

Comparison of the effectiveness of the transactional analysis training and emotion regulation on the improvement of love trauma syndrome: Dealing with the problems caused by the separation and love break up

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Summary

This pilot study compare the effectiveness of the transactional analysis training and emotion regulation therapy on the reduction of love trauma syndrome (LTS). The present research was developed as pre-test and post-test. Randomly 44 participants were divided into three TA ($N = 15$; $M_{age} = 23.01$, $SD = 3.02$), ERT ($N = 14$; $M_{age} = 22.78$, $SD = 3.33$), and control groups ($N = 15$; $M_{age} = 22.60$, $SD = 3.14$). the results of one-way analysis of covariance demonstrated that there is a significant difference in LTS between two treatment groups and control group ($P < 0.001$). However, no significant difference was found between the treatments groups of TA and ERT. Preliminary findings suggest that indicated that both TA and ERT equally reduced the LTS.

love trauma syndrome, emotion regulation, transactional analysis, break up

INTRODUCTION

Love and friendship always have been accompanied by a human. Although love and its concept are rooted in the early theories of psychology, the scientific study of love and issue related to the romantic relationship are a new topic that recently has been addressed in the approaches of social psychology and personality studies [1]. Love is an abstract concept, which refers to a wide range of human emotions ranges from deepest interpersonal affection to simple pleasure [2].

Freud evaluated love from narcissism and libido investment perspective. Accordingly, a per-

son will love someone who is mirror images of ideal oneself or parents. Jung defined love as the attraction of Anima and Animus to each other. Maslow placed the love in the third level of his hierarchy of needs and defined it as a way to relieve the pain of loneliness and abandonment. Fromm indicated that love requires four features of care, compassion, respect, and cognition. Therefore, he introduced five types of love including maternal, brotherly, sexual, self-love, and God-love [3]. Li opposed giving a certain and fixed definition to love. He created the color wheel theory of love and introduced three primary styles of love (color) including Eros, Storge, and Ludus. By combining these three color, three other styles including Mania, Pragma, and Agape were formed [4]. Based on cluster theory of love, love is defined as a two-clus-

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ter friendship relationship including care and passion. The care cluster is characterized by supporting and defending, while passion cluster considers the features of sexual desire and feeling of having a unique relationship [4]. The social exchange theory explains social change and it is formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. In this theory, parties should balance the profit and loss of a relationship [5]. In Imago theory and unconscious attraction, love is defined as unconscious attraction to the saved emotional image of primary carers to relief childhood emotional deprivation [6]. In the perspective of attachment styles, it is possible to identify the various attachment styles including secure, anxious-preoccupied, dismissive-avoidant, and fearful-avoidant [7]. Based on Sternberg's theory, love should bring commitment, affection, and excitement, and the lack of any of these factors creates different forms of love. Sternberg refers to love as a story that attracts the person to a story similar but complementary to his/her own story to express his/hers [8]. Fehr [9] believed that love could be evaluated in prototypes perspective better than the classic point of view and provided 68 features of love. Besides, he introduced five types of love such as maternal, romantic, self-love, love of work, and infatuation. For Fehr, love could be graded in terms of intensity, and each of them is predictive of a certain cognitive processing. Finally, love can also be examined from the perspective of biotic, biochemical, and hormonal changes of the brain [10]. Based on limited studies on human and animals, Horst et al. indicated that brain areas (e.g., insula, anterior cingulate and orbitofrontal), and neurotransmitter (dopamine), which are mediators of drug dependence, may be related to love [10, 11]. The intercultural studies in East Asian countries and in the United States were shown that in both cultures, care, trust, respect, and honesty are among the most important signs of the presence of love in friendly relationships. In the culture of US, love is the most important factors of marriage, while in the East Asian countries the most important factor for marriage is the ability to care and protection [12].

