Iranian Evolutionary Educational Psychology Journal
IEEPJ
University of Hormozgan
Online ISSN: 2588 - 4395
Homepage: https://ieepj.hormozgan.ac.ir

# The Effectiveness of Choice Theory–Based Therapy on Love Trauma Syndrome and Negative Automatic Thoughts in Women Experiencing Emotional Divorce

**Parnian Mohammadi Moghaddam[1], Hamid Sabbaghian Baghdadabad[2], Elham Gheysari[3], Farzaneh Azimi Manavian[4], Roxana Tarighi[5]**

1. M.A. in Counseling, Family Counseling Orientation, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran, parnianm@iau.ac.ir

2. Instructor, Department of Educational Sciences, Payame Noor University, Tehran, Iran

3. M.A. in Educational Psychology, Islamic Azad University, Central Tehran Branch, Tehran, Iran

4. M.A. in Counseling, Islamic Azad University, Quchan Branch, Quchan, Iran

5. Ph.D. in Educational Psychology, Farhangian University, Resalat Campus, Sistan and Baluchestan, Iran

## Article Info

**Article type:**
Research Article

**Article history:**
Received 18 Aug. 2025
Received in revised form 19 Oct. 2025
Accepted 25 Dec. 2025
Published online 01 Mar. 2026

**Keywords**:
Emotional divorce,
Love trauma syndrome,
Negative automatic thoughts,
Choice Theory–Based Therapy

## ABSTRACT

**Objective:** The present study aimed to determine the effectiveness of Choice Theory–Based Therapy on love trauma syndrome and negative automatic thoughts among women experiencing emotional divorce who were referred to family counseling centers in Ahvaz.

**Methods**: The research employed a quasi-experimental design with a pretest–posttest control group. The statistical population included all women experiencing emotional divorce who attended family counseling centers in Ahvaz in 2025. A total of 30 participants were selected through purposive sampling and were randomly assigned to either an experimental group ($n$ = 15) and a control group ($n$ = 15). Data were collected using the Emotional Divorce Questionnaire (Razaghi et al., 2008), the Love Trauma Syndrome Scale (Ross (1999), and the Negative Automatic Thoughts Scale (Hollon & Kendall (1980). The experimental group received Choice Theory–Based Therapy in eight 90-minute sessions, whereas the control group received no intervention. Data were analyzed using multivariate analysis of covariance (MANCOVA) and univariate ANCOVA in SPSS version 27.

**Results**: The findings indicated that Choice Theory–Based Therapy significantly improved love trauma syndrome and negative automatic thoughts among women experiencing motional divorce ($p<.01$).

**Conclusions**: Accordingly, it is recommended that this therapeutic approach be considered and applied in family counseling centers for women affected by emotional divorce.

**Cite this article:** Mohammadi Moghaddam, P., Sabbaghian Baghdadabad, H., Gheysari, E., Azimi Manavian, F. & Tarighi, R. (2026). The Effectiveness of choice theory–based therapy on love trauma syndrome and negative automatic thoughts in women experiencing emotional divorce. *Iranian Evolutionary Educational Psychology Journal*, 8 (1), 1-17.

DOI: https//doi.org/ 10.22034/8.1.1

© The Author(s).

Publisher: University of Hormozgan.

DOI: https// doi.org/ 10.22034/8.1.1

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

## Introduction

The family is the most important social institution in human societies, within which the formation and development of individuals' personalities take place. For a family to properly fulfill its primary functions, security and tranquility must prevail within it. When individuals are aware of their rights and duties in social relationships, they strive to preserve their own rights while also respecting the rights of others and fulfilling the responsibilities that society places upon them. In this way, society becomes more responsible, and each individual performs their duties in every place and position (Mahdavi & Mirzapour, 2020).

The phenomenon of marriage satisfies many of the individual and social needs of men and women through psychological, social, and physical relationships, as well as through other customary and social norms (Bezzina & Camilleri, 2022). In other words, when the family environment includes a healthy and constructive atmosphere, warm relationships, interpersonal interaction, and intimacy, it can foster the growth and development of family members. Conversely, many marital problems originate from the type of thoughts spouses have about each other and their relationship (Amirian, 2018). Within the family system, individuals are connected through strong, enduring, and mutual emotional attachments. Although the intensity of these attachments may decrease over time, they generally persist throughout life. Marriage is usually the primary and most significant context in which intimacy and developed social relationships are manifested. The goal of marriage is to meet the needs of both partners. If the needs of spouses are not fulfilled and they fail to reach constructive solutions for meeting those needs, stress, frustration, disappointment, anger, and ultimately psychological problems may arise. In such circumstances, emotional divorce may occur between spouses (Metz, Schrott, & Bright White, 2017).

