

Research Paper

The Effectiveness of Emotion-Focused Therapy (EFT) on Calmness and Self-Control of Parents of Children with Cancer: A Quasi-Experimental Study



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ABSTRACT



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Key words:

Calmness
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Aims Cancer is a leading cause of childhood mortality in both developed and developing countries, and it ranks as the second most common cause of death among children under the age of 14 in Iran. Children's cancer affects the entire family, including parents who consider themselves responsible for the illness and lose their calmness and self-control. Emotion-focused therapy (EFT) is one strategy that can reorganize parents' mood and relationships. This research was conducted to investigate the effectiveness of EFT on the calmness and self-control of parents of children diagnosed with cancer.

Materials & Methods This study employed a quasi-experimental design featuring pretest-posttest measures, with both control and experimental groups, and included a three-month follow-up period. The statistical population included 40 parents of children diagnosed with cancer in Ferdous, Iran. The questionnaires' data were analyzed using descriptive and inferential statistics in SPSS software (version 22). Moreover, ANCOVA and MANCOVA analyses were used to investigate the research hypotheses.

Findings The results of the one-way ANCOVA, controlling for pretest scores, indicated a significant difference between the experimental and control groups (parents of children with cancer) in the dependent variables of anxiety, stress, and depression reduction ($P < 0.000$). The F -values for reductions in anxiety, stress, and depression were measured at 0.967, 0.382, and 0.341, respectively, with corresponding eta squared values of 0.950, 0.978, and 0.968, indicating a large effect size of the intervention. Additionally, a statistically significant difference was observed in the variables of increased calmness and self-control ($P < 0.000$). These results demonstrated that EFT, with a 95% confidence interval, significantly improved mental health indicators by increasing calmness and self-control, and decreasing anxiety, stress, and depression among parents of children with cancer.

Conclusion The findings of this study revealed that EFT significantly improves calmness and self-control, while reducing anxiety, stress, and depression in parents of children diagnosed with cancer. Given the high effectiveness and sustained outcomes observed in the follow-up stage, EFT can be recommended as an evidence-based and practical approach to promoting psychological well-being in families coping with severe illnesses.

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مقاله پژوهشی

اثربخشی درمان هیجان محور (EFT) بر آرامش و خودکنترلی زوجین دارای فرزند مبتلا به سرطان: یک مطالعه شبه آزمایشی

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چکیده

هدف سرطان به عنوان یک بیماری ناتوان کننده و شایع یکی از علل اصلی مرگ و میر کودکان در کشورهای توسعه یافته و در حال توسعه است. این بیماری در ایران دومین علت مرگ و میر در کودکان کمتر از ۱۴ سال می باشد. سرطان کودک بر روی سبک زندگی والدین تأثیری گذارد و والدین خود را مسئول بیماری او می دانند و آرامش و خویشتنداری خویش را از دست می دهند. از جمله راهکار هایی که میتواند روحیه و روابط والدین را مجدداً سازماندهی کند رویکرد درمانی هیجان مدار (EFT) می باشد. این تحقیق با هدف بررسی اثربخشی مداخله رویکرد درمانی هیجان مدار (EFT) بر آرامش و خویشتنداری زوج های دارای کودک مبتلا به سرطان صورت پذیرفت.

مواد و روش ها: روش پژوهش حاضر نیمه آزمایشی با طرح پیش آزمون، پس آزمون با گروه کنترل و آزمایش و دوره پیگیری سه ماهه بود. جامعه آماری شامل ۴۰ نفر از زوجین دارای کودک مبتلا به سرطان در شهرستان فردوس بود. در بخش آمار استنباطی با فرض نرمال بودن داده ها، از آزمون آماری تحلیل رگرسیون گام به گام استفاده شد. داده ها با استفاده از تکنیک های آماری (توصیفی، استنباطی) و نرم افزار آماری SPSS ۲۲ مود تجزیه و تحلیل قرار گرفتند. جهت بررسی فرضیه تحقیق شیوه تحلیل کواریانس یک متغیره (ANCOVA) و مانکوا تجزیه و تحلیل شد.

