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The Effect of Child-Centered Play Therapy on Self-Compassion and Emotion Regulation Skills in Children with Cancer¹

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Abstract:

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This study examined the effects of Child-Centered Play Therapy (CCPT) on selfcompassion and emotion regulation skills in 8- to 12-year-old children diagnosed with cancer. The study was conducted using a pretest-posttest design with a control group. The participants were children undergoing long-term cancer treatment at Necmettin Erbakan University Faculty of Medicine, Department of Pediatrics. In the experimental group, a child-centered curriculum was applied for 12 weeks. The control group did not receive any therapy. For this purpose, 17 participants were randomly assigned to the experimental group and 17 participants to the control group. The Emotion Regulation Scale for Children and the Self-Compassion Scale for Children were used as data collection instruments in the study. These scales were administered simultaneously to the experimental and control groups to obtain pre-test and post-test measures. As a result of the experimental applications, it was observed that the children in the child-centered play therapy group achieved higher scores in self-compassion and emotion regulation skills compared to their peers in the control group.

Keywords:

S: Children with cancer, Child-Centered Play Therapy, Emotion regulation, Selfcompassion

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INTRODUCTION

Children diagnosed with cancer may face a number of psychological problems during the disease process and treatment phase, including psychological symptoms, lack of selfcompassion, and impaired emotion regulation (Hedström et al., 2015). Such negative processes, especially during childhood, can have serious negative developmental consequences. In this context, the impact of treatment modalities that provide psychological support on protecting and improving children's psychosocial health has become an important area of research (Katz et al., 2018).

Play-based therapy programs are used as a functional intervention method to address children's social, emotional, and behavioral problems. This therapy typically works with children between the ages of 2 and 10 years and is effective in treating problems such as anxiety, depression, obsessions and compulsions, and mental health issues (Vanfleet, Sywulak, & Sniscak, 2018). Child-centered play therapy is preferred in addition to or as an alternative to drug treatment, especially in dealing with psychological symptoms, which are among the most common problems (Orhan, 2022). In the field of play therapy, child-centered play therapy is the most researched therapy method. Related studies confirm the positive effects of this therapy method in solving children's problems (Bratton et al., 2015).

Child-Centered Play Therapy (CCGT) is a method based on the client-centered approach to therapy first introduced by Carl Rogers. This approach was developed and adapted to play therapy by Virginia Axline. Later, this approach developed by Virginia Axline was further developed and conceptualized by Garry Landreth, thus introducing the child-centered play therapy approach (Ryan & Wilson, 2016). The effects of CCOT on children diagnosed with cancer may play an important role, especially in reducing psychological symptoms (Anderson & Gedo, 2013). In addition, self-compassion and emotion regulation are recognized as important internal resources that increase psychological resilience, especially in children who have experienced stressful and traumatic experiences (González et al., 2019; Neff, 2003a). Play therapy can be effective in improving the quality of life for these children by reducing their stress levels, improving their self-compassion skills, and helping them achieve emotional balance (Stallard et al., 2016).

CCET and Emotion Regulation in Children with Cancer

Child-centered play therapy is recognized as an effective way to improve the emotional and psychological state of children with serious illnesses such as cancer. Play provides a way for children to express themselves, their fears, anxieties, and other emotional states. Children undergoing cancer treatment may experience emotional difficulties due to the stress, uncertainty, and time spent in the hospital. At this time, play therapy can help children improve their emotion regulation skills (Shamabadi et al., 2022; Wempe et al., 2023). Play therapy is based on children's play as a natural form of expression. In this process, children learn to manage their emotions through play. For example, expert-led play sessions



allow children to explore their feelings of anxiety, fear, or loneliness and develop coping strategies (Goodyear-Brown, 2009; Kottman & Ashby, 2024).

Emotion regulation includes not only the downward regulation of negative emotions such as sadness and anxiety, but also attempts to reduce, increase, maintain, or change any emotion (e.g., positively valenced emotions such as happiness and excitement) (McRae & Gross, 2020). An important feature of emotion regulation is that it can occur outside of explicit/conscious awareness, such as the desire to change an upsetting problem (Gross & John, 2003), or implicit/conscious awareness, such as hiding one's love from another person due to fear of rejection (Gross, 2014).

Emotion regulation is a general term that refers to the regulation of not only negative but also positive emotions and includes the ability to keep the intensity of emotions felt by individuals at a stable level and to maintain it for the desired period of time (Garnefski, Kraaij & Spinhoven, 2001; Leahy et al., 2011). In cases where emotion regulation is not possible, individual and social functionality is compromised and this situation leads to various problems (Leahy et al., 2011; Niedenthal & Brauer, 2012).

