Original Article

Comparison of the Effectiveness of Emotional Intelligence Training and Social Skills Training on Symptoms of Love Damage and Cognitive Emotion Regulation in Women with Love Failure

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Abstract

Background: Love failure has the potential to lead to significant emotional harm in an individual.

Objectives: This study aimed to assess the effectiveness of emotional intelligence training and social skills training in the reduction of the effects of emotional damage and improvement of emotional regulation in women who have experienced love failure.

Methods: The present semi-experimental research used a pre-test, post-test, and follow-up design and lasted three months, with two intervention groups and one control group. The target population for this research comprised women with the experience of love failure in Tehran, Iran from June to November, 2023. The study included 54 patients from four psychology clinics in the 10th district of Tehran, selected through purposive sampling and divided into two intervention groups and one control group (n=20 in each group). The emotional intelligence group underwent eleven 90-minute sessions twice a week, while the social skills group had ten 90-minute sessions twice a week. The data were collected by the Love Trauma Inventory and the Cognitive Emotion Regulation Questionnaire. Data analysis was conducted using analysis of variance, multivariate analysis of covariance, and Bonferroni post-hoc test in SPSS software (version 27).

Results: The findings demonstrated that both interventions led to a decrease in these components. Moreover, the social skills approach did not have a significant impact on the positive refusal component, with no noticeable differences, compared to the control group (P=1.000).

Conclusion: The present study showed that both emotional intelligence training and social skills training were effective on the variable of love damage symptoms and its components.

Keywords: Cognitive regulation of emotions, Emotional intelligence training, Love failure, Signs of love damage, Social skills training

1. Background

Most people experience a romantic relationship during their lifetime, but sometimes these relationships can fail. Consequences of a failed relationship can damage and disrupt the emotional, cognitive, and behavioral well-being of people (1). Love

failure is a series of symptoms experienced by individuals following the conclusion of an emotional relationship, resulting in detrimental effects on their academic, social, and occupational performance. Irrational responses ensue, and these symptoms persist for an extended period (2). Generally, failure in love relationships is followed by depression attacks, and this issue is especially true among young females as they are more vulnerable to love failure, compared to males (3). In this context, the results of a previous study stated that young females with symptoms of love failure show maladaptive reactions, such as being lost, making uncompromising decisions, bargaining, changing beliefs, having cognitive distortions, and ruminating (4).

When a person fails in love, which is a state of failure and humiliation, they turn to their lover and are rejected, which makes them feel sad and isolated (5). Love failure can lead to various symptoms, such as depression, anger, insecurities, profound disappointment, and guilt, and also physical symptoms, including headache, sleep disorder, anorexia, fatigue, and boredom (6). Research has shown that positive memories are specifically linked to separation distress, while negative memories are linked to separation distress and depression (7). Furthermore, the findings of a study by Pirmoradian et al. (2023) indicated that a decrease in self-worth and self-confidence, changes in various behavioral, physical, and cognitive dimensions, dysfunction in executive functioning, and the occurrence of positive and negative emotions are all linked to love failure (8).

A person feels very deep and uncomfortable emotions after a love failure. One of the most basic aspects of individual adaptation in the face of these negative life events is to adopt effective emotional regulation behavioral strategies. However, the inability to use these appropriate behavioral strategies is related to the intensification of negative emotions and psychological damage

(9). Conscious or unconscious cognitive, emotional, and behavioral strategies are used to maintain, increase, and decrease an emotion (10). According to Mosayebi Dorche et al., the resolution of emotional failure is hindered by their increased emotional schemas, such as feelings of lack of control, simplicity of emotion, and shame/guilt (11). Research indicates that the regulation of emotions after a separation can have an impact on health (12).

The fact that mood and anxiety problems are common in people with emotional failure suggests that females with emotional failure cannot regulate emotions. Females with emotional failure, for example, can benefit from emotional intelligence training that can affect their psychological and emotional components (13). Comprehension and recognition of emotions, usage of cognitive awareness to regulate actions and behavior, and regulation of emotions in challenging situations are all traits of emotional intelligence. Moreover, emotional intelligence demonstrates how reason, perception, and emotion can be utilized to enhance reasoning and understanding of interpersonal complexities (14). Basic emotional intelligence training has been shown to improve higher-order emotional abilities (15). According to a study, emotional intelligence can assist individuals in the management of emotions related to negative events and comprehension of the emotions of others (16). Results of a study performed by Sadeghi et al. (2022) demonstrated that marital conflicts can be predicted by self-knowledge, love, and emotional intelligence (17).

Females experience unconditional acceptance when they are not judged harshly by potential partners, friends, and family, giving them the chance to improve their situation with the help of their strong social skills. (18). Social skills seem to be essential in order to establish a positive relationship and be accepted by others (19). Definitions of social skills vary widely, but can generally be divided into four factors, namely expressive

behaviors (e.g., speech content), receptive behaviors (e.g., emotion recognition), interactive behaviors (e.g., response timing), and situational factors (e.g., a person may be more assertive depending on whether an acquaintance or a stranger is involved) (20). Findings of a study performed by de Mooij et al. (2020) stated that social skills training programs have a positive effect on the development of interpersonal skills and emotional skills (21). Moreover, the results of a study conducted by Zerk et al. (2021) showed that social skills, interpersonal relationships, behavior, mental health, and adult life outcomes are linked (22).