یافته ها: نتایج تحلیل کواریانس یک راهه با کنترل اثر پیش آزمون نشان داد که بین زوجین دارای کودک مبتلا به سرطان در گروه آزمایش و کنترل، در متغیرهای وابسته شامل کاهش اضطراب، استرس و افسردگی تفاوت معناداری وجود دارد ($p < 0.000$) مقادیر آزمون F برای کاهش اضطراب، استرس و افسردگی به ترتیب برابر با ۰/۹۶۷، ۰/۳۸۲ و ۰/۳۴۱ و مجذور اتا نیز به ترتیب ۰/۹۷۸، ۰/۹۶۸ و ۰/۹۶۸ به دست آمد که بیانگر اثر بزرگ مداخله است. همچنین، برای متغیر افزایش آرامش و خویشتنداری نیز تفاوت معنادار مشاهده شد ($p < 0.000$). این نتایج نشان می دهد که رویکرد درمانی هیجان مدار (EFT) با سطح اطمینان ۹۵ درصد، تأثیر معناداری بر بهبود شاخص های سلامت روان (افزایش آرامش و خویشتنداری، کاهش اضطراب، استرس و افسردگی) در والدین کودکان مبتلا به سرطان دارد.

نتیجه گیری: نتایج این پژوهش نشان داد که درمان هیجان مدار (EFT) به طور معناداری موجب بهبود آرامش و خویشتنداری و نیز کاهش اضطراب، استرس و افسردگی در والدین کودکان مبتلا به سرطان می شود. با توجه به اثربخشی بالا و پایداری نتایج در مرحله پیگیری، می توان این مداخله را به عنوان یک رویکرد کارآمد و مبتنی بر شواهد برای ارتقای سلامت روان خانواده های درگیر با بیماری های سخت توصیه کرد.

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Introduction

Cancer is the second leading cause of death among children aged 1–14 years in many countries [1, 2]. Diagnosing childhood cancer leads to dramatic changes in a child's life, including short- and long-term adverse effects ranging from minor discomfort to death in childhood and adolescence [3]. Cancer is a multifaceted disease that harms patients and their families, especially children. Treatment of childhood cancers has increased survival rates by 80%, although various forms of malignancy still cause premature death [4, 5].

Childhood cancer diagnosis imposes an enormous burden on parents and demands more emotional, technical, and nursing roles from them. Fear of the progress of the child's cancer, dysfunction and internal turmoil in the family, the financial burden incurred by the child's cancer, and marital crises are among the consequences of this disease [6, 7, 8]. Therefore, it is not surprising that parents of children with cancer are also at risk of psychological distress, following the diagnosis of their children's cancer [9].

Research findings indicate that parents of children with cancer experience greater emotional distress compared to those in the control group, while also facing insufficient emotional support [10]. Parental emotional distress not only worsens their quality of life, but also negatively affects their children's emotional regulation and quality of life, highlighting the importance of responding to parents' emotional demands [11]. Childhood cancers can stimulate family cohesion and provide a social support system between spouses [12], while at the same time, offering a source of family discomfort. Repeated hospitalization of a child with cancer places significant strain on parents, as it can change their expectations and perceptions of the support they should receive from their spouse during this challenging process [13].

A diagnosis of childhood cancer provokes various emotional reactions as the family faces new demands and stresses [14], requiring strategies for emotional regulation, including the ability to understand emotions and feelings, manage emotional experiences, and express emotions [15]. As distress among family members causes a negative response in the entire family [16], the nervous breakdown and loss of calmness and self-control of the family of children with cancer should also be taken into consideration. Nervous breakdown is a term used to describe any troubling emotions or feelings that affect a person's daily functioning [17].

Unmet psychological and emotional needs of parents require maximum attention, as each parent of a child with cancer adapts differently to various situations.

These parents experience existential, physical, psychological, and social struggles, facing an unstable situation after diagnosis and focusing their attention on protecting their child during treatment [18], necessitating inclusive and planned support and training to reduce coping constraints. One of the most effective ways to provide such support is Emotion-Focused Therapy (EFT), an experiential approach that views emotions as the foundation of experience, associated with both adaptive and maladaptive functions [19].