Especially in studies conducted with chronic cancer patients, it is known that in addition to positive health behavior change, the provision of social support, self-efficacy, refocusing on the plan and positive reappraisal, which are emotion regulation strategies, increase disease resilience in chronic patients (Helgeson & Zajdel, 2017). People who are able to remain optimistic about their chronic illness are found to frequently use acceptance, positive reappraisal, and plan refocusing as coping mechanisms, while maladaptive strategies are rarely used (Carver et al., 2010). In a comprehensive study of chronic illness, it was found that young people's social functioning was impaired and the use of maladaptive cognitive emotion regulation strategies was higher.

Thompson argued that emotional regulation can be defined as external and internal. That is, emotions are not only self-regulated but also managed by others. Biologically, emotions organize and coordinate responses to important environmental events. Therefore, emotional regulatory processes are necessary both to provide flexibility to the behavioral processes that help motivate and direct emotions and to enable organisms to respond quickly and efficiently to change (Thampson, 2008).

Middle childhood is a period of significant change for both attachment and emotion regulation. As in younger years, parents remain children's primary attachment figures. As in younger years, caregivers serve as both safe spaces and secure bases, although their role as secure bases becomes more important in middle childhood. In terms of emotion regulation, the change seen in middle childhood is that children become increasingly self-aware, which increases the regulation of their emotions. Norms for emotional expression also change, such that children are increasingly expected to modify and regulate their



emotions in middle childhood, and failure to do so is associated with difficulties such as peer rejection (Movahed Abtahi & Kerns, 2017).

There are studies showing that emotion regulation difficulties and processes are associated with many psychopathologies such as somatic symptoms and related disorders, depression and posttraumatic stress disorder due to childhood trauma (Alpay et al., 2017; Hopfinger et al., 2016), internalizing and externalizing disorders in children (Braet et al., 2014). Research has supported that emotion regulation processes are also associated with illness anxiety. Görgen et al. (2014) found that dysfunctional emotion regulation strategies such as suppression, rumination, blaming others, and catastrophizing were associated with illness anxiety.

Child-centered play therapy is a therapeutic approach that creates a safe space for children to express their emotional and psychological concerns through play. The therapist tries to understand the child's feelings and experiences and shows unconditional acceptance. The playroom is organized in such a way that the child feels safe and free to express themselves and experience emotional release through play. In addition, selfcompassion is an important concept that encourages individuals to be kind, understanding, and supportive of themselves (Germer & Neff, 2013). Self-compassion is the ability to approach one's own shortcomings, pain, and challenging experiences from a wise perspective and to be compassionate toward oneself (Neff et al., 2007). This is not just an individual trait; on the contrary, people can only behave in the same way with others if they are compassionate, loving and kind to themselves. Play therapy gives children the opportunity to express their feelings and make sense of them. This process increases emotional awareness and helps children accept their own emotional experiences, which is a key component of self-compassion. The empathic relationship with the therapist allows children to develop empathy for themselves. The therapist's unconditional acceptance and gentle approach encourages children to be kinder to themselves. In addition, CCPT increases children's self-confidence and self-esteem (Daniel et al., 2023).

CCPT and Self-Compassion in Children with Cancer

Being diagnosed with cancer can be considered a traumatic event in and of itself and can be described as a painful experience. Patients experience psychosocial, spiritual, and existential distress (Garcia et al., 2021). Changing one's perspective on this challenging experience, developing empathy, and strengthening emotional coping skills are critical for these patients (Ewert, Vater, & Schröder-Abe, 2021). Self-compassion can enhance the psychosocial well-being of cancer patients, alleviate their suffering, and help them maintain self-care, suggesting that it is an important resource (Garcia et al., 2021). Childhood cancer is a major health problem that leaves deep physical, emotional, and social impacts. In this process, children's sense of self-compassion is of great importance, as it plays a critical role in overcoming difficulties and psychological adjustment. Self-compassion can help children to accept their bodies and show love to themselves (Serçe, 2022).