Sedikides, Oliver, & Campbell [13] studied the benefits and costs of having a romantic relationship. According to their study, the benefits

of the relationship include feelings of companionship and solidarity, sexual relationship, feel loved and fall in love, sincerity, understanding and trust and mutual partnership, growth, and self-perception, self-esteem, etc. besides the costs of the romantic relationship are losing identity, feeling bad about oneself, stress and anxiety about relationships. In two research, Aron and Paris [14] studied the self-concept of people who were in their first and second years of love in 10 weeks for 5 times. In the first research, after evaluating the level of love, participants were asked to provide a report. In the second study, a sample of 529 participants completed the standard of self-efficiency scale and self-esteem. The results of the first study showed more changes in self-concept and the variety of its different domains. Moreover, the results of the second study indicated the increase of self-efficiency scale and self-esteem in people after falling in love. Other studies showed the impact of love on individual welfare and creative thinking [15].

Although a romantic relationship results in an increase in self-esteem and welfare of individual [16] the separation by death is inevitable and it is a natural part of life and each relation will experience this kind of separation.

MOURNING AFTER THE SEPARATION AND LOVE TRAUMA SYNDROME (LTS)

The romantic and intimate relationship break up with any kind of separation, such as avoiding from the other party, blaming yourself, the free negotiation of separation, the gradual preparation of the opponent party, the use of deception, loosen and tighten the relationship, and tensing up the situation and relationship affect the individual [17] because the passionate love refers to a deep relationship in which a person is very interested in someone else and feel emotional and physical intimacy toward that person. Following this love, obsessive thoughts have grown in one person, and in the event of separation unpleasant feelings such as vanity, frustration and anxiety arise [18].

Based on Corr, Nabe, and Corr [19] the term "bereavement" referred to the state in which a person faces a state of loss or end of that attachment. The three major loss include the loss

of a valued relationship, loss of a relationship and supportive (it can be a person or an object). In the event of loss, a bereaved person feels grief, which has physical, physiological, emotional, cognitive, and dysfunction consequences. If a person shows anxiety, depression, and dysfunction during the mourning process, a complicated bereavement occurs [20]. Ross [21] believed that the mourning process occurs after collapsing a romantic relationship and it is accompanied by anger, depression, and feelings of guilt, disappointment, loss of self-confidence, physiological and physiological responses, and disturbances in social, vocational, and educational fields, which is studied as LTS. Accordingly, Ross divided the LTS into two types of I and II. In type I, the separation is unpredicted and sudden, but in type II, the separation is predicted by signs of separation and unstable relationship. In some people, signs appear after a period of time, which is called as "delayed LTS". One of the three keywords of LTS is resistance, i.e., signs can last for a long time. The second term is "generalized", i.e., thoughts, memories, and emotions related to advancement and growth. The third term is "disorder", which means a disruption in the function of a person in various fields of education, social, occupation, and sleep [21].

Boelen and Reijntjes [22] evaluated the relationship between negative cognition and emotional problems after breaking up. The results showed that anxiety and depression score of a bereaved person is significantly higher than

the normal population. The cognitive error of catastrophizing and general negative belief and self-criticism had the highest correlation with emotional problems of separation. The difficulty in maintaining a positive feeling is also a preventing factor of recovery after separation. Barutcu and Aydin [23] confirmed the role of emotion in the post-separation symptoms in developing a questionnaire related to post-separation emotional responses. Willen [24] conducted a study on 55 people and highlighted the emotion dysregulation after 2 and 5 years separation. In those of Renshaw, Klein, and Curby [25], the effect of emotion dysregulation on the perception of hostile critique in romantic relationships was reported. Therefore, the cognitive emotion regulation therapy was suggested to these people [26]. Besides, Ross [21] in order to improve the symptoms of relationship breakdown provided solutions including relaxation, breathing exercises and muscle relaxation, accepting the event, changing the focus and distraction, changing the vision, living in the present, changing the emotions from anger to disappointment and eventually accepting the grief of separation and preventing this emotional injury from becoming an emotional infection. Therefore, in the present study, training the emotion regulation was considered as one of the treatment methods. Emotion regulation is defined as the process of initiating, maintaining, modifying, or changing the incidence, severity, or continuity of the inner feeling and the emotion associated with the social, psychological, and physical processes in