According to EFT, emotions arouse humans and have an inherently adaptive capacity that can help individuals change their unwanted emotional and expressive positions if activated [20]. Based on this approach, family members live in an emotional system with a critical contribution to the quality of interpersonal relationships, psychological traumatic symptoms, and their health. The emphasis is on adaptive attachment methods through care, support, and mutual attention to each individual and spouse's own needs [21]. As a result, negative emotions become more manageable, and mental adjustment improves through processes, such as increasing emotional awareness, making clear meaning of emotions, developing a sense of personal agency during change, and reorganizing rigid interaction patterns [22].

Many psychological disorders, such as depression, anxiety, and anorexia nervosa, are the result of individuals' unsuccessful attempts at emotional self-regulation. Therefore, maladaptive emotions should be identified, modified, and redirected in order to build a healthy and meaningful life. The Emotion-Focused Therapy is among the effective approaches in this regard, which emphasizes self-healing and inner balance, and contributes to emotional regulation by strengthening a positive self-concept [23]. From this perspective, understanding the effectiveness of EFT, compared to other therapeutic approaches, can have important implications for implementing psychotherapeutic interventions aimed at reducing trauma-related psychological harm. Accordingly, the present study aims to examine the effectiveness of EFT in promoting relaxation and self-control among parents of children suffering from cancer.

Materials and Methods

This study employed a quasi-experimental design with a pretest-posttest, control group, and a three-month follow-up. As Thyer (1993) notes, quasi-experimental designs are commonly used to evaluate the effectiveness of social programs, specific types of psychotherapy, or other psychosocial interventions—especially when full control over variables and

complete randomization are not feasible [24].

Although some aspects of randomized controlled trials (RCTs), such as the use of a control group and pretest-posttest measures, were included, some core RCT criteria—namely random sampling from the target population and blinding—were not met due to ethical and practical constraints. Specifically, because the target population (parents of children suffering from cancer) was limited, and it was ethically inappropriate to delay treatment for the control group, participants were selected using purposive sampling, and randomization was applied only to group assignments, not to the selection from the overall population. Therefore, due to the absence of critical RCT features such as full randomization, population-based sampling, and blinding of intervention or assessors, this study is classified as quasi-experimental research.

Participants and Sampling

The target population included couples in Ferdows city who had a child diagnosed with cancer. To determine the sample size, G*Power software (version 3.1) was used. Based on ANCOVA with a medium effect size ($f=0.25$), a significance level ($\alpha=0.05$), and statistical power (0.80), the required sample size was estimated to be 20 participants per group, resulting in a total of 40 individuals (20 couples). Participants were selected through purposive sampling and randomly assigned to the experimental and control groups.

Purposive sampling, a type of non-probability sampling, is often used when probability-based sampling is impractical, costly, or inefficient [25]. The inclusion criteria for the study were having a child

diagnosed with cancer and experiencing high levels of anxiety, as measured by the Beck Anxiety Inventory (BAI). During the screening phase, only parents who scored above 36 on the BAI were selected. According to Beck's classification, a score above 36 indicates severe anxiety, meaning that these parents were experiencing clinically significant psychological distress.

Each group was limited to 20 participants, considering the time-intensive nature of EFT sessions and ethical concerns regarding withholding treatment from the control group. The control group received no therapeutic intervention and was only assessed at the pretest, posttest, and follow-up stages. In experimental and quasi-experimental research, a minimum of 15 participants per group is generally recommended [26].

Participation was voluntary and based on informed consent. Participants were fully informed about the nature of the study and expectations, and signed written consent forms. All responses were collected anonymously, and confidentiality of data was maintained throughout the study.

Intervention

The Emotion-Focused Therapy intervention for the experimental group was administered according to the structured protocol developed by Sanagouy Moharrar et al. (2018). The intervention consisted of 12 weekly group sessions, each lasting 60–90 minutes, and included in-session exercises, homework, and group discussions.

Table 1 provides a detailed outline of the content of EFT sessions for the experimental group.

