

# The Effectiveness of Child-Centered Play Therapy on Behavioral and Emotional Problems of Children with Anxiety Caused by Corona: A Case Study in Fouladshahr-Isfahan

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#### **Abstract**

**Background:** The outbreak of coronavirus disease 2019 (COVID-19) has caused stress and anxiety for various parts of society all over the world. This concern and stress are not limited to being affected by COVID-19 because this condition has also caused changes in people's lifestyles.

**Objectives:** This study aimed to evaluate the effectiveness of child-centered play therapy on behavioral and emotional problems of children suffering from anxiety caused by Corona in Fuladshahr.

**Methods:** The method of this study was a single-case experimental design with multiple asynchronous baseline was used. According to the clinical criteria and the diagnosis of the child and adolescent psychologist, 6 children were selected and included in the research by purposeful sampling. Data collection tools included expert interviews and Achenbach questionnaires, which were used in three phases: pre-treatment, intervention, and follow-up. The data were analyzed with the descriptive and inferential statistics and the methods of recovery percentage and visual drawing.

**Results:** The percentages of improvement in emotional-behavioral problems for the first to sixth subjects were 54%, 57%, 52%, 54%, 37%, and 48% respectively, which indicates the effectiveness of the treatment in the first, second, third, and Fourth subjects. The percentages of recovery in externalized problems were 35%, 64%, 30%, 56%, 44%, and 45% for the first to sixth subjects, respectively; it indicates the therapeutic effectiveness in the second and fourth subjects. The percentages of recovery in internalized problems were 72%, 66%, 60%, 50%, 27%, and 63% for the first to sixth patients, respectively, which indicates the effectiveness of the treatment in the first, second, third, fourth, and sixth subjects and relative effectiveness in the fifth patient.

**conclusions:** The analysis of the data of this research showed that child-centered play therapy is effective in reducing behavioral-emotional problems of children with anxiety caused by Corona.

Keywords: Anxiety, Behavioral-Emotional Problems, Child-Centered Play Therapy, Corona

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# 1.Background

The spread and infection of various infectious diseases throughout history has been one of the most serious threats to human health; one of the most recent of which is the Corona virus (Covid-19), which originated from Wuhan, China in December 2019, and has received serious attention worldwide (1). This disease is a new type of highly contagious disease caused by acute respiratory syndrome (2).



Hundreds of thousands of people around the world have been infected with this virus, so many countries have different strategies to control this disease. One of these methods is the process of quarantine, despite the benefits of quarantine in preventing the spread of the corona virus, researches show that the method of quarantine is possible lead to a decrease in mental health and the occurrence of some psychological disorders in people, because the quarantine of entire communities and the closure of recreational, educational centers, have affected many aspects of people's lives(3). In this context, studies that investigated the psychological disorders of people during quarantine have reported many signs of psychological damage such as panic disorders, emotional disorders, anxiety, depression, irritability and aggression and sleep disorders in people (4).

In the meantime, although children seem to be less vulnerable to the virus than adults, early reports from China show that they are not only indifferent to the significant impact of the epidemic, but also sensitive to the changes and developments caused by Corona, leading to expressions of anger and gets angry (5) and has had devastating effects on their mental health(6), on the other hand, school closures and home quarantine of students, lack of communication with classmates and friends, lack of suitable space for physical activities at home, stressful stimuli at home such as fear of getting infected, unpleasant thoughts, fear and anxiety of parents have also greatly increased the anxiety level of children (7).

Approximately 30% of children and adolescents will experience a diagnosable psychiatric disorder in their lifetime, but 70-80% of them do not receive appropriate interventions (Evans, Mullett, Wiest, Franz, 2005). (Richman, Stevenson and Graham, 1982) studied the prevalence of behavior problems in preschool children of 705 families in London and concluded that 15% of preschool children have mild behavior problems, 2.6% have moderate behavior problems, and 1.1% have severe behavioral problems. In Iran, it is predicted that the prevalence of behavioral disorders in children is more than expected. Behavioral-emotional disorders in children refer to situations in which behavioral-emotional responses at school and at home are different from society's norms. So that it negatively affects a person's adaptation, school performance, self-care and social relationships (Fox, Halpern, and Forsyth, 2008).

