnosis, children with previous psychiatric problems were excluded from this study.

D. Ethical approval

All procedures involving human participants in this study were performed by the ethical standards of the official permission was sought from the University of Sulaimani, College of Medicine and Nursing. The Directorate of Sulaimaniyah governorate was informed about the research and written permission had been obtained to carry out this study (JCC, on 1-11-2020), and the Arbat campus (UNHCR) manager was informed to ensure their agreement. An agreement was made by the researcher with the campus manager about the procedures for data collection. Informed consent also by children and relatives was obtained.

E. Questionnaire

A three-part, all-prepared questionnaire was used for data collection through direct interviews with children and their parents based on a guide to the depression, anxiety, and stress scale (DASS) ***[16].*** Part 1 includes sociodemographic information such as children's age and gender, parents' education level, and the number of children in the family, and with the parent's psychological distress status. Whereas part 2 covers the psychological symptoms of children with depression, and part 3 evaluates the effects of the CBT program (data not presented in this article).

F. Cognitive behavioral therapy (CBT)

In the experimental group, baseline characteristics were obtained, followed by four psychoeducation (CBT) sessions as follows (excluding the 1st interview):

1. Contact the group to incorporate cooperative agenda-setting (talk about children with parents problems), children with their parents about depression, the cognitive model of depression, identify the key issues, and assign homework.
2. Give parents and kids some health-related advice, including those on a diet, rest, exercise, enjoyable activities, and social skills.
3. Give a concluding summary and encourage feedback; re-evaluate for signs of depression.

Three months after 1st interview, a reassessment was conducted, and most of the depressive symptoms persisted. Three months later, the assessment was immediately followed by a second round of the same psychoeducational procedure, along with a lecture about the responders' difficulties after the first round. Totally, four CBT sessions were applied with three months intervals.

Regarding the control group, the interventions were given to them when the children and their parents were interviewed for the pretest questionnaire to determine the severity of the depression symptoms.

G. Data analysis

Data from the present study were analyzed using the statistical package for social science (SPSS, version 25). The probability levels to determine the significance of the test were set as non-significant ($p > 0.05$) and highly significant ($p < 0.001$).

Results

In the control group, most of the children were aged 11-13 years (49.3%), followed by 8-10 years (37.5%), then 5-7 years (13.25). Also, it appears that the majority of the children were females (52.2%), most of them had parent psychiatric distress (89.7%), and most of the families (46.3%) had 4-6 children. Whereas in the experimental group, most children (47.8%) were aged 11-13 years, and fewer were aged 5-7 years (16.2%). It

appears most of the children were females (53.7%), most of them had parent psychiatric distress (91.9%), and most of the families (48.5%) had 4-6 children. Additionally, most parents had a basic level of education in both groups (48.5 and 72.8% for control and experimental groups, respectively) (Table 1).

Table 2 indicated that most of the children had depression symptoms. It appears that the higher frequent symptoms, according to sample response scale 1, was "I just couldn't seem to get going some of the time" (34.6%). The higher frequent behavioral characteristics according to the sample response scale 2 was "I felt that I had lost interest in just about everything" (88.2%), while the higher frequent behavioral characteristics according to the sample response scale 3 were "I felt I wasn't worth much as a person" (44.1%).

Table- 1: Distribution of the sample's responses relating to the sociodemographic data of the control and experimental groups.

Variable	**Control group**		**Experimental group**	
	F	**%**	**F**	**%**
Child age (Year)				
5-7	18	13.2	22	16.2
8-10	51	37.5	49	36
11-13	67	49.3	65	47.8
Child gender				
Male	65	47.8	63	46.3
Female	71	52.2	73	53.7
Psychological distress among parent				
Yes	122	89.7	125	91.9
No	14	10.3	11	8.1
No. of children in the family				
1-3	22	16.2	9	6.6
4-6	63	46.3	66	48.5
≥7	51	37.5	61	44.9
Education level of parent				
Illiterate	19	14	25	18.4
Basic	66	48.5	99	72.8
Preparatory	51	37.5	12	8.8
Total	136	100.0	136	100.0

Table- 2: Distribution of the sample's response relating to depression symptoms in children.

No.	**Item**	**Sample response scale**							**Total**
		0	**1**	**%**	**2**	**%**	**3**	**%**	
		F	**F**		**F**		**F**		
1	I couldn't seem to experience any positive feeling at all	0	62	22.8	107	39.3	103	37.9	272
2	I just couldn't seem to get going some of the time	0	94	34.6	174	64	4	1.5	272
3	I felt that I had nothing to look forward to	1	47	17.3	185	68	39	14.3	272
4	I felt sad and depressed	0	19	7	208	76.5	45	16.5	272
5	I felt that I had lost interest in just about everything	0	13	4.8	240	88.2	19	7	272
6	I felt I wasn't worth much as a person	0	11	4	141	51.8	120	44.1	272
7	I felt that life wasn't worthwhile	0	58	21.3	211	77.6	3	1.1	272
8	I couldn't seem to get any enjoyment out of the things I did	0	28	10.3	198	72.8	46	16.9	272
9	I felt down-hearted and blue	0	18	6.6	169	62.1	85	31.3	272
10	I was unable to become enthusiastic about anything	0	80	29.4	151	55.5	41	15.1	272
11	I felt I was pretty worthless	0	57	21	195	71.7	20	7.4	272
12	I could see nothing in the future to be hopeful about	0	2	0.7	169	62.1	101	37.1	272
13	I felt that life was meaningless	0	36	13.2	200	73.5	36	13.2	272
14	I found it difficult to work up the initiative to do things	0	82	30.1	168	61.8	22	8.1	272