Table 1. The EFT protocol sessions

No.	Sessions	Content of sessions
1	First	Establishing a good relationship through advanced empathy and self-presence, jumping platform, understanding, discovery, tracking, validation, and mirror empathy.
2	Second	Unraveling the client's problem and observing his/her emotional processing style through listening to the current problem and identifying the painful and prominent emotional experiences
3	Third	Observing and discovering the client's emotional processing style and emotional coaching through the stages of identification, awareness, acceptance, tolerance, and emotion regulation
4	Fourth	Unfolding the client's main emotion through the experiential representation of their traumas related to identity attachment
5	Fifth	Discovering and identifying primary, secondary, or instrumental emotions through working on micro and task markers and using chair work techniques.
6	Sixth	Continuing to identify, represent, and regulate the main underlying compatible-incompatible or healthy-unhealthy emotions
7	Seventh	Identifying and working on interruptions or blockages in access to primary and secondary emotions and experiences
8	Eighth	Tracking and identifying subjects and images of objects from the current problem and relating them to images of oneself, father, mother or other possible objects.
9	Ninth	Continuing to identify and work on the charted markers and work with the remaining images through the use of expressive arts such as bodywork, music, movement, etc.
10	Tenth	Client coaching during object representation and achieving experiential insight
11	Eleventh	Evaluating how new meanings create new selves
12	Twelfth	Consolidating the new self and generalizing to future events

Validity and reliability of the research questionnaire

The researcher-made questionnaire involved five questions. The face validity of the questionnaire was assessed by experienced and expert social science professors, and the construct validity was examined through factor analysis. Cronbach's alpha coefficient for this questionnaire was >0.70 , indicating that the internal consistency of the items of these variables was at a desirable level. Content Validity Ratio (CVR) was used to confirm the content validity of the researcher's questionnaire, utilizing the opinions of eight experts. The objectives of the test were explained to the experts, who were also provided with operational definitions related to the content of the questions and asked to rate each of the questions on a three-point Likert scale, including "it is necessary", "it is useful but not necessary", and "it is not necessary". Based on Lawshe's Table, the expressions whose numerical value of CVR was >0.5 were considered significant ($P<0.05$) and kept to determine the minimum value of the content validity index.

Data Analysis

Data were analyzed using descriptive and inferential statistics with SPSS (version 22). To test the study hypotheses, both univariate analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) were applied.

Measurement Tools

Two primary self-report instruments were used to assess the variables:

1. Self-Control Questionnaire

Developed by Abdollahi (2014), this questionnaire consists of 5 items rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The items measure individuals' self-control in interpersonal and social contexts, emphasizing the motivational and cognitive aspects of compliant behavior. Examples include: "I comply to avoid feeling guilty" and "I obey to avoid being blamed by others." Higher total scores indicate greater levels of self-control.

- Content validity was confirmed by experts in the social sciences.
- Construct validity was verified via factor analysis, with satisfactory factor loadings.
- Reliability (Cronbach's alpha) was reported as 0.71, indicating acceptable internal consistency.

2. Maslach Stress Inventory (MSI)

Originally developed in 1989 to assess stress in cardiac patients, the MSI includes 40 items measuring physiological, cognitive, and behavioral symptoms of stress. Respondents rate the frequency of symptoms over the past month using a 4-point Likert scale:

"Never," "Sometimes," "Often," and "Almost daily," scored from 1 to 4. Total scores range from 40 to 160.

Interpretation of total scores:

- 40–80: Low stress
- 80–100: Moderate stress
- 100+: High stress

The MSI can be used individually or in groups. Content and face validity were confirmed by faculty members at Shahid Beheshti University, and certain items were clarified with parenthetical explanations. Reliability, based on Cronbach's alpha, was reported as 0.83 in a sample of 315 adolescent athletes, exceeding the acceptable threshold of 0.70.

Questionnaire Validity and Reliability

The custom-developed Self-Control Questionnaire included five items, such as:

- "I comply to avoid being scolded."
- "I comply to avoid guilt over unmet responsibilities."
- "I obey to promote others' well-being."
- "I obey to gain others' respect."
- "I obey to ensure the dignity and equality of others."
- Face validity was confirmed by experienced social science faculty.
- Construct validity was evaluated via factor analysis, with acceptable results.
- Internal consistency (Cronbach's alpha) was >0.70 .

For content validity, CVR was calculated using feedback from eight subject matter experts. Definitions and objectives were provided to the experts, who then rated each item on a 3-point scale: "Essential," "Useful but not essential," and "Not necessary."