According to Neff (2003b), the sub-dimensions of self-compassion are defined as selfkindness, a sense of common humanity, and mindfulness, which in turn are related to the opposite dimensions of self-judgment, isolation, and over-identification. Cancer reduces people's self-compassion, decreases self-kindness, weakens self-care, and increases selfjudgment. It also triggers feelings of alienation and isolation, weakens the sense of shared experience with humanity by thinking "Why is this happening to me?" and leads to integration with trauma by reducing self-awareness. According to Neff (2003b), practices that support self-compassion can be effective in reducing the stress and anxiety experienced by children with cancer. Self-compassion promoted in play therapy settings can help children be less critical and more supportive of themselves when coping with difficult situations, which can increase overall well-being by reducing emotional distress. Additionally, self-compassionate approaches in play therapy settings allow children to accept and cope with their feelings of fear, sadness, and anxiety (Bluth & Blanton, 2014).

Play therapy can have a positive impact on self-compassion and its sub-dimensions through the process of building a relationship with the child to address issues such as self-judgment, isolation, and illness identification that may occur in children with cancer. This method of therapy helps the child gain a sense of control and mastery over their experiences, helps make the unmanageable manageable, and supports the child in feeling understood and unconditionally accepted (Neff & Dahm, 2015). According to ESMOT, children have innate problem-solving and self-efficacy skills. In this context, it is accepted that the child is the guide and the potential for intrinsic well-being is given great importance. The therapist provides an environment for the child to discover and manage themselves through empathy, reassurance, and unconditional acceptance (Meany-Walen & Teeling, 2016). The focus is on the individual, living in the present rather than the past, accepting rather than directing, and understanding rather than explaining. The fundamental power for healing and change is found in the inner resources and wisdom of the individual (Vanfleet, Sywulak, & Sniscak, 2018).

Purpose of the Study

Child-centered play therapy is a school that has been recently addressed and increasing research on this subject contributes to the field. There is more research on this topic in foreign literature than in our country (Ghasemzadeh, 2022; Parker et al., 2021; Ray et al., 2015). Weis (2020) stated that play is a powerful tool, and play can be used to help children cope better with difficulties. Lin and Bratton (2015), in a study conducted using the meta-analysis method, stated that child-centered play therapy is effective for children and that positive outcomes were recorded for internalizing and externalizing behaviors in children who received child-centered play therapy. Looking at national studies, it can be seen that child-centered play therapy has only recently been addressed. Therefore, there are few studies on child-centered play therapy in Turkey. Sancak (2023) stated that although there is a significant increase in research on play therapy as of 2019, play therapy should be



addressed more in domestic research compared to foreign literature. It has been observed that the research in the domestic literature on child-centered play therapy is mostly related to behavioral problems of children. On the other hand, there are few studies that examine the effects of child-centered play therapy on emotion regulation and self-compassion in children with cancer. The purpose of this study is to examine the effects of Child-Centered Play Therapy (CCPT) applied to 8-12-year-old children diagnosed with cancer on their emotional regulation and self-compassion levels. The following research questions were addressed:

- Is there a statistically significant difference between the posttest scores on the Emotion Regulation Scale in Children of 8-12-year-old children in the experimental group who received play therapy and those who did not?

- Is there a statistically significant difference between the posttest scores on the Self-Compassion in Children Scale for 8-12-year-old children in the experimental group who received play therapy and those who did not?

METHOD

This study was conducted using the experimental method with a study group consisting of experimental and control groups determined by randomization (pretest-posttest control and experimental group design). According to Karunarathna et al. (2024), random assignment in research is an experimental technique used to randomly assign participants to different groups (e.g., a treatment group and a control group) in an experiment. This ensures that each participant or group of subjects has an equal chance of being placed in any group. Random assignment of participants helps ensure that any differences between and within groups in the experimental study are not initially systematic. Thus, any differences between groups at the end of the experiment can be said to be due to the experimental procedures or treatment process (Mattila et al., 2021).

This study used the **experimental method** to examine the effects of Child-Centered Play Therapy (CCPT) on self-compassion and emotion regulation skills in 8-12 year old children diagnosed with cancer. The experimental procedure included 12 sessions of childcentered play therapy in the experimental group. In the placebo control group, instead of play therapy, free time was spent and no application was performed. At the beginning of the experimental procedures, the scales of the study were applied to both groups as a pretest.

The researcher manipulated the independent variable (therapy) by administering the CCPT to the children in the experimental group and measuring the results using the study's scales. This was the most reliable method of determining cause and effect. Random assignment of subjects allowed the researcher to maintain control over the variables and helped to understand whether the effect of the experimental treatment was truly due to the



play therapy or to other external factors. Random assignment minimized sample bias and provided similar baseline conditions in both groups.