Play therapy is one of the methods focused on the child, because children are not able to express their emotions and feelings due to the low level of abstract thinking, and therefore the game is a tool that the child uses to express himself (8). There are different types of play therapy, including Adlerian play therapy (Fashimpar, 1992), cognitive behavioral play therapy (Spence, Donvan, and Berchman-Toussaint, 2000), ecosystem play therapy, and child-centered play therapy (Ray, Bratton, Raine, Jones, 2001).

One of the reasons for the success of this method in the treatment of children is the lack of abstract thinking and high verbal skills in expressing behavior. For children, toys express their language and play is their conversation (Landreth, 2002). On the one hand, considering the many consequences of children with behavioral and emotional problems on the dimensions of relationships and functions and the quality of life of family members, and in order to prevent other problems that can befall children due to these disorders in the future, the treatment of these children's problems should be a priority in treatment programs and It is the education of the society, so the identification and effective treatment of these children has a double necessity. The necessity of this research is that due to the positive role of play therapy in projecting children's negative emotions, it can be used as an effective treatment method to reduce destructive effects and emotional and behavioral disorders.

Fear of illness and death hampers people's general functioning during a pandemic like Corona (7). Studies have shown that people these days experience mental disorders such as panic disorder, emotional disorder, anxiety, depression, irritability, aggression, and sleep disorders (4). These issues have a significant impact on the child's normal personal and family functioning and may persist into adulthood. However, many studies have shown that play therapy can be helpful in treating and improving children's behavioral, emotional, and mental disorders and problems (9, 10). Furthermore, it has been demonstrated by Bratton that child-centered play therapy is effective in reducing depression and anxiety (11).

## 2.Method

In this research, a single-case design, which is one of the experimental methods, was used. Among the single-case experimental designs, the multiple baseline experimental design was used. The single-case plan used in this order that eligible people entered the multiple baseline phase at the same time and randomly entered the baseline phase and treatment one by one, one session apart and asynchronously (one week). They were being treated. In



this way, after the purposeful sampling, 6 children entered child-centered play therapy asynchronously and with an interval of one week. 12 sessions were conducted (Landreth's child-centered play therapy: one 45-minute session per week) and after the treatment, they were followed up after two weeks. Therapists were 2 students (MSc & PhD) of psychology who rained in play therapy. They have learned procedure of play therapy for children with emotional disorders.

## participants

The statistical population of the current study is composed of all students aged 7 to 10 years of Fouladshahr city in the 1399-1400 academic year. In this research, to select students with emotional-behavioral problems caused by Corona anxiety, the purposeful sampling method was used and according to the inclusion and exclusion criteria, the subjects entered the baseline phase at the same time and then entered the intervention. And among the children aged 7 to 10, it was done in Fouladshahr schools. In the next stage, in order to identify students with emotional-behavioral disorders, a questionnaire was created by the researcher, by the principal of girls' and boys' schools (hasht behesht, shaghayegh, ayat, tadbir, marafet, shaysteh, farhang, safura, ghods, hejrat, sana, & erfan) in virtual form. Given to parents. 6 applicants to participate in the project, which was conducted according to the clinical interview by a clinical psychologist, were purposefully selected according to the entry and exit criteria.

By the entering and excluding criteria for the research, human subject's review process has defined. Then, those who had the necessary criteria were selected. This criteria for entering this study were 7-10 years old, the consent of the individual and the parents, the absence of a physical defect that would prevent the child from playing, and the confirmation of a clinical psychologist in the presence of anxiety caused by the corona virus in the child. The criteria for withdrawing from the research were the individual's or parents' refusal to continue participating in the research, absence of more than two sessions at the center, the researcher's diagnosis of causing harm and loss to the child if the treatment continues, such as causing excessive anxiety and stress.