According to Lawshe's Table, items with CVR >0.5 were considered valid ($P<0.05$) and retained.

Table 2 presents the CVR calculations.

Table 3 displays the Cronbach's alpha values, with 0.80 indicating good internal consistency and strong reliability of the questionnaire.

Table 2. CVR calculation

Questionnaire	Calculated CVR value
Calmness and self-control	0.541

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Reliability: Cronbach's alpha coefficient was used for this purpose, indicating the questionnaire's reliability if its Cronbach's alpha coefficient was $>70\%$.

Table 3. Cronbach's alpha coefficient

Questionnaire	Cronbach's alpha coefficient
Calmness and self-control	0.80

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Cronbach's alpha value of 0.80 highlights the appropriate and reliable correlation and internal consistency between the items related to the variables, confirming the questionnaire's reliability.

Results

As previously mentioned, the total number of participants in the study was 40, who were randomly assigned to two groups: the experimental ($n=20$) and the control ($n=20$). In examining demographic variables, the mean age of participants in the EFT group was 27.40 ($SD=4.28$), while the control group had a mean age of 26.50 ($SD=5.72$). Additionally, at the pre-test stage, no significant differences were observed in the mean scores of the study variables between the two groups, indicating initial homogeneity in their measured characteristics before the intervention.

As shown in Table 4, in the pre-test stage, the mean score of relaxation and self-control in the experimental group was 16.80 ($SD=2.016$), and in the control group

it was 17.00 ($SD=2.27$). This similarity in mean scores indicates that at the beginning of the study, no significant difference was observed between the two groups in terms of this variable. However, in the post-test stage, the mean score of the experimental group increased to 20.15 ($SD=2.498$), whereas the control group showed no noticeable change, remaining unchanged at 17.05 ($SD=2.32$). This substantial increase in the experimental group compared to the control group demonstrates the effect of the EFT intervention in improving relaxation and self-control among the experimental group. Overall, the statistical distribution of the scores supports the effectiveness of the intervention in enhancing the targeted variables in the experimental group.

Table 4. Means and Standard Deviations of Relaxation and Self-Control Scores in the Pre-Test and Post-Test Phases for the Experimental and Control Groups

Test Phase	Experimental Group – Mean	Experimental Group – SD	Control Group – Mean	Control Group – SD
Pre-test	16.80	2.016	17.00	2.27
Post-test	20.15	2.498	17.05	2.32

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To test the study hypotheses, ANCOVA was conducted after checking assumptions, such as normal distribution of data, homogeneity of variances, homogeneity of covariance matrices, and sphericity. The results of the Shapiro-Wilk test, skewness, and kurtosis indicated that the data distribution was normal. Additionally, Levene's test confirmed the homogeneity of error variances for the relaxation and self-control variables ($P=0.335$). Although the assumption of homogeneity of covariance matrices was not confirmed ($P=0.001$), given the equal sample sizes in both groups, this issue does not undermine the validity of the results. Bartlett's test also indicated an appropriate correlation between components ($P<0.01$), justifying the use of Multivariate Analysis of Covariance (MANCOVA) for comparing the two groups.

In this study, to examine the effects of the EFT approach on psychological variables—including relaxation and self-control, anxiety, stress, and depression—in couples with a child diagnosed with cancer, both one-way ANCOVA and MANCOVA were used. The analysis results are summarized in Tables 5 and 6.

The findings from ANCOVA (Table 5) indicated that the intervention had a significant effect on all dependent variables, with significance levels reported at $P<0.05$ in all cases. Specifically, for the component "increase in relaxation and self-control," the F -value was 138.839, and the effect size (Eta squared) was 0.950, indicating a very strong intervention effect on this aspect of mental health. The statistical power of 1.00 suggests that the sample size was adequate to detect this effect.