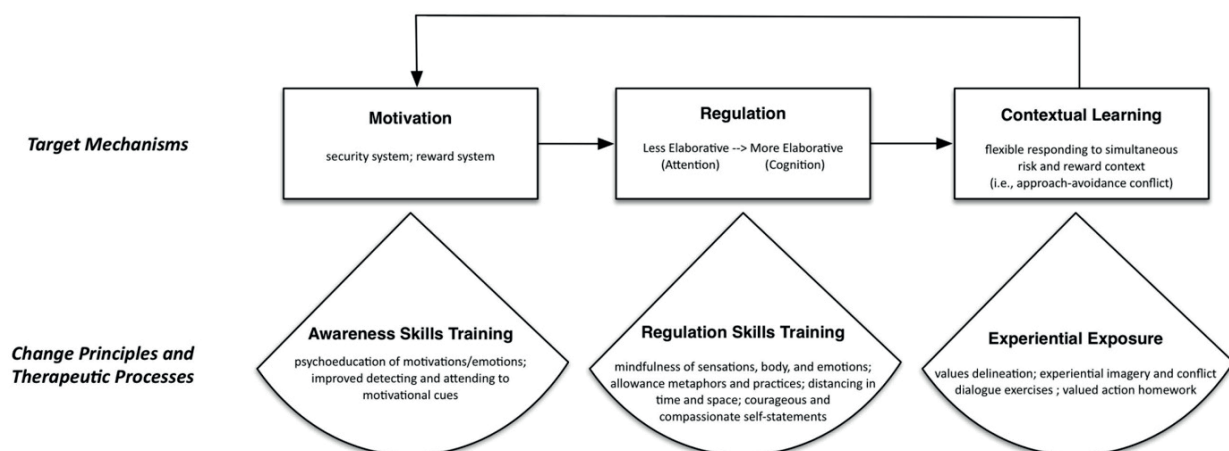


Figure 1. Conceptual model of target mechanisms, change principles, and therapeutic processes in Emotion Regulation Therapy [32].

accomplishing the individual's goals [22]. Gross [26] believed on the difference between the nature of the emotion before and after emotion regulation. He also mentioned that the ability of individuals in emotion regulation is deferent and can be automatic or deliberate and non-automatic [27]. ERT sessions specifically target motivational mechanisms, contextual learning consequences, and regulatory mechanisms including self-referential (i.e., worry, rumination, and self-criticism) and behavioral responses (i.e., avoidance, reassurance-seeking, and compulsive behaviors) that are hypothesized to comprise the distress disorders (see Fig. 1 for a summary of the relationship between this model and ERT components).

ERT is divided into two sequential phases. The first phase of treatment focuses on the cultivation of mindful emotion regulation skills with the goal of promoting intentional and flexible responses to intense emotional experiences including anxiety, anger, and sadness. These skills consist of practices is designed to cultivate attention regulation followed by meta-cognitive regulation. All these skills aim to help clients develop alternatives for the reactive cognitive responses such as worry, rumination, and self-criticism that have characterized their lives. Instead of reactively responding to challenging emotional situations, participants are taught to approach their lives "counteractively" by utilizing these skills in the moment when they first notice the arising of emotional and motivational cues. In the second phase of ERT, the focus shifts to promoting behavioral "proactivity." This contextual engagement is cultivated through assisting participants to identify what is meaningful in their lives and how anxiety and depression hold them back from this. Subsequently, they are encouraged proactively reflect this personal meaning and value [28]. Through the utilization of imaginal exposures and dialog tasks (described below), participants commit to taking meaningful actions between sessions that help cultivate an enriching and valued life.

In controlled research, the effectiveness of ERT was approved. Dehghani, Atef-Vahid, & Gharaee [29] conducted a study on 5 people with LTS symptoms and revealed the positive effects of short-term anxiety-regulating psychotherapy on the symptoms of depression and the gener-

al performance of these people. In the study of Brans, Koval, Verduyn, Lim, and Kuppens [30] with the title of "the regulation of positive and negative emotion in daily life," they demonstrated that the use of ER-based strategies results in an increase in positive emotion and a decrease in negative one. Therefore, these strategies lead to an increase in happiness.

Mennin et al. [31] showed the effectiveness of 20-sessions ERT on an initial open trial (OT) of adults ($N=20$; $M_{age}=32.25$, $SD=10.96$) with GAD and with and without co-occurring major depression. Their results indicated that not only the participants accept the therapy with less attrition, but also the clinical evaluation and self-reported questionnaires show the significant reduction of GAD severity, worry, trait anxiety, and depression symptoms, and a significant increase in life quality. Besides, the results of 9-month follow-up confirmed the stability of the results. The research reported the high effectiveness of this method (Cohen's $d=1.5-4.5$).