#### Instruments

- 1. A specialized clinical interview that was conducted by a clinical psychologist and confirmed the anxiety caused by Corona. DSM evaluates children according to fulfilling the criteria
- 2. Achenbach's questionnaire (CBCL-II) is a child's behavior inventory. It used to measure emotional-behavioral problems (translated by Minaei, 2005). This questionnaire is suitable for the age group of 6 to 18 years. For each age group, an Achenbach questionnaire obtains the necessary information about the behavior from three sources: the parents, the teacher, and the child himself. This list is completed by parents. Like the other two parallel forms, the child's behavior list consists of 113 questions and 8 sub-questions, next to each question there are three options: zero (not true), 1 (somewhat true) and 2 (completely or mostly true). The parent or guardian of the child should circle one of the options according to the child's behavior. For scoring, scales based on factor analysis were used as criteria and after summing the scores of the components of each scale, the scale score was obtained. By summing the scores of two scales (aggressive behavior and ignoring the rules), the score of externalizing problems was determined, and the sum of the scores of three scales (anxiety/depression, withdrawal/depression, and physical complaints) was the score of internalizing problems, and from the sum of these two scores, with the scales (problems attention, thinking problems, social problems and other problems) total score was obtained. Low scores in this questionnaire mean a low level of problems and high scores mean a high level of problems. In the all subscales, the T-scores under 60 are normal, 60-63 are subclinical, and 63 and more are clinical cases. The validity of this test through retesting is in the range reported from 0.65 to 0.85 (Roi and Roy, 2004).

# Data analysis

In this research, visual charting and significant clinical improvement has been used. In the visual charting method, data related to the subjects in three stages before treatment (baseline), intervention, and follow-up. Data were collected and analyzed with the help of descriptive statistics. Clinical significance is evaluated by the recovery percentage index, in such a way that if the score of the cases after the treatment is lower than the cut point, it can be said that as a result of the intervention on the patient. For clinically meaningful objectification, the recovery percentage formula is used. This formula was presented for the first time by Blanchard and Squares (1988; Haug, 1996). In this formula, the pre-test score is subtracted from the post-test score and divided by the pre-test score and the result is multiplied by 100. If the result is 50% or more, it is considered as a reduction in



symptoms, recovery and success in treatment. 25 to 49% is considered as a slight improvement, and finally, a decrease in scores below 25% is considered as a treatment failure.

#### Results

Table 2: Scores of general problems (behavioral-emotional) of patients undergoing play therapy

Subject	1	2	3	4	5	6		
Baseline 1	48	62	55	51	36	58		
Baseline 2	49	60	57	50	36	58		
Baseline 3	49	60	55	50	36	57		
Mean of Baselines	48.6	60.6	55.6	50.3	36	57.6		
Session 1	48	60	54	48	35	56		
Session 4	44	61	50	47	30	50		
Session 6	34	58	40	45	27	32		
Session 8	32	53	42	40	20	26		
Session 10	30	45	30	30	17	27		
Final Session	25	38	25	23	15	26		
Mean of Sessions	35.5	52.5	40.1	38.8	24	36.1		
Percentage of Recovery	48	37	54	52	57	54		
Total Percentage of Recovery	50							
follow up 1	25	40	24	25	14	26		
follow up 2	23	42	24	23	15	27		
follow up 3	23	42	24	21	14	25		
Mean of follow up	23.6	41.3	24	23	14.3	26		
Percentage of Recovery	52	30	55	52	60	55		
Total Percentage of Recovery	51							

Table 2 shows the scores of general problems (behavioral-emotional) of patients undergoing play therapy in the basic, treatment and follow-up stages. As can be seen in Table No. 1-4, in all six children, the mean of the treatment and follow-up line showed a decrease compared to the mean of the baseline. The recovery percentage of general problems in the first child is 48%, in the second child, 37%, in the third child, 54%, in the fourth child, 52%, in the fifth child, 57%, and in the sixth child, 54%, according to Blanchard and Squares (1988; Haug, 1996), the third child, The fourth, fifth and sixth children are in full recovery and successful treatment, and the first and second children are in the range of partial recovery. The percentage of recovery in the follow-up phase is 52% in the first child, 30% in the second child, 55% in the third child, 52% in the fourth child, 60% in the fifth child and 55% in the sixth child, which according to Blanchard (1988; Haug, 1996) The second, third, fourth, fifth, and sixth children are in the range of full recovery and treatment success, and the first child is in the range of partial recovery, in the follow-up phase of treatment changes in the first, third, fifth, and sixth children, an increase in the percentage of recovery can be seen, the fourth child It remains constant, but in the second child, a decrease in the percentage of recovery and therapeutic effects is observed, which can be explained according to the child's family conditions. The average percentage of recovery in the follow-up phase is 51%, which according to Blanchard and Squares (1988; Haug, 1996) is in the range of complete recovery and therapeutic success.