Table 5. Results of One-Way ANCOVA for the Study Hypotheses

Statistical Power	Eta Squared	Sig. Level	F Value	Mean Square	Sum of Squares	df	Source of Variation	Variable
1.00	0.950	0.000	138.839	0.344	22.33	18	Group Effect	Increase in relaxation/self-control
1.00	0.981	0.000	0.967	0.399	68.785	18	Group Effect	Decrease in anxiety
1.00	0.978	0.000	0.382	0.311	20.50	18	Group Effect	Decrease in stress
1.00	0.968	0.000	0.341	0.810	24.810	18	Group Effect	Decrease in depression

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For the "reduction in anxiety" component, the F -value was 0.967, and the effect size was 0.981, again indicating a strong effect. Similarly, for "reduction in stress," the F -value was 0.382 with an effect size of

0.978, reflecting the considerable effectiveness of the intervention in lowering participants' stress levels. Finally, for "reduction in depression," the F -value was 0.341, and the Eta squared was 0.968, further

emphasizing the intervention's powerful influence.

Overall, the high effect sizes and full statistical power in all components demonstrate the strong efficacy of the intervention in improving various dimensions of mental health.

To evaluate the overall impact of the intervention on the combined set of dependent variables, MANCOVA was conducted. According to the results presented in Table 6, Pillai's Trace statistic showed high values across all components: 0.950 for increased relaxation and self-control, 0.981 for decreased anxiety, 0.978 for

decreased stress, and 0.968 for decreased depression. In all cases, the significance level was $P < 0.05$, and statistical power was 1.00, confirming both the statistical significance and strength of the intervention's overall effect on the combined psychological variables. These results are consistent with the ANCOVA findings and demonstrate that the intervention effectively and comprehensively improved the psychological indicators of the participants.

Table 6. Results of Multivariate ANCOVA (MANCOVA) for the Study Hypotheses

Statistical Power	Sig. Level	Test Value	Test Statistic	Variables
1.00	0.000	0.950	Pillai's Trace	Increase in relaxation/self-control
1.00	0.000	0.981	Pillai's Trace	Decrease in anxiety
1.00	0.000	0.978	Pillai's Trace	Decrease in stress
1.00	0.000	0.968	Pillai's Trace	Decrease in depression

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Discussion

Based on the findings of the first hypothesis of the present study regarding the significant effectiveness of EFT in increasing relaxation and self-control among couples with children diagnosed with cancer, it can be stated that these results are consistent with a substantial body of previous research. For example, studies by Sanagouy Moharrar et al. (2020), Sadat Tabatabaei Hosseini et al. (2020), Ghasemi (2015), and Hisa et al. (2020), all reported significant reductions in anxiety and depression, as well as improvements in quality of life following EFT, which aligns with the increase in relaxation (as an indicator of mental health) observed in the present study. Additionally, the findings of Hedayati et al. (2020), which showed a decrease in aggression and improvement in couple interactions, support the positive impact of EFT on enhancing self-control within marital relationships. Theoretically, the effectiveness of EFT can be explained by Attachment Theory (Bowlby) and Emotion Regulation Theory (Gross). Emotion-Focused Therapy, by focusing on the identification, expression, and processing of primary emotions, helps individuals reconstruct maladaptive emotional responses and achieve more adaptive and balanced emotional states. According to Attachment Theory, emotional security and a healthy connection with significant others play a fundamental role in calming the emotional system; EFT strengthens couple relationships through this pathway, facilitating relaxation and emotional self-regulation. Moreover, based on Johnson's therapeutic model, EFT promotes empathy, trust, and the correction of negative interaction patterns, resulting in more effective emotion regulation and consequently increased self-control. In summary, the findings of the

present study are in line with previous empirical evidence and foundational theories in the fields of emotion and attachment, confirming that emotion-focused interventions can significantly improve psychological indicators in couples facing the psychological stress associated with having a child with cancer.

The second hypothesis of the present study, which proposes that EFT intervention has a significant effect on reducing anxiety in couples with a child diagnosed with cancer, aligns with the findings of numerous previous studies. For instance, research by Sanagouy Moharrar et al. (2020), Ghasemi (2015), Sadat Tabatabaei Hosseini et al. (2020), and Hisa et al. (2020), specifically reported reductions in anxiety symptoms following EFT intervention. In these studies, EFT, as an approach based on deep emotional processing, helped patients reduce their anxiety by experiencing and expressing hidden emotions. From a theoretical perspective, the impact of EFT on anxiety reduction can be explained through Emotion Regulation Theory (Gross, 1998) and Attachment Theory (Bowlby, 1969). Emotion-Focused Therapy focuses on processing primary emotions, identifying unmet emotional needs, and reconstructing emotional interactions in close relationships, which lead to the restoration of attachment security and the strengthening of emotional self-regulation. These processes ultimately reduce anxiety levels, often stemming from feelings of a loss of control or threats within close relationships. Moreover, since EFT provides an interactive and supportive framework, couples are able to better manage anxiety related to their child's illness within a safe environment. Overall, the findings of the present study regarding anxiety reduction, are consistent with existing research