Research Group

Participants were children undergoing long-term cancer treatment at Necmettin Erbakan University Faculty of Medicine, Department of Pediatrics. Eligibility criteria were determined based on previous studies on this topic. According to the order of hospitalization of children undergoing cancer treatment, participants were included in the study according to the following inclusion criteria:

- (1) Meet cancer criteria and be undergoing cancer treatment;
- (2) Be between the ages of 8 and 12;
- (3) Have no acute or chronic medical conditions other than cancer;
- (4) Report regularly to the hospital for treatment;
- (5) Have no known disorders, disabilities, or cognitive-mental impairments;
- (6) Children should speak Turkish and have the literacy level to complete the questionnaires;
- (7) Voluntary participation of the children in the study and parental consent.

The exclusion criteria were as follows:

- (1) Children do not communicate well with researchers;
- (2) Children's illness is at a critical stage (negatively affecting the research process);
- (3) Refusal to participate in the study.

(4) Death of the child, irregular attendance at therapy sessions (not attending two or more consecutive sessions), unwillingness to continue the study.

In this study, which examined the effect of Child-Centered Play Therapy on participants' self-compassion and emotion regulation skills, research participants were identified based on the procedures of a two-group randomized controlled trial. At this stage, experimental and control groups were formed according to expert opinion and research in the literature. According to Zareapour et al. (2009), the recommended sample size for an experimental study is at least 20 (total experimental and control groups) using a significance level of .05, β = 0.1, and 90% power. However, due to the nature of childhood cancer, a total of 40 participants were enrolled in the experimental and control groups to account for a dropout or exclusion rate. Thus, 20 participants who received child-centered play therapy were randomly assigned to the control group. Group assignments was completely randomized according to the hospital patient lists, with 20 children in each group (experimental and control). In the experimental group, 2 patients were excluded due to



absenteeism during the experimental interventions and 1 participant was excluded due to exacerbation of his illness. In the control group, 2 patients were excluded because they did not complete the post-tests and 1 participant died. Thus, the study was carried out with the participation of 34 children (17 experimental + 17 control group) who completed the preand post-tests. In the experimental group, 8 of the participants were boys and 9 were girls; in the control group, 9 were boys and 8 were girls. Twelve of the children in the experimental group were in elementary school and 5 were in middle school. In the control group, 13 participants attended primary school and 4 attended secondary school. We can say that the experimental and control groups are equivalent in terms of gender and educational status. Ethical approval to conduct this research was obtained from Hasan Kalyoncu University Ethics Committee. The necessary application permissions were obtained from the Dean's Office of Necmettin Erbakan University, Faculty of Medicine, where the research application will be carried out.

Practice

The study used a two-group randomized controlled trial to evaluate the effectiveness of "child-centered play therapy" in children with chronic illness between June and October 2024. The entire therapeutic procedure consisted of 12 sessions of child-centered play therapy lasting approximately 20 minutes, 1-2 times per week, and the entire therapy practice lasted approximately 5 months. Eligible children and their families in both groups were administered the research scales and the therapy method individually in a private room after obtaining their consent. Prior to the study, the Child Self-Compassion and Emotion Regulation Skills Scales were administered simultaneously and individually to children with cancer in the experimental and control groups.

- In this study, participants in the experimental group received child-centered play therapy for 12 sessions. The control group received regular health care without any therapy. Regular health care consisted of routine medical care and daily expressions of comfort and encouragement by medical staff.

- The interventions in the experimental group were conducted at Necmettin Erbakan University, Faculty of Medicine Hospital in Konya. The child-centered play therapy room was set up in the pediatric ward and the room was relatively independent, quiet, and sufficiently bright.

-In the child-centered play therapy practices of the experimental group, toys were used in each session. The toys used in the sessions were: Dramatic/role-playing tools, creative expression tools, tablet and digital tools, classic play therapy toys, dramatic/role-playing tools, expressive art tools, cards, gift cards, mandala, balls (large, small), counseling balls, sandboxes, sand, art tools, sensory tables, craft materials, magic wand, costumes, musical instruments, animal mascots, blackboard chalk, easel, newspaper, brushes, pencils, paper, children's furniture, story and fairy tale books, medical books.