Renna et al. [32] reviewed the effective mechanism of ERT and confirmed its effectiveness.

Clinical research must continue to delineate the longer-term impact of the treatment on individual's symptoms and overall wellbeing going forward. Further, ERT should continue to be honed in an effort to reach a wider group of individuals through greater efforts for treatment personalization including addressing specific contextual challenges of diverse groups in terms of race, culture, and socioeconomic status. Despite the need for these future steps, ERT demonstrates a novel approach for treating distress disorders in an effort to promote stronger long-term ameliorative changes for the individuals suffering from these conditions.

In the present study, also the transactional analysis was used. In this method, the therapist introduces three personality states (child, adult, and parent), the way of interaction, life script, and stroke, and helps the individuals to know themselves (self-knowledge). The knowledge and improvement of interaction and relationships lead to an effective relationship. It should be noted that the change begins with decision-making and need of individuals to change their inefficient patterns and replace them with more healthy ones [33] The effectiveness of this method on the interaction patterns in couples [34]

and improvement of love breakup symptoms were reported. Akbari et al. [16] investigated the effect of transactional analysis therapy on personality states, self-esteem, and clinical symptoms of people with love break up. Therefore, the sample of five female university students was selected using purposeful sampling method and was treated by TA. Participants completed questionnaires of Love Trauma, BDI-II, self-esteem, GHQ-28, functions after an emotional breakdown, DASS-21, and PAC in pretreatment (baseline) and during the first session, seventh, eighth, and final session (Session XIV) and the three-month and six-month follow-up. Results showed that TA has been effective on personality states, self-esteem, and clinical symptoms of people with emotional breakdown, and participants have uses "adult" and "supportive parent" more after TA.

Based on the similarity between the symptoms of LTS and Post-Traumatic Stress Disorders (PTSD) in the view of annoying memories, flashback, trauma, negative symptoms, and avoidance, the two related research are mentioned as follows;

Harford (2013) [35] showed the effectiveness of TA on 6 veterans with PTSD. He indicated that 16-sessions of TA led to significant reductions in symptoms of PTSD, anxiety, and depression. Harford and Widdowson [36] demonstrated the effectiveness of TA on global distress, anxiety, and depression in short (24 sessions) and long-term (52 sessions) TA treatment of 15 soldiers with PTSD using the quantitative and the qualitative Change Interview. Qualitative findings indicated that a broad spectrum of therapist factors and psychotherapy process factors within the TA therapy delivered were beneficial for this particular participants group.

As the results of the research showed, both ERT and TA are effective in the treatment of emotional disorders and traumas, but in the present study, there is no research related to comparing these two methods. On the other hand, guidelines issued by the UK National Institute for Clinical Excellence (NICE, 2005) [37] state that 'there is as yet no convincing evidence for a clinically important effect (other therapies) on PTSD (p.19) and instead, recommends "a course of trauma-focused psychological treatment, trauma-focused cognitive behavioral therapy [CBT]

or eye movement desensitization and reprocessing [EMDR]" (p.4). Therefore, there is a strong case for building the evidence base for ERT and TA psychotherapy in the treatment of LT.

Therefore, this research seeks to answer these questions:

- Is ERT effective in improving LTS?
- Is TA effective in improving LTS?
- Is there a significant difference between the effectiveness of two methods of ERT and TA?

METHOD

Sample and process

In this pilot study, first, the screening process was conducted to diagnose people with LTS. Accordingly, LSD questionnaire [21] was completed by 1500 female and male students of Persian Gulf University in 2015. Based on the cutting point of 20 [21], 120 people were invited to interview, which 93 people had inclusion criteria of LTS and only 80 participants had inclusion criteria for attending therapy sessions. Then, 48 of them were randomly selected. Besides, these participants randomly were divided into three groups (16 participants in ERT and TA groups, and waiting list). Then, training classes were conducted in the form of eight 90-minute group sessions (2 sessions in a week). It should be mentioned that all participants completed LTS questionnaire before and after sessions. The effectiveness of both methods was evaluated based on the results of pre and post-tests data analysis. After attrition, the number of final samples was 44.