Waller (1983) was the first researcher to propose that divorce may have its roots in marital frustration. Marital frustration and emotional separation refer to the gradual reduction of emotional attachment to one's spouse, accompanied by feelings of alienation, disinterest, and indifference between partners, as well as the replacement of negative emotions in place of positive ones (Kanters, Proulx, & Monk, 2019). In a frustrated marriage, one or both partners experience a sense of disconnection from the spouse and a decline in mutual interests and interactions, along with considerable concern about the progressive deterioration of the relationship and movement toward

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

separation and divorce (Brasilo, 2016). The findings of Harris (2018) indicated that after divorce, women who seek divorce, compared with men, face additional changes and challenges in their lives. These consequences may sometimes appear immediately after divorce and sometimes affect an individual's life after a longer period of time.

Many factors influence emotional divorce, one of which is love trauma syndrome. Often, love appears in ways that are least expected. In such situations, what actually happens is that a person encounters someone who matches the image of an ideal beloved that exists in their mind—an image everyone holds in their imagined ideals. In fact, when mutual agreement or compatibility is perceived, love begins. However, sometimes this compatibility breaks down and separation occurs (Ghodrati & Taklavi, 2019). Separation from a loved one can be a major emotional shock for any individual and may become one of the saddest events and most bitter periods in a person's life; nevertheless, it must be accepted that instability is part of the nature of romantic passion (Yalom, 2016). One of the most common and profound experiences of loss and grief is the distress caused by the collapse of romantic relationships, particularly love relationships (Mahlberg, 2021).

Love trauma in women can also be associated with negative automatic thoughts. Cognitive theories consider negative automatic thoughts and a negative view of the self, the world, and the future as causes of depression as well as its persistence and recurrence. Negative automatic thoughts refer to pessimistic and illogical interpretations about oneself that arise involuntarily and outside the individual's conscious control (Burger et al., 2019). Negative automatic thoughts are transient phenomena; their duration lasts only as long as the individual remains aware of them. These automatic thoughts are remnants of other cognitive processes (Webb et al., 2022).

In this regard, the increasing rate of emotional divorce and marital dissatisfaction on the one hand, and the growing demand of couples for enrichment and improvement of marital relationships on the other hand, indicate the need for specialized interventions and training in this field (Dehghani & Niknejadi, 2022). Accordingly, various approaches have been proposed to treat family problems and to assist women experiencing emotional divorce. One therapeutic approach that plays an important role in this regard is Choice Theory–based therapy (Dvorak et al., 2022). Glasser's Choice Theory is considered one of the common therapeutic interventions in the field of cognitive psychology for explaining human behavior, determining behavioral principles, and explaining how

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

individuals can achieve satisfaction, happiness, and success (Gardner, 2015). This therapeutic method emphasizes confronting reality, accepting responsibility, recognizing basic needs, making moral judgments about the correctness or incorrectness of behavior, focusing on the here and now, internal control, and ultimately achieving a successful identity that is directly related to self-esteem (Holland & Walker, 2018). In general, Choice Theory includes a set of techniques, methods, and tools used to help individuals move from ineffective behaviors to effective ones, from destructive choices to constructive ones, and most importantly from an unhappy lifestyle to a satisfying lifestyle. According to Glasser, individuals—whether healthy or ill—choose their behaviors based on their decisions (Langstad, 2022).

Based on the issues discussed above and considering the psychological problems experienced by women undergoing emotional divorce, the present study aims to examine whether Choice Theory–based therapy is effective in reducing love trauma syndrome and negative automatic thoughts among women experiencing emotional divorce who have referred to family counseling centers in the city of Ahvaz.

## Material and Methods

The present study was applied in nature and employed a quasi-experimental design using a pretest–posttest format with a control group. The independent variable was Choice Theory–based therapy (intervention), while the dependent variables were love trauma syndrome and negative automatic thoughts. The study included one experimental group that received the intervention and one control group that did not receive any intervention during the research period. The statistical population consisted of women experiencing emotional divorce who referred to family counseling centers in Ahvaz in 2024. Using purposive sampling, two family counseling centers were selected. Participants were recruited according to inclusion and exclusion criteria.