literature and relevant theoretical frameworks, demonstrating that EFT can be effectively employed as an intervention to alleviate psychological anxiety in parents of children with cancer.

The third hypothesis of the present study, which proposes that EFT intervention has a significant effect on reducing stress among couples with a child diagnosed with cancer, is consistent with the results of previous research. Specifically, the study by Raeisipour et al. (2021) demonstrated that psychological distress, including stress, is negatively correlated with the quality of relationships in couples with a child suffering from cancer. Additionally, findings from studies by Ghasemi (2015), Sadat Tabatabaei Hosseini et al. (2020), and Hisa et al. (2020) indicate that EFT can help improve psychological adaptation in health crises (e.g., cancer) by reducing chronic negative emotions, including stress. From a theoretical perspective, the EFT approach, with its emphasis on creating a "secure emotional bond" and processing suppressed or distorted emotions, facilitates the reconstruction of supportive relationships. Attachment Theory (Bowlby, 1969) asserts that secure relationships are a primary source of stress reduction in threatening situations. Similarly, Emotion Regulation Theory (Gross, 1998) highlights the role of effective emotional processing in alleviating psychological pressure. In EFT, couples learn to recognize, express, and respond to their emotions in interactions that help reduce emotional stress. Therefore, the results of the present study regarding a significant reduction in stress in the experimental group align well with both theoretical and empirical foundations, demonstrating that EFT can be an effective tool for supporting couples experiencing psychological pressure due to their child's illness.

The fourth hypothesis of the study, which states that the EFT intervention has a significant effect on reducing depression in couples with a child diagnosed with cancer, is fully consistent with previous research evidence. Studies by Ghasemi (2015), Sadat Tabatabaei Hosseini et al. (2020), Sanagouy Moharrar et al. (2020), and Adler et al. (2019) have all demonstrated that EFT effectively reduces depressive symptoms in individuals suffering from chronic illnesses or couples facing critical situations, such as a child's illness. Theoretically, EFT is based on Attachment Theory, which views depression as a consequence of disrupted secure emotional bonds. In this approach, by helping individuals identify, process, and express primary emotions (such as grief, helplessness, or the need for support), the groundwork for repairing emotional connections is laid; thereby,

reducing feelings of loneliness and helplessness that contribute to depression. Additionally, according to Emotion Regulation Theory, EFT promotes adaptive emotional processing, leading to reconstruction of self-concept and reduction of negative thinking, both of which play a key role in treating depression. Therefore, the present study's finding of a significant reduction in depression in the experimental group, aligns with scientific evidence and foundational theories, and confirms the effectiveness of EFT in improving the mental health of couples facing the severe crisis of having a child with cancer.

Conclusion

In summary, the findings of this research underscore the significant role of EFT in enhancing both calmness and self-control among couples dealing with the challenges of having a child diagnosed with cancer. By equipping parents with essential emotional regulation skills, such therapies not only provide immediate emotional relief but also contribute to the development of more resilient coping mechanisms. The substantial effect size and statistical validation of the results highlight the practical relevance of these interventions in real-world settings. As families navigate the complexities of serious health issues, the need for ongoing support and tailored therapeutic practices becomes increasingly evident, paving the way for future research to explore further and refine these approaches in diverse populations facing similar adversities.

Ethical Considerations

Compliance with ethical guidelines

The research was conducted in accordance with the Code of Ethics (IR.PNU.REC.1402.407) issued by Payame Noor University, Tehran, Iran.

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Authors' contributions

Z. Ashofte conducted the study and collected the data. K. Arab Sheibani supervised the study as the corresponding author. Both authors contributed to writing and reviewing the manuscript and approved the final version.

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Conflicts of interest

The authors declare no conflict of interest.

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