Table 3: The process of changes in child-centered play therapy reduces internalized problems in children with anxiety caused by Corona

Subject	1	2	3	4	5	6			
Baseline 1	12	15	6	7	8	13			
Baseline 2	12	16	7	6	8	12			
Baseline 3	12	16	7	6	8	12			
Mean of Baselines	12	15.66	6.66	6.33	8	12.33			
Session 1	11	18	6	5	6	11			
Session 4	9	20	4	5	6	10			
Session 6	9	20	4	4	5	8			
Session 8	7	19	3	3	6	6			
Session 10	6	14	3	2	4	3			
Final Session	4	13	3	2	2	3			
Mean of Sessions	7.6	17.3	3.8	3.5	5.1	6.8			
Percentage of Recovery	63	27	50	60	66	72			
Total Percentage of Recovery	56								
follow up 1	5	15	4	3	3	3			
follow up 2	2	17	3	3	2	5			
follow up 3	3	16	3	2	2	3			
Mean of follow up	3.33	16	3.33	2.66	2.33	3.66			
Percentage of Recovery	73	11	50	60	67	73			
Total Percentage of Recovery	56								

As can be seen in Table No. 3, in all six children, the mean of the treatment and follow-up line has decreased compared to the mean of the baseline. The recovery percentage of externalized problems in the first child is 45%, the percentage in the second child is 44%, in the third child is 56%, in the fourth child is 30%, in the fifth child is 64%, and in the sixth child is 35%, according to Blanchard and Squares (1988; Haug, 1996), the first child, the second, fourth and sixth are in the range of partial recovery and in the third and fifth child they are in the range of full recovery and treatment success.

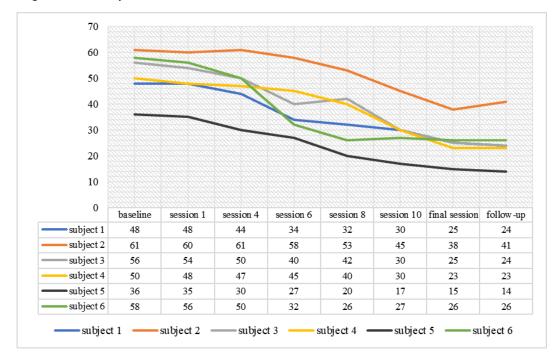


Chart 1: The process of changes in the stages of child play therapy focused on behavioral-emotional problems of children suffering from anxiety caused by Corona



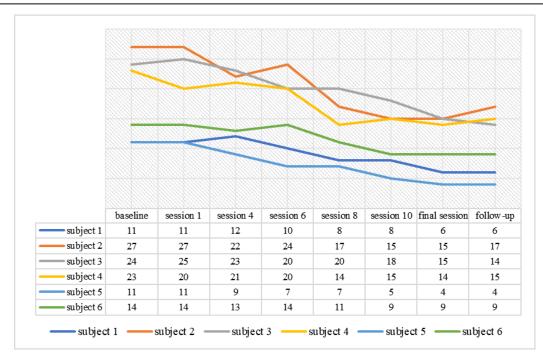


Chart 2: The process of changes in the stages of child play therapy focused on the externalized problems of children with anxiety caused by Corona



Chart 3: The process of changing child play therapy based on the internalized problems of children with anxiety caused by Corona



The percentage of recovery in the follow-up stage is 45% in the first child, 33% in the second child, 56% in the third child, 25% in the fourth child, 63% in the fifth child and 43% in the sixth child, which according to Blanchard and Squares (1988; Haug, 1996) The first, second, fourth, and sixth children are in the range of partial recovery, and the third and fifth children are in the range of complete recovery and treatment success, and in the follow-up phase of the treatment changes of the sixth child, an increase in the percentage of recovery was seen, and the first, third, and fifth children remained stable. But in the second and fourth child, the reduction in the percentage of recovery and therapeutic effects is observed. The average percentage of recovery in the follow-up phase is 44%, which according to Blanchard and Squares (1988; Haug, 1996) is in the range of partial recovery of treatment.