-The main themes and topics of the child-centered play therapy sessions were determined according to the child-centered play therapy models proposed by Bratton et al. (2015), Landreth (2012), Post et al. (2019), Ray (2011), Sweeney & Landreth (2009), VanFleet et al. (2010), and Wilson, Kendrick & Ryan (2005). According to these models, child-centered play therapy follows a child-centered procedure and can be adapted to the therapy situation. In this study, only one child was allowed in the playroom at a time to ensure that the sessions were effective. Before the session began, the therapist took the child through a strict hand hygiene procedure and introduced the play therapy room and the procedure to be followed in a soft and gentle voice. Once the child was familiarized with the environment, the therapist guided the child to get used to the play activity and to relax. The therapist emphasized that the play creation could be anything and that the child would not be judged. As the child played the game, the therapist recorded the child's behavior and the miniatures used. The therapist adopted a "silent witness" approach, accepting, appreciating, and accompanying the child, creating a safe, tolerant, and supportive atmosphere so that the child could fully engage in the process of creating the play creations. After the therapy session, according to the child's psychological state, the therapist asked the child to present the play and his/her creations, communicated with the child, and guided them to appreciate and explore their inner world. After the play therapy session, the therapist took pictures with the child's permission and saved the pictures in files.

-At the end of the study, self-compassion and emotion regulation skills scales for children were applied as post-tests to children with cancer in the experimental and control groups.

Data Collection Tools

The Emotion Regulation Scale for Children and the Self-Compassion Scale for Children were used as data collection instruments in the study. In the experimental group, all scales were administered before and after the child-centered play therapy procedure. In the control group, the research scales were administered simultaneously as a pretestposttest.

The Emotion Regulation Scale for Children (ERS)

The Emotion Regulation Scale for Children (ERS): It was developed by Rydell, Berlin-Thorell, and Bohlin (2007) based on the idea that it would be efficient for children to selfassess their emotion regulation skills. The items associated with this scale were developed by Rydell, Berlin, and Bohlin (2003) for caregivers to assess children's emotion regulation skills using the items from the Emotion Regulation Scale for Children: Adult Form" by Rydell, Berlin, and Bohlin (2003) for caregivers to assess children's emotion regulation skills. It consists of 29 items related to four sub-dimensions: Anger (9 items), Excitement (5 items), Fear (8 items), and Sadness (7 items). The scale is a 4-point Likert-type scale that is scored from 1 to 4 as "Not at all appropriate for me," "Not appropriate for me," "Appropriate for me," "Appropriate for me," and "Totally appropriate for me," and comments are made on



the total score. An increase in the total score indicates an increase in the level of emotion regulation. Some of the items (Anger Dimension items: 2, 9; arousal dimension items: 4, 5; Fear dimension items: 3, 6, 7) are reverse scored. In the original study, Cronbach alpha values for the dimensions were calculated as .77 for the anger subscale, .57 for the excitement subscale, .61 for the fear subscale, and .71 for the sadness subscale. The original Cronbach alpha value obtained for the total scale was .85.

The Self-Compassion Scale for Children (SCSC

The Self-Compassion Scale for Children (SCSC) was developed to assess the level of self-compassion in primary and secondary school students, aged 8-12 years. The Turkish adaptation of the scale developed by Sutton et al. (2017) was conducted by Çakmak et al. The scale is a 12-item measurement tool that assesses children's positive and negative thoughts and feelings about themselves.

As a result of the factor analysis conducted during scale development, items were grouped into two factors: positive self-compassion (items 2, 3, 5, 6, 7, 10) and negative self-compassion (items 1, 4, 8, 9, 11, 12). Factor loadings ranged from .53 to .71 for the positive self-compassion items and from .60 to .72 for the negative self-compassion items. This construct aims to assess both positive and negative aspects of self-compassion. Negative items are reversed and an overall self-compassion score is obtained from the scale. High scores indicate high levels of self-compassion. The scale is administered as a five-point Likert-type scale ranging from "never" (1) to "always" (5). The fit indices were χ^2 (53) = 183.32, p<.001; CFI = .91; RMSEA = .08 (90% CI .06-.09), which supports the construct validity of the scale (Sutton et al., 2017).

Çakmak et al. (2018) showed that the Turkish adaptation was consistent with the original form. The overall Cronbach's alpha internal consistency coefficient was .81, .83 for positive self-compassion, and .71 for negative self-compassion. Exploratory and confirmatory factor analyses confirmed the distribution of positive and negative items in the original scale. These results suggest that the SCSC is a reliable measure of children's self-compassion.

Data Analysis

The analysis of the research data was conducted using SPSS 25.0 statistical software. According to the central limit theorem, the sample size should be at least 30 in order to apply parametric analysis (Kul, 2014). However, in this study, the number of participants in the experimental and control groups was less than 30. In addition, according to the normality test results, each of the pretest-posttest scores did not have a normal distribution. Given these results, the data were analyzed using nonparametric tests. The Mann-Whitney U test was used to compare the pretest and posttest scores of emotion regulation and selfcompassion among the groups.