INCLUSION AND EXCLUSION CRITERIA

The informed consent of the participants and at least 6 months romantic relationship is required. The exclusion criteria include participation in any individual or group psychotherapy sessions during the study and taking psychiatric medicine. Besides, infection by acute disorder such as psychosis and Borderline Personality Disorder (BPD), which is determined during the clinical interview, irregular participation in the training courses (being absent in more than

3 sessions), failure to do weekly homework, entering a new relationship, and non-observance of the group rules are the other exclusion criteria.

TOOLS

Demographic questionnaire: Each participant completed the questionnaire containing gender, age, discipline, academic degree, duration of the romantic relationship, satisfaction with the relationship and having sexual behavior along the relationship.

Ross LTS questionnaire: The four-choice LTS scale was provided by Ross in 1999, which contains 10 questions about measuring the physical, emotional and cognitive-behavioral state of individual after separation and emotional relationship break-up. Scoring is based on the individual choice and the level of normality from zero to three. The minimum and the maximum score are 0 and 30, respectively. The cutting point of 20 shows the high LTS, which affect the life quality, social, educational, and occupational performance seriously. In Iran, Dehghani [29] translated the questionnaire and applied it to measure the student population. The internal consistency reliability of the questionnaire in a 48-person group of the student population was 0.81. Besides, the validity coefficient of this group after a week was calculated 0.83 using retesting method [29]. Also in this questionnaire, the Cronbach’s alpha coefficient was 0.82.

IMPLEMENTATION METHOD AND TRAINING PROTOCOLS

ERT as a treatment protocol, in its current form, consists of 8 weekly sessions (a prior version of the treatment utilized a 20 weekly session’s format; e.g. [31] and approximately 11 hours of direct care. Sessions consist of 90 minutes in length (Appendix 1). The form of TA psychotherapy chosen was primarily the integrative model advanced by Erskine (1993) [38], Erskine, and Trautmann (1996) [39] with an emphasis on facilitating internal contact. TA, also, consists of 8 weekly sessions and approximately 11 hours of direct care. Sessions consist of 90 minutes in length (Appendix 2).

RESULTS

In the present research, the age range of the participants was 20.78 to 23.13 years. There were 3 male and 21 female ($M_{age} = 23.01$ and $SD = 3.02$) in the TA group, 11 male and 3 female ($M_{age} = 22.78$ and $SD = 3.33$) in ERT group and 6 male and 9 female ($M_{age} = 22.60$ and $SD = 3.14$) in control group. In this study, 32 (72.7%) and 12 (27.3%) participants were studying at BA and MA degrees, respectively. Moreover, in the view of the sexual relationship, 27 (61.4%) participants had sex experience and 17 (38.6%) did not have any sexual relationship. The prevalence of LTS in both genders is reported in Table 1.

Table 1. prevalence of LST in both genders

| gender | Indicator | LT | | Total | Chi Square (sig.) |
|--------|---------------------|-------------|----------|------------|-------------------|
| | | Normal | Abnormal | | |
| male | Frequency (percent) | 709 (94.5) | 41 (5.5) | 750 (50) | 3.75 (0.05) |
| female | Frequency (percent) | 698 (93.1) | 52 (6.9) | 750 (50) | |
| total | Frequency (percent) | 1407 (93.8) | 93 (6.2) | 1500 (100) | |

The Table 1 indicates that in the view of LTS, most of the students are in normal states. Moreover, 6.2% of participants have LTS (6.9% and 5.5% in female and male students, respectively). Based on the results, the LTS in female students is significantly higher than male. In Table 2, the

average and standard deviation of LTS for each group, before and after the intervention, with weighted mean were shown.

The results of Table 2 show a significant reduction of LTS in both TA and ERT groups after treatment.

Table 2. The average and standard deviations of the score, before and after intervention, in segregated groups

| Estimated Means | | Posttest | | Pretest | | Groups | Variable |
|-----------------|-------|----------------|-------|----------------|-------|---------|----------|
| Std. Deviation | Mean | Std. Deviation | Mean | Std. Deviation | Mean | | |
| 0.75 | 10.58 | 3.52 | 10.60 | 3.66 | 19.47 | TA | LTS |
| 0.78 | 10.84 | 1.36 | 10.78 | 3.45 | 19.07 | ERT | |
| 0.75 | 18.83 | 3.35 | 18.86 | 2.41 | 19.60 | Control | |

Prior to the analysis of covariance, the observation of the assumptions of this analysis was reported in Table 3.