### Conclusion

The present study showed that child-centered play therapy has been effective on the behavioral and emotional problems of children suffering from anxiety caused by Corona. The total score of behavioral problems, the parents' comments during the interview, especially in the last weeks, and the comparison of their children's recent behaviors with the pre-intervention behaviors and the researcher's daily observations and notes show that the children's overall behavioral problems have decreased. Many researches confirm the effects of play therapy on behavioral-emotional problems. Landerth, Ray, and Bratton (2009) and the research of Smith (2000) and Ekner and Braverman (1997) investigated the effect of play therapy in children with behavioral disorders and observed a significant reduction in the disorders in the final evaluation after the treatment. In another study conducted by Bratton and Landerth (1995), the effect of child-centered play therapy on children aged 3 to 7 years who had behavioral problems was investigated. This research showed a significant difference (Landreth and Bratton, 2006) and also most of the researches related to investigating the effect of play therapy on behavioral problems have shown that play therapy reduces the total score of children's behavioral problems (Ray 2007; Packman and Bratton (2003); Tyndall-Lind et al., 2001; Kot et al., 1998; Malek et al., 2012; Azarniushan et al., 2011). One of the eight principles of child-centered play therapy is unconditional acceptance of the child by the therapist. When children, during the process of shaping their feelings in the presence of an adult who understands and accepts even the intensity of their feelings, the child learns that his feelings are acceptable, so they can control their feelings responsibly and are freed from the control of these feelings, and thus this process for children It is a constructive release experience that allows them to go beyond these feelings (Landreth, 2019).

In explaining the research data obtained from hypothesis 1, it can be stated that according to the conducted research, child-centered play therapy has shown its effectiveness on behavioral-emotional problems. The data indicate the effectiveness of this treatment in the present study, but due to the novelty of this treatment protocol, no research background was found on the effectiveness of child-centered play therapy on behavioral-emotional problems of children with anxiety caused by Corona. Although positive changes in this type of treatment were observed in children's externalizing problems, and during interviews with parents, many effects were seen in children's aggression and law breaking, but it can be said that due to the lack of 4 points in the percentage of overall improvement in children's externalizing scores in this play therapy hypothesis Child-centered therapy has not been effective in treating the externalizing problems of children with anxiety caused by Corona.

Like Paste (1996) and Schumann (2010), who have concluded in their research that the implementation of play therapy method on children's aggression did not create a significant difference between the experimental and control groups, and in the meta-analysis research of Lin and Bratton (2015) among the three The variables of general behavioral problems, internalized problems and externalized problems have the lowest average effect size for externalized problems. The results of this analysis are inconsistent with various researchers who have used play therapy and have introduced it as an effective method in reducing children's externalizing problems (Garz, 2005, Jafari, Mohammadi, Farid and Chiti, 2011). The research findings of Ritzi and Ray (2017) also Ray (2017) showed significantly less aggressive behaviors. Barzegar, Tajrishi and Bahnia (2011), Babaei (2010) and Ahmadi (2016) in a study on the effect of play therapy on behavioral problems have come to the conclusion that play therapy has been effective in reducing externalizing problems, aggression and ignoring behavior. Elliott and Pumphrey (2006) concluded in a research that the child-centered method significantly reduced boys' maladjustment, and Kojran (2010) and Dadam Rafat (2007), Dodestan, Bayat and Askari (2008) concluded that play therapy it has a significant effect on attention problems, very destructive behavior and aggression.

In explaining the research data obtained from hypothesis 2, it can be stated that during the interview of the parents and the downward trend in the graph of externalizing problems, many effects were seen in children's



aggression and law breaking, and also the daily notes of the play therapist from the observations of the play therapy sessions show that with the progress of the sessions, The children's externalizing behavior problems had improved and they had become calmer, more patient and more lawful than before the intervention; However, the percentage of overall improvement in children's externalizing scores in this child-centered play therapy hypothesis has not been effective in treating the externalizing problems of children with anxiety caused by Corona.