The inclusion criteria were: obtaining scores higher than the mean on the Love Trauma Syndrome questionnaire and the Negative Automatic Thoughts questionnaire, providing written informed consent to participate in the study, and not participating in other concurrent training programs or psychological treatments.

The exclusion criteria included: absence from more than one intervention session, submitting incomplete questionnaires, separation from the spouse during the research period, or unwillingness

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

to continue participation in the therapy sessions. A total of 30 participants were selected as the sample and randomly assigned to two groups: an experimental group (n = 15) and a control group (n = 15).

**Measures**

**Emotional Divorce Questionnaire:** The Emotional Divorce Questionnaire was developed by Razaghi et al. (2008). This scale contains 22 items rated on a five-point Likert scale (always = 4, most of the time = 3, sometimes = 2, rarely = 1, never = 0). The total score ranges from 0 to 88, and individuals scoring above 40 are considered to experience higher levels of emotional divorce. Rashid and Moradi (2017) examined the validity of the scale using content validity and factor validity. For content validity, the questionnaire was reviewed by several faculty members from the psychology and sociology departments of Bu-Ali Sina University. Their evaluations confirmed that the items appropriately measured emotional divorce. Factor analysis results also indicated that the scale measures three key factors: tendency toward separation, feelings of loneliness, and aversion. The reliability coefficient using Cronbach's alpha was reported as 0.98, and the split-half reliability was 0.97, indicating very high reliability. In the present study, Cronbach's alpha for this instrument was 0.83.

**Love Trauma Syndrome Questionnaire:** The Love Trauma Syndrome Questionnaire was developed by Ross (1999) to measure the severity of love trauma. It consists of 10 four-point items, and respondents select the option that best reflects their experience of romantic breakup trauma. This questionnaire provides an overall assessment of physical, emotional, cognitive, and behavioral distress. The minimum possible score is 0 and the maximum score is 30. Items 1 and 2 are reverse-scored (Tavasoli, 2013). Ross (1999) identified a score of 20 as the cut-off point. Scores between 10 and 19 indicate the presence of love trauma symptoms at a tolerable level, while scores between 0 and 9 indicate that the symptoms are manageable. In the study by Amanollahi et al. (2016), the reliability coefficient using Cronbach's alpha was reported as 0.78. Akbari et al. (2021) reported a reliability coefficient of 0.75. In the present study, Cronbach's alpha was calculated as 0.81.

**Negative Automatic Thoughts Questionnaire:** The Negative Automatic Thoughts Questionnaire was developed by Hollon and Kendall (1980). It consists of 30 items designed to assess the

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

frequency of negative automatic self-statements. The questionnaire is rated on a Likert scale ranging from never (1) to always (5). This instrument has excellent internal consistency, with a Cronbach's alpha coefficient of 0.97 (Fischer & Corcoran, 1994). The Persian version of the questionnaire has an internal consistency coefficient of $\alpha = 0.91$, with a mean of 46.28 and a standard deviation of 11.67 (Kimiaei, 2001). In the present study, the reliability of the instrument using Cronbach's alpha was 0.84.

**Intervention: Choice Theory–Based Therapy**

In this study, Choice Theory therapy sessions were conducted based on Glasser's Practical Guide to Choice Theory (2012), translated by Sahebi (2014). The intervention was delivered to the experimental group in eight sessions, each lasting 90 minutes (table 1).