Table 3. Results of the assumptions for independent variables analysis of covariance

| Levene's Test F (sig.) | R ² | P value | F | Mean Square | Df (Total) | SS | source | Variable |
|---------------------------|----------------|---------|------|----------------|---------------|------|---------------|----------|
| 1.86 (0.17) | 0.67 | 0.69 | 0.37 | 3.23 | 44 | 6.59 | Pretest*group | LTS |

As shown in Table 3, the insignificant interaction in LTS indicates that the data support the homogeneity hypothesis of regression slopes. Moreover, the approximated parallelism of regression slopes also confirms the “assumption of homogeneity of regressions” and the existence of a linear relationship between the auxiliary random variable and dependent variable.

The coefficient of determination (R²) also indicates the correlation between the dependent variable and auxiliary random variables. In this connection, the insignificance of Levene’s test also indicates that the term for the variances error is equal. Therefore, considering the assumptions of covariance analysis, LTS was compared in three groups.

Table 4. The results of One-Way ANCOVA to compare three groups based on the LST variable

| ES | Sig. | F | df | MS | SS | Source | variable |
|------|------|--------|----|---------|---------|----------|----------|
| 0.12 | 0.07 | 23.423 | 1 | 23.264 | 23.264 | Pretest | LTS |
| 0.63 | 0.00 | 21.227 | 2 | 144.287 | 288.574 | Posttest | |
| | | | 44 | | 9009 | Total | |

As seen in Table 4, the independent variable (group) has a significant effect on the dependent variable (LTS) (F=21.23, P<0.000). Therefore, it should be noted that there are significant differences among three groups in terms of reducing the LTS in post-test. The effect size also shows that the 63% difference in the three groups is related to test intervention. In order to two-by-two groups comparison, the LSD post hoc test was used (Table 5).

Table 5. Result of LSD Post Hoc Test

| Sig. | Mean Difference | Groups | | Variable |
|-------|-----------------|---------|-----|----------|
| 000 | -6.542 | Control | TA | LTS |
| 000 | -8.273 | Control | ERT | |
| 0.225 | 1.731 | ERT | TA | |

According to Table 5, although the effectiveness of TA and ERT on LTS was significant (p≤0/001), there was no significant difference between two treatment methods on improving LTS.

DISCUSSION

The present study aimed to compare the effectiveness of TA and ERT on the improvement of love trauma syndrome in university students.

The results showed that ERT led to a decrease in love trauma syndrome in university students. The result was in agreement with those of Dehghani, Atef-Vahid, and Gharaee [29], Brans, Koval, Verduyn, Lim, and Kuppens [30], Lei, et al. [40], Mennin et al [31]. Besides, Renna, Quintero,

Fresco, and Mennin [32] in a review study demonstrated the effectiveness of ERT. Moreover, in multiple case report, Dehghani, Atef-Vahid, and Gharaee [29] showed the effectiveness of short-term ERT on the reduction of anxiety and depression symptoms in 6 students with LTS.

It should be noted that in order to develop the findings above, four main factor should be considered: emotional knowledge and excitement, improving emotional secretion of the individual, improving the emotional regulation of individual, thinking about emotion, and deformation of emotion [41]. In the present study, the Gross [26] emotional regulation model with five important stage was considered. In this model, Gross referred to the state of antecedent emotional response. The first stage is the situation selection, i.e., the certain aspects of a position or a thought and event that probably create emotion. The second stage is about situation modification in a way that it affects an emotion. The third stage is attentional deployment, which an individual focuses on a particular aspect, regardless of the general. The fourth stage is cognitive change and the last stage is response modulation, which the multiple response systems of the individual including the physiological and behavioral responses, which are changed [Therefore, in trained group, individuals were introduced with different types of emotion (primary, secondary, positive, and negative emotions) and they were trained how to increase their knowledge about the situation related to love and reminders of memories, which arouse the emotion, and how to modify the situation in order to balance those emotions and feel more emotions that are positive. Accordingly, the individual was encouraged to modify their focus and attention from the subject of love to various aspect of love and to expand the concept of life. The cognition of the individuals was examined during the sessions and they attempt to reconstruct the self-cognition, errors, and distortions. Furthermore, the problem-solving skills also were taught to deal with the problems of separation and avoidance of incompatible responses.