In explaining these data, it can be said that the goal of play therapy is to develop the inner potential of the child to effectively deal with the current and future problems of his life. Unlike structured approaches such as relaxation play therapy, this approach is focused on the child and its purpose is not to focus on a specific problem and reduce its symptoms; Therefore, since the intervention process never directly focused on solving specific problems such as aggression, the children did not show early and significant changes that are reflected in the statistical results. It is necessary to mention that in child-centered approaches, behavioral changes take place gradually, and the spread of these changes from the playroom to the environment around the child is also gradual; therefore, although the children's changes were evident for the therapist's play, the parents did not evaluate these changes as significant. Also, the results showed that child-centered play therapy was effective in reducing the internalized problems of children with anxiety caused by Corona. The results of this research are in line with the results of Stulmaker and Ray (2015), Ray et al. Jafari et al. (2011), Ata Nasi Dewa (2012), and Shen (2000) were able to reduce children's anxiety by using the group child-centered play therapy method. Pakman and Bratton (2003 cited in Ray, 2006) also showed a reduction in all internalized problems using play therapy. One of these capabilities is the imaginary projection feature in the game text. Children recreate and reexperience traumatic and stressful experiences using play; As a result, they feel capable and mastered. In fact, children encounter external unfortunate events through play and dominate them in a playful manner, without real dangers threatening them. Klein (1955; cited by Sheffer and Drews, 2010) believes that a child can learn through play, games and materials that have therapeutic properties reveal their unconscious conflicts through the defense mechanisms of projection, displacement and symbolization. Expressing these unconscious conflicts makes one to seek solutions to solve them while creating insight. Since play therapy is in harmony with children's developmental, verbal and cognitive capacities and is considered a pleasant experience for children, it can effectively provide the possibility of investigating and diagnosing children's issues and problems, and by creating a safe and accepting communication framework, the use of toys that help to express and re-creating the child's problems help and facilitate and accelerate the child's efforts to overcome conflicts and find compromise solutions to pave the way for the treatment and improvement of the child's problems. Based on the conducted research, children experience fear and anxiety, loss of appetite, physical and social isolation at the onset of the disease, and show many emotional and behavioral problems. During the outbreak of the Covid-19 disease, children often have to stay at home for a long time due to the closure of schools, which has caused them to have limited contact with their classmates and reduce physical activity among them, resulting in more behavioral and emotional problems than themselves (Zhu et al. 2020).

Ingram and Hizoscott (2000) have pointed to various variables in examining the effectiveness of psychological treatments. These variables are: the change process (it means the amount of change in the goals) in this research, the findings indicated the change in the dependent variables, which were presented separately in each patient. Totality of change (percentage of people who showed and did not show change) the results showed that all patients had positive changes, but despite the positive changes in people, the rate of improvement in patients was different. The generality of the change (indicates the change in interpersonal and functional shade). In this research, using the Achenbach Questionnaire (Child Behavior Inventory), scales such as: anxiety/depression, withdrawal/depression, physical complaints, social problems, attention problems, problems Thoughts, lawbreaking behavior, aggressive behavior and other problems were examined. According to the interview conducted by the therapist in the follow-up phase in these patients, practical obsessions (excessive washing, checking the health of people around, etc.) and intellectual obsessions (thoughts of self-harm), worrying about one's illness and others, etc.) And attention problems (restlessness and inattention in class) and other problems (nocturnal urination, finger and toe sucking, nail picking) showed a significant improvement. The stability of the duration (shows the duration of the therapeutic achievements) has been done to measure this component, 3 stages of follow-up have been carried out, and the results showed that in this research, the patients were able to maintain the therapeutic changes in most of the therapeutic variables, and even in some of them, in the follow-up sessions, sometimes the effects increased. It has also been observed. Acceptance rate (shows the degree of



participation of people in the treatment and its completion). The acceptance rate (percentage of patients who completed or left the treatment) of the patients participating in the treatment fully cooperated until the end of the treatment session and the treatment did not show any drop. Safety (indicates whether or not the treatment has caused problems and troubles for them) according to the interview conducted, no problems or troubles were reported by the patients.

Every research has limitations, the limitations of this research are:

- 1. Corona disease and compliance with health protocols such as: wearing a mask, observing social distance, etc. caused limited disturbances in the communication between the therapist and the children.
- 2. On the other hand, the impossibility of controlling variables such as personality traits of individuals, economic, cultural and social factors of families and things such as family population and number of children were other limitations of the present research that can affect the results of the research.

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