**Table 1.** Summary of Choice Theory Therapy Sessions

| Session | Goal | Content and Techniques | Homework |
|---|---|---|---|
| 1 | Introducing participants to Choice Theory and explaining the objectives of the sessions | Establishing emotional engagement with group members, explaining group counseling rules, discussing self-evaluation, interpersonal needs, and expectations from others, motivating members to actively participate, and establishing a therapeutic contract | Participants wrote their personal strengths and weaknesses and described behavioral changes they would like to achieve |
| 2 | Familiarizing participants with identity and types of identity | Discussing characteristics of successful identity versus failure identity, reviewing previous homework, exploring excuses for irresponsible behaviors, providing information on improving quality of life, encouraging discussion about current behaviors, emphasizing focus on present behavior rather than past events unless they affect current functioning, and addressing negative thoughts | Participants focused on admirable aspects and positive points in their relationships with others |
| 3 | Increasing awareness and responsibility for personal behavior | Discussing the importance of responsibility in life, reviewing homework, exploring life direction, evaluating whether current behaviors and thoughts are desirable, increasing awareness, emphasizing commitment in life, and enhancing personal differentiation for better adjustment | Participants recorded their weekly activities and described their behavior toward others, including how they respond when their requests are rejected |
| 4 | Understanding internal resistance from the perspective of Choice Theory | Teaching relaxation skills for emotional regulation, reviewing homework, listening carefully to participants' feelings, encouraging behavioral and cognitive changes rather than focusing solely on emotions, discussing irrational thoughts and cognitive distortions such as mind reading and overgeneralization, and learning strategies for replacing negative thoughts with positive ones | Practicing communication skills, including both speaking and listening skills, and recording these exercises for later review |
| 5 | Introducing basic needs and their role in real life | Discussing the influence of basic needs on life and the ability to choose effective ways to satisfy them, reviewing homework, evaluating commitment to implementing personal plans, discussing psychological resilience and strategies for returning to adaptive functioning | Participants described the most challenging situation they had experienced and how their internal resistance manifested |
| 6 | Learning problem-solving planning and life planning in the present | Evaluating behaviors, challenging irrational thoughts through questioning, reviewing the impact of previous sessions, helping participants evaluate their behaviors, discussing hope and its dimensions, and practicing interpersonal relationship techniques | Self-evaluation and practice of learned skills |

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

| | | | |
|---|---|---|---|
| 7 | Developing commitment to implementing personal plans | Discussing personal responsibility and avoidance behaviors, examining the consequences of avoidance, and exploring strategies to increase commitment and responsibility toward personal values and basic needs | Participants prioritized avoidance factors affecting their ability to address personal challenges based on their basic needs |
| 8 | Eliminating excuses and reinforcing commitment to behavioral plans | Reviewing homework, summarizing previous sessions, addressing barriers to skill implementation, emphasizing the application of learned skills in stressful and emotional situations, and improving emotional control based on personal needs | Participants completed evaluation forms and posttest questionnaires; appreciation was expressed for their participation and cooperation |

### Ethical Considerations

Ethical principles were observed throughout the study. Participants were informed about the objectives of the research and provided written informed consent before participation. They were assured that participation was voluntary and that they could withdraw from the study at any stage without any consequences. Confidentiality and anonymity of participants' information were maintained, and the collected data were used solely for research purposes. Additionally, after completion of the study, the training content was made available to the control group to ensure fairness and ethical responsibility.

### Data Analysis

Data were analyzed using descriptive and inferential statistical methods. Before conducting the analysis of covariance, assumptions such as linearity, absence of multicollinearity, homogeneity of variances, homogeneity of covariance matrices, homogeneity of regression slopes, and normality of distribution were tested using the Kolmogorov–Smirnov test. Hypotheses were tested using univariate analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA). Statistical analyses were performed using SPSS software version 27, and the significance level was set at $p < 0.05$.

## Results

Table 2 presents the descriptive statistics of the study variables, including the mean and standard deviation of Love Trauma Syndrome and Negative Automatic Thoughts in the Choice Theory–based intervention group and the control group at the pretest and posttest stages.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

**Table 2.** Descriptive statistics of Love Trauma Syndrome and Negative Automatic Thoughts in the experimental and control groups at pretest and posttest

| Variable | Stage | Group | Mean | Std. Deviation | Minimum | Maximum | N |
|---|---|---|---|---|---|---|---|
| Love Trauma Syndrome | Pretest | Experimental | 22.14 | 3.09 | 2.02 | 24.58 | 15 |
| | | Control | 23.60 | 4.25 | 2.45 | 26.36 | 15 |
| | Posttest | Experimental | 14.55 | 2.71 | 1.33 | 16.45 | 15 |
| | | Control | 22.32 | 3.50 | 2.52 | 25.22 | 15 |
| Negative Automatic Thoughts | Pretest | Experimental | 103.69 | 36.33 | 34.56 | 106.38 | 15 |
| | | Control | 106.11 | 37.64 | 32.23 | 115.36 | 15 |
| | Posttest | Experimental | 83.82 | 21.19 | 19.25 | 95.87 | 15 |
| | | Control | 104.43 | 31.22 | 29.33 | 108.47 | 15 |

As shown in Table 2, the mean and standard deviation of the scores for Love Trauma Syndrome and Negative Automatic Thoughts are reported for both the experimental and control groups.