The second finding of the study showed the effectiveness of TA therapy on reduction of LTS in university students. The result was in agreement with those of Harford [35] Honari [34]. The closest research to this finding is the study of Akbari

et al. (2010), which evaluated the effectiveness of TA therapy on clinical symptoms of love breakdown. They also mentioned the effectiveness and stability of TA on personality states, self-esteem, and clinical symptoms of love breakdown. Besides, in the study of Harford and Widdowson [36] the effectiveness of TA on global distress, depression, and anxiety was confirmed.

The effective mechanism of TA was showed in the development of findings above. In this method, three different personality state (child, adult, and parent) was introduced to individuals and aimed to help them to identify and evaluate these three states in their romantic relationship. Accordingly, they can balance the emotions and self-criticism about love in child and parent state, respectively by adult state. The individuals learn to put themselves in the best state (I am fine, you are fine) in order to prevent themselves from self-criticism, feel guilty, undermine their self-esteem, or even blame the other side and feel anger and disgust toward it. Moreover, the participants find the best way to cope with the ineffective relationships and unawareness choices by becoming familiar with themselves life script and Karpman's drama triangle.

The present study indicated that both TA and ERT equally reduced the LTS in the affected person by 63%. Considering the sample size of 44 including two groups of treatment and control, the increase of the effect size up to 0.63 not unexpected for this research. On the other hand, there was no significant difference between TA and ERT in terms of LTS reduction, which shows a relatively equal share of two treatment methods in terms of effect size and its division into two groups. It should be noted that in the control group, the very small amount of effect size is related to a reduction in the mean of LTS because of the time passage and compatibility with separation.

LIMITATION AND SUGGESTIONS

As the research has pointed out, the approaches of people toward love and romance are different in different cultures. In Iran, due to the cultural and religious limitation, people experience romantic and sexual relationships within the marriage framework. Therefore, romantic separa-

tion is less accepted by the community and individuals avoid exposing this conflict and problem. This restriction is more severe for women and girls, therefore, a number of female participants refused to attend medical treatment because of the presence of boys and some refused to continue the treatment sessions, consequently, the researcher did not succeed in matching the groups in terms of gender. It is suggested that in subsequent studies, this comparison is performed in peer groups and the effectiveness of TA and ERT is evaluated by considering gender. Furthermore, since the difference in the process of symptoms occurred in all types of LTS, the present study was not succeeded in controlling the different types of LTS (acute, chronic, and delayed), which it can be affected the results of the study. For example, during the sampling, a person with the chronic LTS experiences less emotional symptoms after separation, or a person with delayed LTS don not experience any emotional symptoms after separation unless something triggers those symptoms. Therefore, the division of LTS types is suggested in future studies. Besides, it is proposed to evaluate the one-sided and unrequited love that the person did not have any romance and never revealed his love to the other party.

Although treatment follow-up is one of the strong points of each research, in the present study, implementation of follow-up was not possible during the summer due to the coincidence of the treatment sessions by the end of the school year. The time limitation was the most important limitation of this research. It is also recommended that in future studies, if possible, the parties will be treated in the same way as the couple and the cognition of both will be evaluated. Meanwhile, the duration of the separation and the intention of the person to form the relationship and the number of past acquaintances as a quarantine variable could enter the research.

CONCLUSION

Based on the conducted research, the romantic relationship breaks up is one of the challenging and stressful life events. The separation is strong enough to create a significant degree of emotion such as sadness and anger [42] and insecur-