0= did not apply to me at all, 1= Applied to me to some degree, 2= Applied to me to a considerable degree, 3=Applied to me very much.

Table 3 shows that the mean score of children's depression symptoms 87in the pretest (3.07±0.15) was higher than that of the post-test (2.36±0.22). The t-test (32.21) appears highly significant (p=0.0001) in the pretest and post-test of the experimental group. Regarding the control group, there was no significant difference (p=0.195) between the mean score of children's depression in pretest and post-test (2.76±0.19) with a t-test of 0.466 (Table 4).

Table-3: The pretest and post-test sample responses related to children's depression symptoms of the experimental group.

	Group	No.	Mean±SD	t-test	P-value
Depression	**Pretest**	136	3.07±0.15	32.21	0.0001*
	Post-test	136	2.36±0.22		

*= Highly Significant difference

Table- 4: The pretest and post-test sample responses related to depression symptoms in children of the control group.

	Group	No.	Mean±SD	t-test	P-value
Depression	**Pretest**	136	2.7687±0.19	0.446	0.195
	Post-test	136	2.7682±0.19		

Table 5 compares the mean depression of the control group (2.76±0.19) and the experimental group (2.36±0.22), which reveals a significant difference between them (p=0.0001) with a t-test of 19.151.

Table- 5: Comparison between the mean children depression of control and experimental groups.

	Group	No.	Mean±SD	t-test	P-value
Depression	**Control**	136	2.76±0.19	19.151	0.0001*
	Experimental	136	2.36±0.22		

*: Highly Significant difference

Table 6 reveals the differences between the scores of psychological distress in the parents of the children in the control and experimental groups. The mean score of this item in the control group was (2.76±0.19), while for the experimental group was 2.36±0.22, with a significant difference between them (p=0.0001).

Table- 6: Correlation between psychological distresses in the parents of control and experimental groups.

	Group	No.	Mean±SD	t-test	P-value
Psychological distress in the parent	**Control**	136	2.76±0.191	−52.960	0.0001*
	Experimental	136	2.36±0.227	−37.554	0.0001*

*: Significant difference

Discussion

Generally, the main causes of childhood depression are related to family trouble, parent distress, low family income, unstable life, stress, burden by family members, threatens from surroundings, not schooling/poor school performance, social functioning, work at a young age, poor diet, caregiver abuse and bullying victimization outside the home ***[17, 18].***

In this study, the most frequent age of children experienced depression was 11-13 years, with females more frequently than males. The findings of Bernaras et al. support these outcomes in 2011 in Spain, which indicated that most children have higher depression symptoms between the ages of 8-12 years, and depression

symptoms appear in girls more than in boys, which might be due to female self-esteem [1]. The differences in depressive frequency by sex and age were also found by Robers et al., 2013 and Long et al., 2019 in the USA ***[19-20].***

Furthermore, parents' psychological distress, education level, and careful/awareness of their children are among the potential factors affecting the children's welfare. In this study, most Syrian refugee parents experienced psychological distress, and basic educational level, even having more than four children in their family made them not take care of their children despite not providing them with enough food, clothes, comfort, and daily expense. Collectively, all these adverse conditions drive children to face various degrees of depression and anxiety ***[21-23].***

Moreover, our results showed the effectiveness of the psychological intervention using CBT on children to alleviate depression symptoms. These results are supported by Johnstone et al., 2020, demonstrating that psychoeducation therapy effectively treats childhood depression disorders ***[24].*** Other researchers also found similar results using various approaches for treating and improving depression among children ***[25].*** Additionally, Alotaibi, 2015 showed that student counselling in Saudi Arabia schools could potentially and indirectly help combat and reduce levels of anxiety and depression among children and adolescents ***[26].***

Conclusion

Applying CBT had a potential effect on reducing symptoms of depression among Syrian refugee children living in the Arbat Campus. The researcher also concluded that the parent's psychological distress significantly affected the depression symptoms of the children in both groups. Thus, before the interventions are implemented, a detailed plan should be created and given to everyone working with the kid, including parents, teachers, aides, specialists, and others. The strategy should outline the procedures, deadlines, resources, tools, and other elements required to improve the chances of success. The program must be strictly adhered to demonstrate consistency and predictability to depressed kids, as this will lessen their perception of stress. The program's potential effects might be diminished if it results in depression or adverse reactions.

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