Ethical Considerations

Before starting the research, ethical principles were applied to the Hasan Kalyoncu University Scientific Research and Publication Ethics Committee, and an ethics committee approval certificate numbered was obtained.

Ethical Review Board: [Hasan Kalyoncu University Scientific Research and Publication Ethics Committee]

Date of Ethics Review Decision: [05.12.2023]

Ethics Assessment Document Issue Number: [E-97105791-050.01.01-47349]

FINDINGS

Table 1

Descriptive Values of Emotion Regulation Pretest Scores of Experimental and Control Groups

	Experime	ental	Control	
Pre-test	Mean	Std. Deviation	Mean	Std. Deviation
Anger	2,49	0,12	2,53	0,20
Excitement	2,51	0,37	2,52	0,38
Fear	2,46	0,31	2,51	0,37
Sadness	2,16	0,54	2,12	0,49
Total	2,40	0,26	2,38	0,30

Examining Table 1, the descriptive values of the pretest scores for emotion regulation of the experimental and control groups are presented. The mean score of the experimental group was 2.40 with a standard deviation of 0.26, while the mean score of the control group was 2.36 with a standard deviation of 0.30. These results show that there are small differences between the emotion regulation levels of the two groups.



Table 2

PreTest			Mean	Sum of	Mann-	Ζ	р
	Group	Ν	Rank	Ranks	Whitney U		
Anger	Experimental	17	19,13	363,50	173,50	-0,21	0,83
	Control	17	19,87	377,50			
Excitement	Experimental	17	19,37	368,00	178,00	-0,08	0,94
	Control	17	19,63	373,00			
Fear	Experimental	17	18,92	359,50	169,50	-0,34	0,73
	Control	17	20,08	381,50			
Sadness	Experimental	17	19,71	374,50	176,50	-0,13	0,90
	Control	17	19,29	366,50			
Total	Experimental	17	19,87	377,50	173,50	-0,21	0,84
	Control	17	19,13	363,50			

Pretest Rank Means and Mann-Whitney U Test Results of Emotion Regulation Scale of Experimental and Control Groups

Table 2 shows the comparison of the pretest emotion regulation scores of the experimental and control groups using the Mann-Whitney U test. The mean rank of the experimental group was calculated as 19.87 and the mean rank of the control group was calculated as 19.13. The Mann-Whitney U value was 173.5, *z*=-0.21 and *p*=0.84. This result showed that there was no significant difference between the experimental and control groups in terms of emotion regulation in the pretest and that the groups' emotion regulation was similar before the experimental procedure.

Table 3

Descriptive Values of Self-Compassion Pre-Test Scores of Experimental and Control Groups

		Group					
		Control		Control			
Variables	Test	Mean	Sd	Mean	Sd		
Self-compassion	Pre-test	32,53	5,87	33,94	4,48		

Examining Table 3, the descriptive values of the pre-test self-compassion scores of the experimental and control groups are presented. The mean self-compassion score of the experimental group was 32.53 with a standard deviation of 5.87, while the mean score of the



control group was 33.94 with a standard deviation of 4.48. These results show that there are small differences between the self-compassion scores of the two groups.

Table 4

Self-compassion Pretest Rank Means of Experimental and Control Groups and Mann-Whitney U Test Results

Variables	Group	Ν	SO	ST	U	Z	р
Self-compassion pretest	Experimental	17	15,79	268,5	115,5	-1,01	0,31
	Control	17	19,21	326,5	115,5		

Table 4 shows the comparison of the pre-test self-compassion scores of the experimental and control groups using the Mann-Whitney U test. The mean score of the experimental group was 15.79 and the mean score of the control group was 19.21. The Mann-Whitney U value is 115.5, *z*=-1.01 and p=0.31. This result showed that there was no significant difference between the experimental and control groups in terms of self-compassion levels and that the groups had similar self-compassion perceptions before the experimental procedure.

Table 5

Exp	Experimental		
Mean	Std. Deviation	Mean	Std. Deviation
2,70	0,58	2,25	0,18
2,96	0,44	2,65	0,41
2,89	0,47	2,54	0,37
3,18	0,53	2,97	0,52
2,93	0,42	2,60	0,26
	Mean 2,70 2,96 2,89 3,18	Mean Std. Deviation 2,70 0,58 2,96 0,44 2,89 0,47 3,18 0,53	Mean Std. Deviation Mean 2,70 0,58 2,25 2,96 0,44 2,65 2,89 0,47 2,54 3,18 0,53 2,97

Descriptive Values of Emotion Regulation Scale Posttest Scores of Experimental and Control Groups

Examining Table 5, the descriptive values of the emotion regulation posttest scores of the experimental and control groups are presented. In total, the mean emotion regulation score of the experimental group was 2.93 with a standard deviation of 0.42, while the mean score of the control group was 2.60 with a standard deviation of 0.26. Results showed a significant increase in the level of emotion regulation in the experimental group compared to the control group.