**Testing the Normality of Distribution**

Before selecting statistical tests and applying parametric tests, certain assumptions must be examined. Any statistical test that assumes normal distribution of the data requires verification of this assumption. In addition, the randomness of the data was also examined. In this study, the following methods were used to assess the normality of the data distribution:

• Kolmogorov–Smirnov test

• Examination of skewness and kurtosis values

The Kolmogorov–Smirnov test was conducted at a significance level of 0.05. If the significance value is greater than or equal to 0.05, the data distribution is considered normal. The statistical hypotheses are defined as follows:

H0: $Z \geq 0.05$ — The data follow a normal distribution.

H1: $Z < 0.05$ — The data do not follow a normal distribution.

Skewness is a measure of the symmetry or asymmetry of a distribution, whereas kurtosis reflects the peak of the distribution. In general, if skewness and kurtosis values fall within the range of −2 to +2, the data can be considered normally distributed.

The results of the Kolmogorov–Smirnov test for the assumption of normal distribution of scores, as well as the results of the regression slope homogeneity assumption test for the research variables, are presented in Table 3.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

**Table 3.** Results of the Kolmogorov–Smirnov test for normal distribution of research variables

| Variable | Group | Skewness | Kurtosis | K–S Statistic | Sig. | Group | Skewness | Kurtosis | K–S Statistic | Sig. |
|---|---|---|---|---|---|---|---|---|---|---|
| Love Trauma Syndrome | Experimental | -0.742 | 0.028 | 0.741 | 0.770 | Control | -0.764 | 0.026 | 0.725 | 0.746 |
| Negative Automatic Thoughts | Experimental | -0.761 | 0.031 | 0.725 | 0.792 | Control | -0.722 | 0.024 | 0.720 | 0.765 |

Table 3 shows the results of the Kolmogorov–Smirnov test assessing the normality of the distribution of participants' scores. As observed, the null hypothesis for normal distribution is confirmed for both groups. Therefore, the assumption of normal distribution of scores in both the experimental and control groups is satisfied.

**Examination of the Assumptions of Analysis of Covariance (ANCOVA)**

In this section, before analyzing the data related to the research hypotheses, the assumptions of analysis of covariance were examined to ensure that the data met these requirements. Six assumptions were evaluated: linearity, absence of multicollinearity, homogeneity of variances, homogeneity of covariances, homogeneity of regression slopes, and normality of the distribution of variables.

**1. Linearity**

The most fundamental assumption for analysis of covariance is the linear relationship between the dependent variable and the covariate. In this study, the pretest scores of Love Trauma Syndrome and Negative Automatic Thoughts were considered covariates, and their posttest scores were treated as dependent variables.

**Table 4.** Linearity assumption between pretest and posttest scores of the study variables

| Variable | SS | DF | MS | F | P |
|---|---|---|---|---|---|
| Love Trauma Syndrome | 114.006 | 1 | 114.006 | 6.128 | 0.027 |
| Negative Automatic Thoughts | 143.872 | 1 | 143.872 | 2.325 | 0.008 |

The results presented in Table 4 indicate that the relationships between pretest and posttest scores of Love Trauma Syndrome and Negative Automatic Thoughts are statistically significant ($p < 0.05$). Therefore, the assumption of linearity is satisfied.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

**2. Multicollinearity**

In this study, the pretest scores of Love Trauma Syndrome and Negative Automatic Thoughts were treated as covariates. The correlation coefficient between these variables was r = 0.54. Since the correlation coefficient between variables was less than 0.90, it can be concluded that the assumption of no multicollinearity among the covariates was met.

**3. Homogeneity of Variances**

Another assumption of ANCOVA is the equality of variances across groups. Before data analysis, Levene's test for equality of variances was used to examine this assumption. Table 5 presents the results for the dependent variables in the experimental and control groups.