ity [43]. After separation, individuals deal with emotion dysregulation due to facing the situations associated with romantic relationship and some triggers that stimulate the recollection of memories. The individuals consider the negative aspects of this event and ignore the positive sides or even by focusing on the positive aspects of the relationship and ignoring the problems of staying in the relationship will make the acceptance of the event more difficult. Emotional regulation strategies help peopled with LTS make their emotions fit with the situation [25]. Accordingly, training could help people moderate their troubles and separation-related problems. Besides, TA method helps individuals to be free from the effect of their personality states and life script on their lives and relationships and prevent the emergence of ineffective relationships and unawareness choices. By comparing these two methods, it seems that in spite of the difference in the concept and basis of theory, these two methods are similar in terms of their effect on increasing the emotion and cognitive awareness of individuals correcting them. For example, in ERT, the person is taught what are the emotion and cognition, what is the relationship between them, and by changing one of them how the other one change. In TA method, the concept of emotion is described in child state, the individual's beliefs are included in parent state, and emotion regulation and cognition appropriate to the situation are identified in the adult state. Finally, the cognitive error is corrected by training the life script and injunctions, which was trained in ERT with the titles of emotional mind, logical mind, and healthy mind. For example, feeling empathy with people who involved in emotional problems such as those with LTS helps the individual to feel better. In ERT, compassionate person technique was used and taught to write a letter to the compassionate person, while in TA was trained to proceed from critical parent/controlling parent to nurturing parent.

Finally, it should be said that the LTS is a subject that disturbs the person's performance and social relationships. Besides, it may affect the decision-making and other relationships of individual and lead to academic failure, reduction of self-esteem, feeling of guilt, distrust to others, and difficulty of making decisions for marriage.

Sometimes it is possible one take medicine and drug to reduce feelings of loneliness and emotional failure. The LTS plays an important role in early age and adolescence because the emotional separation and the inability to accept it from the parent bring the person closer to the peer group, which may be faced them with wrong suggestions [44]. In this situation, if a person has the weakness of critical thinking and problem-solving skill, he will not be able to measure the options ahead accurately or weakness in other skills, such as self-esteem, empathy, and responsibility for the event, will disrupt him. Therefore, it is required to identify these people and support them to overcoming emotional problems and finds the right ways to treat and help them. As a result, scientific research should be conducted to identify suitable and appropriate treatments and effective factors on LTS.

The small study groups were limitation of this study. Therefore, it is recommended to consider that The preliminary findings need a confirmation in further research.

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APPENDIX 1**Protocol for the emotion regulation training sessions**

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|-----------------|---|
| First Session | Introducing the group members to each other, describing the conditions and rules of the sessions and emphasis on the importance of confidentiality principle, introduction to emotions, their varieties and their functions |
| Second Session | introducing emotion regulation techniques (emotion recognition), helping the group members to identify their own emotional states, how these emotions affect behavior, performance and the ensuing emotions, giving assignments |
| Third Session | Checking the assignments, introducing the obstacles to reach healthy emotions, increase in positive emotions, giving assignments for the next session |
| Fourth Session | Checking the members' assignment, identifying their cognitive and physiological injuries resulting from the emotions, regulating emotions and excitement, giving assignments. |
| Fifth Session | Reviewing the previous session and checking the assignments, introduction to the mindfulness technique regarding emotions and emotion expression, giving assignments for next session |
| Sixth Session | Checking the assignments, introduction to emotion management technique, having the participants exercise the technique, giving assignments |
| Seventh Session | Checking the members' assignments, introduction to problem-solving technique, exercising, giving assignments |
| Eighth Session | Checking the members' assignments, modifying the errors and giving recommendations, summing up and concluding the training sessions |

APPENDIX 2**Protocol for the transactional analysis training sessions**

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|-----------------|--|
| First Session | Introducing the group members together, explaining the group's regulations and objectives and emphasis on the importance of confidentiality principle, introduction to Transactional Analysis theory and its application |
| Second Session | Introduction to three ego states (the Child, The Adult, the Parent), introduction to the four life positions, helping the participants to identify their own states and position, giving assignments |
| Third Session | Checking the assignments, introduction to transactional analysis and getting familiar with its diagrams, giving assignments for the next session |
| Fourth Session | Checking their assignment and correcting them, introduction to time structures, internal dialogues, emotion regulation techniques, giving assignments |
| Fifth Session | Checking the assignments, introduction to strokes and its problem, introduction to life script, giving assignments |
| Sixth Session | Checking the assignments, review on life scripts, analyzing the methods to be released from bewilderment, giving assignments |
| Seventh Session | Checking the assignments and correcting them, analyzing what we want and how to acquire them, introduction to the Karpman triangle, giving assignment |
| Eighth Session | Reviewing and checking the assignments, summing up and concluding the training sessions |