Table 6

Ζ Mannp Sum of Mean Whitney U Ν Rank Ranks Anger Experimental 17 24,45 464,50 86,50 -2,78 0,01 Control 17 14,55 276,50 Excitement Experimental 22,50 427,50 0,09 17 123,50 -1,71 Control 17 16,50 313,50 Fear Experimental 17 23,53 447,00 104,00 -2,27 0,02 294,00 Control 17 15,47 Sadness Experimental 17 21,97 417,50 133,50 -1.420,15 17 17,03 323,50 Control Total 82,50 0,00 Experimental 17 24,66 468,50 -2,86

Post-test Rank Means and Mann-Whitney U Test Results of Emotion Regulation Scale of Experimental and Control Groups

When Table 6 is examined, the descriptive values of the post-test scores of emotion regulation of the experimental and control groups are presented. According to the analysis, a significant difference was found in the scores of anger, fear and emotion regulation in the whole scale (p<0.05). These results show that there was a significant increase in the emotion regulation skills of the experimental group compared to the control group.

14,34

272,50

Table 7

Descriptive Values of Self-Compassion Posttest Scores of Experimental and Control Groups

17

Control

		Group				
		Experimental		Control		
Variables	Test	Mean	Sd	Mean	Sd	
Self-compassion	Post-test	40,88	3,59	33,94	4,13	

Examining Table 7, the descriptive values of the self-compassion post-test scores of the experimental and control groups are presented. The mean self-compassion score of the experimental group was 40.88 with a standard deviation of 3.59, while the mean score of the control group was 33.94 with a standard deviation of 4.13. These results show that there was a significant increase in the self-compassion level of the experimental group compared to the control group.



Table 8

Self-compassion Posttest Rank Means of Experimental and Control Groups and Mann-Whitney U Test Results

Variables	Group	N	SO	ST	U	Z	р
Self-compassion post-test	Experimental	17	24,44	415,5	26,50	-4,08	0,00*
	Control	17	10,56	179,5			

*p<0,05

Table 8 shows the Mann-Whitney U test results for the self-compassion posttest scores of the experimental and control groups. The mean rank of the experimental group was 24.44 and the mean rank of the control group was 10.56, and there was a significant difference between the groups with U=26.50, z=-4.08, and p=0.00 (p<0.05). These results show that the self-compassion level of the children in the experimental group was significantly higher than that of the control group. The finding that there was a significant increase in self-compassion levels of children who received Child-Centered Play Therapy suggests that this therapy is effective in developing children's positive perceptions of themselves.

DISCUSSION

CCPT is an effective therapy method that addresses the psychosocial needs of children, allowing them to express themselves and explore their emotional world. This study examined the effect of the CCPT approach applied to 8-12 year old children diagnosed with cancer on their levels of emotion regulation and self-compassion.

According to the results of the study, the children participating in the experimental group who received child-centered play therapy achieved higher emotion regulation scores compared to their peers in the control group. Consistent with the findings of this study, the effect of child-centered play therapy on the emotion regulation levels of children with cancer was found to be positive and at a very high level. The emotion regulation skills of children who participated in the family involvement training program, which was prepared by Uğur-Ulusoy and Gözün-Kahraman (2019) to increase the emotion regulation skills of preschool children, increased. As Weikart (1998) stated, emotional skills programs that are prepared to involve children and families are more effective and lasting. Similarly, Aktürk (2016) investigated the effectiveness of a play-based psychotherapy program on the emotion regulation skills of 5-6-year-old children whose parents were divorced. The experimental group received 7 sessions of play-based psychoeducation, which lasted approximately twenty minutes each week. As a result of the study, it was observed that the emotional regulation skills of the experimental group increased significantly compared to the placebo control group, and this effect was maintained in the follow-up test conducted one month later.



Many studies show the positive effects of play therapy on children with cancer. For example, Landreth (2002) states that play therapy increases children's emotional expression and improves their ability to cope with stress. In addition, Akin (2016) has shown that children's self-expression through play has a significant impact on their emotional regulation skills. In conclusion, play therapy is an important tool for children with cancer to improve their emotional state and develop their emotional regulation skills. This therapy method allows children to express themselves while also helping them increase their psychological resilience due to their development in emotional regulation skills.