**Table 5.** Levene's test for homogeneity of variances in the pretest stage

| Variable | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Love Trauma Syndrome | 0.058 | 1 | 28 | 0.811 |
| Negative Automatic Thoughts | 1.725 | 1 | 28 | 0.321 |

The results in Table 5 indicate homogeneity of variances. Since the Levene's test results are not statistically significant ($p > 0.05$), the assumption of equal variances is satisfied, allowing the use of analysis of covariance.

**4. Homogeneity of Covariances**

Another assumption of ANCOVA is the homogeneity of covariance matrices. To examine this assumption, Box's M test was used. The results are presented in Table 6.

**Table 6.** Box's test for homogeneity of covariance matrices

| Box's M | F | df1 | df2 | P |
|---|---|---|---|---|
| 6.206 | 1.895 | 3 | 141120.00 | 0.267 |

The results of Table 6 indicate that the test is not statistically significant ($p = 0.267$), suggesting that the assumption of homogeneity of covariance matrices is satisfied.

**5. Homogeneity of Regression Slopes**

Another important assumption of ANCOVA is that regression slopes should be equal across groups. This means that the relationship between the covariates (pretest scores) and dependent variables (posttest scores) should be similar across the experimental and control groups.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

**Table 7.** Levene's test for equality of variances of research variables

| Variable | F | df1 | df2 | Sig. |
|---|---|---|---|---|
| Love Trauma Syndrome | 0.005 | 1 | 8 | 0.874 |
| Negative Automatic Thoughts | 1.662 | 1 | 8 | 0.762 |

As shown in Table 7, the results of Levene's test for Love Trauma Syndrome and Negative Automatic Thoughts are not statistically significant. Therefore, the variances of the experimental and control groups are equal for both variables. Consequently, the assumption of homogeneity of variances is confirmed, and the equality of variances between the two groups is supported for all study variables.

## Results Related to the Research Hypotheses

In this section, the research hypotheses were tested. Multivariate analysis of covariance (MANCOVA) and univariate analysis of covariance (ANCOVA) were used to examine the hypotheses.

### Main Hypothesis

Choice Theory–based therapy is effective on Love Trauma Syndrome and Negative Automatic Thoughts among women experiencing emotional divorce who refer to family counseling centers in Ahvaz.

**Table 8.** Results of MANCOVA on posttest mean scores controlling for pretest

| Test | Value | Hypothesis df | Error df | F | p | Effect Size | Statistical Power |
|---|---|---|---|---|---|---|---|
| Pillai's Trace | 0.999 | 3 | 9 | 3662.429 | 0.001 | 0.999 | 1.00 |
| Wilks' Lambda | 0.001 | 3 | 9 | 3662.429 | 0.001 | 0.999 | 1.00 |
| Hotelling's Trace | 1425.538 | 3 | 9 | 3662.429 | 0.001 | 0.999 | 1.00 |
| Roy's Largest Root | 1425.538 | 3 | 9 | 3662.429 | 0.001 | 0.999 | 1.00 |

After confirming the assumptions of MANCOVA, this test was used to examine the research hypotheses. The results comparing the pretest and posttest scores of the experimental and control groups are presented in Table 8. As shown, all F values are statistically significant, indicating that the research hypotheses are supported.

In other words, after controlling for pretest scores, the posttest scores of the research variables in the experimental group were significantly different from those of the control group. Therefore, it

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

can be concluded that Choice Theory–based therapy significantly affected the research variables in the posttest stage for participants in the experimental group compared with the control group. Given the significant results in the MANCOVA test ($F = 3662.429$, $p < 0.001$), further analyses were conducted to determine which variables contributed to the differences between the two groups. The effect size was 0.99 and the statistical power was 1.00, indicating a very strong effect and a negligible probability of Type II error.

**First Sub-Hypothesis**

Choice Theory–based therapy is effective on Love Trauma Syndrome among women referring to family counseling centers.

**Table 9.** Results of one-way ANCOVA within the MANCOVA framework for posttest mean scores of Love Trauma Syndrome controlling for pretest

| Variable | SS | DF | MS | F | P |
|---|---|---|---|---|---|
| Love Trauma Syndrome | 120.387 | 2 | 60.193 | 69.73 | 0.001 |

As shown in Table 9, after controlling for the pretest scores, there is a significant difference between the experimental and control groups in terms of Love Trauma Syndrome ($F = 69.73$, $p < 0.001$). In other words, Choice Theory–based therapy significantly affected Love Trauma Syndrome scores in the experimental group compared with the control group. The effect size was 0.99, indicating that approximately 99% of the variance in Love Trauma Syndrome can be attributed to the Choice Theory–based intervention. Therefore, the first sub-hypothesis is supported.