When the findings regarding the effect of CCPT application on children's selfcompassion levels are examined, the fact that the mean self-compassion post-test scores of the children in the experimental group were higher than those in the control group shows that the therapy contributed to the development of a positive perspective towards themselves. While self-compassion facilitates the acceptance of one's own emotional experiences on the one hand, it also enables the development of defense mechanisms against negative emotions (Germer & Neff, 2013; Neff, 2003). In this context, it can be said that CCPT supports the development of self-compassion in children and provides a healthier emotional structure. Play therapy provides a safe space where children can express themselves. In this therapy, children express their emotional conflicts and negative feelings towards themselves through play. This process helps children understand and accept themselves better (Gil & Drewes, 2004; Landreth, 2012). CCPT provides a safe environment where the child can develop a sense of self-compassion through emotional support and acceptance. Allowing children to express their feelings and respecting these feelings during the therapy process is an important factor that supports the increase in self-compassion (Coatsworth, 2021). Such intervention programs can have a protective effect, especially for children who have experienced challenging life events (Brown et al., 2020; Bluth & Blanton, 2014). The increase in the self-compassion levels of the children in the experimental group supports their ability to keep themselves away from criticism and develop an internal support mechanism. Another reason why CCPT is effective on self-compassion may be that the therapy supports the child's personal awareness and increases self-esteem (Landreth, 2012). Especially during the play therapy process, allowing the child to think about their experiences and emotional reactions improves their internal evaluation skills, which contributes to the increase in self-compassion (Van Vliet & Kalnins, 2016). Considering that children with high self-compassion have stronger emotional resilience and an increased ability to cope with challenging situations, the importance of the role of CCPT on emotional development becomes even more evident (Germer & Neff, 2013). According to Van Vliet and Kalnins (2011); children's self-confidence improves during the play therapy process. The increase in self-compassion ensures that children's self-evaluations change in a more positive direction and increases their self-confidence, and children have the opportunity to know and accept themselves better during this process. The positive self-compassion development provided by CCPT can also have positive effects on children's social



relationships. Children with high self-compassion can establish healthier relationships in social environments. This contributes to the strengthening of emotional support networks during the treatment process (Barnard & Curry, 2011). Another reason for this significant increase in the experimental group is the potential of children to transfer the behaviors they adopt in the therapy environment to their daily lives. CCPT helps children acquire skills such as accepting themselves without judgment and managing their emotions (Siu, 2020). Increasing children's self-compassion levels is of critical importance for the development of their psychological resilience and self-efficacy. In this context, including children with low self-compassion in emotional support programs can improve their quality of life and contribute to them becoming psychologically healthy individuals in their future lives (Gouveia et al., 2019; Neff & McGehee, 2010).

CONCLUSIONS AND RECOMONDATIONS

According to the results of the study, it was observed that the 12-week CCPT application positively affected the emotion regulation and self-compassion levels of children diagnosed with cancer in the 8-12 age group. However, the program applied in this study was limited to 12 weeks. It is thought that longer periods of child-centered therapy programs will have more positive effects. It is thought that increasing the duration of the program applied to children with cancer and providing psycho-education to those who provide care and support in hospitals while the program is applied to children will increase the awareness of health workers and positively affect the social and emotional development of children. In addition to the fact that children with cancer in the intensive treatment process are more sensitive and disadvantaged, positive skill development is a process that requires time. In this context, it is important for health institutions to conduct studies on the development of self-compassion and emotion regulation skills in children with cancer, such as child-centered play therapy.



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Data Availability Declaration

While the primary datasets utilized in this study are not publicly accessible due to certain constraints, they are available to researchers upon a formal request. The authors have emphasized maintaining the integrity of the data and its analytical rigor. To access the datasets or seek further clarifications, kindly reach out to the corresponding author. Our aim is to foster collaborative academic efforts while upholding the highest standards of research integrity.

Author Contributions

All authors, Esra Coşkun and Prof. Dr. Şaziye Senem Başgül, contributed equally to this work. They collaboratively handled the conceptualization, methodology design, data acquisition, and analysis. Each author played a significant role in drafting and revising the manuscript, ensuring its intellectual depth and coherence. Both authors have thoroughly reviewed, provided critical feedback, and approved the final version of the manuscript. They jointly take responsibility for the accuracy and integrity of the research.

Author(s)' statements on ethics and conflict of interest

Ethics statement: We hereby declare that research/publication ethics and citing principles have been considered in all the stages of the study. We take full responsibility for the content of the paper in case of dispute.

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