**Second Sub-Hypothesis**

Choice Theory–based therapy is effective on Negative Automatic Thoughts among women referring to family counseling centers.

**Table 10.** Results of one-way ANCOVA within the MANCOVA framework for posttest mean scores of Negative Automatic Thoughts controlling for pretest

| Variable | SS | DF | MS | F | P |
|---|---|---|---|---|---|
| Negative Automatic Thoughts | 64.516 | 2 | 32.258 | 51.36 | 0.001 |

As shown in Table 10, after controlling for pretest scores, there is a significant difference between the experimental and control groups in terms of Negative Automatic Thoughts ($F = 51.36$, $p < 0.001$). In other words, Choice Theory–based therapy significantly reduced Negative Automatic

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

Thoughts in the experimental group compared with the control group. The effect size was 0.99, indicating that 99% of the variance in Negative Automatic Thoughts can be attributed to the effect of Choice Theory–based therapy. Therefore, the second sub-hypothesis is also confirmed.

## Discussion

The results indicated that choice theory–based therapy had a significant effect on love trauma symptoms in women experiencing emotional divorce. As shown in Table (10), the F value obtained from the univariate analysis of covariance for the variable of love trauma symptoms was 69.73, which was significant at the level of $p < 0.01$. Therefore, the first hypothesis of the study was confirmed. This finding suggests that choice theory–based therapy in the post-test stage led to an improvement in love trauma symptoms in the experimental group compared with the control group. This finding is consistent with the results of studies conducted by Arianakia et al. (2023), Akbari et al. (2021), Rezvani Abdiabad et al. (2021), Tavassoli et al. (2018), and Zamora-Bonilla (2023).

In explaining this finding, it can be stated that love trauma refers to deep feelings of emotional injury, disappointment, and distress resulting from unmet emotional needs in intimate relationships. In couples experiencing emotional divorce, this trauma may involve intense feelings of neglect, rejection, and dissatisfaction, which can lead to negative emotions and disturbances in mental health. Choice theory, developed by William Glasser, emphasizes the role of individual choices in shaping behavior and emotions. According to this approach, human behaviors are the result of personal choices, and the main goal of therapy is to help individuals select healthier and more effective behaviors. Within this framework, therapy focuses on examining basic human needs such as love and belonging, power, freedom, and fun, and helps individuals improve their quality of life through more constructive choices. By enhancing individuals' ability to identify and meet their emotional needs as well as those of their partners, choice theory–based therapy can help improve their psychological and emotional well-being. This approach also emphasizes learning more effective behavioral choices in emotional interactions, improving communication between partners, and strengthening personal responsibility in relationships, which together can reduce love trauma and enhance the quality of emotional relationships.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

Also, the findings also showed that choice theory–based therapy had a significant effect on negative automatic thoughts in women experiencing emotional divorce. As shown in Table (11), the F value obtained from the univariate analysis of covariance for the variable of negative automatic thoughts was 51.36, which was significant at the level of $p < 0.01$. Therefore, the second hypothesis of the study was also confirmed. This result indicates that choice theory–based therapy improved negative automatic thoughts in the experimental group compared with the control group in the post-test stage. This finding is consistent with the results of studies conducted by Nematinia et al. (2022), Shojae Razavi et al. (2021), Naderi (2018), Kilik and Ertuk (2023), Gross (2021), Wyn et al. (2020), Liener et al. (2020), and Halik et al. (2020).

Negative automatic thoughts refer to a set of recurring negative beliefs and thoughts that spontaneously arise in an individual's mind and can negatively affect psychological and emotional well-being. Among couples experiencing emotional divorce, these thoughts may include self-criticism, feelings of failure, and negative beliefs about oneself and the relationship. Choice theory, as a therapeutic approach, emphasizes the role of personal choices in shaping behaviors and emotions and helps individuals identify their basic needs and select more constructive ways to satisfy them. Through this process, individuals can better understand how negative automatic thoughts may stem from unmet emotional needs and learn to modify these thoughts through more constructive cognitive and behavioral choices. Furthermore, strengthening communication skills, promoting positive interactions, and enhancing personal responsibility in emotional and cognitive choices can help individuals change maladaptive thought patterns, reduce negative automatic thoughts, and improve their psychological well-being.

**Suggestions and Limitations**

Based on the findings of the present study, several suggestions can be proposed. Future research is recommended to examine the effectiveness of choice theory–based therapy among men experiencing emotional divorce and to compare the results with the findings of the present study. In addition, preparing and distributing educational brochures to familiarize couples experiencing emotional divorce and therapists with the principles and applications of choice theory–based therapy may facilitate the wider use of this approach. Furthermore, providing specialized training programs and practical workshops for therapists on effective methods and techniques derived from choice theory for reducing love trauma and negative automatic thoughts could improve therapeutic

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

outcomes. Considering the results of this study, therapists and couple-therapy specialists may employ choice theory–based therapy as an effective intervention for improving love trauma symptoms and reducing negative automatic thoughts among couples experiencing emotional divorce.

Despite these contributions, the present study also had several limitations that should be considered when interpreting the findings. One limitation was that the study population consisted only of women experiencing emotional divorce, which limits the generalizability of the results to men or other populations. Additionally, the use of self-report instruments may have been influenced by response bias. Conducting the study within a specific geographical area and with a relatively limited sample size may also restrict the generalizability of the results. Therefore, future studies are recommended to include larger samples, different regions, and multiple assessment methods to enhance the validity and generalizability of the findings.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

### Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

### Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University.

### Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

### Funding

The authors did (not) receive support from any organization for the submitted work.

### Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## References

Amiri, Z., & Saheb, K. (2019). *Emotional divorce: Examining causes, consequences, and strategies*. Chehel Miqat Publishing.

Amirian, F. (2018). *Emotional divorce*. Farhang-e Ameh Publishing.

Burger, A. M., Van der Does, W., Thayer, J. F., Brosschot, J. F., & Verkuil, B. (2019). Transcutaneous vagus nerve stimulation reduces spontaneous but not induced negative thought intrusions in high worriers. *Biological Psychology*, *142*, 80-89.

Kanter, J. B., Proulx, C. M., & Monk, J. K. (2019). Accounting for divorce in marital research: An application to growth mixture modeling. *Journal of Marriage and Family*, *81*(2), 520-530.

Lee, J. (2004). The power of negative thinking. *Canadian Journal of Emergency Medicine*, *6*(5), 359-361.

Lyngstad, M. (2022). At Home with the Mavericks: Student and Teacher Perspectives of the Transformative Potential of Glasser's Choice Theory at an Alternative Secondary School. *Journal of Transformative Education*, 15413446221130363

Molazadeh, J. (2013). *The relationship between marital burnout, general health, and marital intimacy among couples in Tehran* (Doctoral dissertation, Tarbiat Modares University, Tehran).

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]

Moller, N. P., & Vossler, A. (2015). Defining infidelity in research and couple counseling: A qualitative study. *Journal of Sex & Marital Therapy*, *41*(5), 487-497.

Munsch, C. L. (2015). Her support, his support: Money, masculinity, and marital infidelity. *American Sociological Review*, *80*(3), 469-495.

Naderi, F. (2018). Application of choice theory on negative automatic thoughts, deliberate self-harm, and quality of life in individuals with depression. *Psychological Achievements, 3*(2).

Nematinia, M. (2022). The effectiveness of group therapy based on choice theory on resilience and negative automatic thoughts of first wives in polygamous families in Saravan. *Family and Health Quarterly, 12*(3).

Webb, C. A., Tierney, A. O., Brown, H. A., Forbes, E. E., Pizzagalli, D. A., & Ren, B. (2022). Spontaneous thought characteristics are differentially related to heightened negative affect versus blunted positive affect in adolescents: An experience sampling study. *JCPP Advances*, *2*(4), e12110.

Zamora-Bonilla, J. (2023). Public Choice versus Social Choice as Theories of Collective Action. *The Oxford Handbook of Philosophy of Political Science*, 141.

Zawadzki, M. J., Graham, J. E., & Gerin, W. (2013). Rumination and anxiety mediate the effect of loneliness on depressed mood and sleep quality in college students. *Health Psychology*, *32*(2), 212.

[ Downloaded from ieepj.hormozgan.ac.ir on 2026-11-21 ]