2. Objectives

Failure of love has negative consequences on individuals and can lead to personal, social, and sometimes family conflicts and dissociations, with females being the most affected (2). Therefore, it is necessary to know how to treat the symptoms of this damage. In this regard, love and cognitive regulation of emotion in females should be researched. However, despite the importance of this issue, the literature review indicated that no research has directly compared the effectiveness of emotional intelligence training and social skills training on the symptoms of love damage and the cognitive regulation of emotions in women suffering from love failure. Therefore, there is a research gap in this field, and the present study is one of the first studies that aimed to compare the effectiveness of emotional intelligence training and social skills training on the symptoms of love damage and the cognitive regulation of emotions in women suffering from love failure. The present study sought to answer the question of whether emotional intelligence training and social skills training have any impact on the symptoms of love damage and the cognitive regulation of emotions in women who suffer from love failure.

3. Methods

The present semi-experimental study was performed with a control group based on a pre-test, post-test, and three-month follow-up design. It consisted of two intervention groups and one control group. Women who had experienced love failure in Tehran, Iran between July and November 2023 were included in the statistical population of this research. The statistical sample consisted of 60 people who were selected by purposeful sampling method and randomly (using the randomization method of coin toss) placed in two intervention groups and one control group (20 subjects in each group).

Adequacy of the sample size was determined using G*Power version 3.1.9.7., considering $\alpha = 0.05$, effect size = 1.11, and power test = 0.90 (23).

The inclusion criteria were female gender, age of 18 years old and above, physical and mental health to participate in intervention sessions, possession of a psychological counseling file, and experience of love failure. The exclusion criteria were any mental disorders, consumption of psychiatric drugs, and lack of participation in more than three intervention sessions, which caused withdrawal from the study and continued treatment. After obtaining the necessary approvals to conduct the research as well as the confirmation from the university, the authors visited four psychology clinics in the 10th district of Tehran (the names of the clinics remained confidential to protect the information). Among the clients of psychological clinics, females who had experienced love failure were identified in a targeted manner.

In the initial interview, the researcher identified a sufficient number of females who had experienced love failures. During the interview, the researcher introduced the research objectives and ethical principles to the participants, answered their questions, and obtained their written consent using a consent questionnaire. Participants were randomly divided into emotional intelligence, social skills, and control groups to implement the

interventions. The Emotional intelligence group had eleven 90-minute sessions, while the social skills group had ten 90-minute sessions. As per instructions, each intervention group received the designated number of training sessions, while the control group received no intervention and was put on a waiting list. As part of the research ethics, the control group received an intensive course of social skills and emotional intelligence training sessions upon completion of the study.

Tables 1 and 2 summarize the treatment sessions for the emotional intelligence group based on Bradberry and Greaves (2001) training (24, 25), and the social skills group was based on Stafenz (1978) training (26, 27). At the end of the final session, the intervention groups answered the research questionnaires as a post-test. The flow chart of CONSORT is illustrated in Figure 1.

Table 1. Summary of emotional intelligence training protocol

Session	Content
First	Pre-examination, introduction, and familiarization of group members, statement of group goals and rules, determination of topics and general structure of meetings, definitions, and description of emotion, statement of the importance of emotional intelligence, and assignment of homework
Second	Recognizing and teaching emotional and emotional words, teaching how to recognize and express appropriate faces using techniques, such as stories and allegories, and paying attention to the face by looking in the mirror and poster
Third	Checking homework, defining emotional self-awareness and increasing emotional self-awareness and emotional control, understanding the emotions of other people, receiving feedback, and presenting homework
Fourth	Checking homework, teaching active listening and empathy, receiving feedback, and assigning homework
Fifth	Homework review, problem-solving training focused on emotional problem-solving, receiving feedback, assigning homework
Sixth	Checking homework, controlling emotions through changing position, calming and emotional keywords, identifying unpleasant emotions that cause trouble, teaching responsibility for emotions, receiving feedback, assigning homework
Seventh	Homework review, anger control and management training, anger consequences, ways to deal with anger, receiving feedback, assigning homework
Eighth	Checking homework, reviewing past meetings, receiving feedback from members regarding past meetings, and coordinating with participants for follow-up programs.
Ninth	Detachment, self as context, the tombstone exercise, relationship between goals and values
Tenth	Evaluation of values, self as context, the chessboard metaphor, clarification of the values, and commitment
Eleventh	Review and summing up

Table 2. Summary of social skills training

| Session	Content
First	The meeting began with the group members being introduced and then the leader explained the rules of the group and the importance of social skills for the participants.
Second	The leader of the group taught the participants about the correct methods of conversation, how to start a conversation, continue it, and end it. The leader also talked about how to listen and exercises were performed for further training.
Third	After reviewing the previous session, the participants learned how to make a request from others and express their positive and negative emotions. For further training, students performed a practical exercise.
Fourth	After going over the previous session, the group leader taught the participants about emotions, like anger, sadness, and self-control, and they reinforced the training with practical exercises.
Fifth	The group leader began by discussing the material learned in the previous session and then instructed the participants on the essential and practical skill of being bold and saying no. In order to consolidate the learned material, a practical exercise was performed in the session, and homework was assigned for the next session.
Sixth	First, the previously learned material was reviewed, and then the group leader talked about the nature of criticism, receptivity to criticism, and the skill and method of apologizing, and then practical exercises were given to the group members.
Seventh	The participants were trained to cooperate with each other, and accept, and cope with problems and crises in life, as well as crises that occur in relationships with peers and family members. Likewise, the participants were taught about being responsible in life and in society and expressing positive opinions about themselves, especially in public, and they performed practical exercises in this regard to consolidate their learning.
Eighth	They talked about problems and how to face them. Next, the group leader discussed problem-solving techniques and strategies with the students. Afterward, the leader of the group talked about the rules established in society, school, and home, as well as the way of accepting and coping with them for the participants, and then justified the established rules and respecting them.
Ninth	Self-expression skills were taught to participants. Participants learned to express their opinions clearly so that others could also get to know their real wants and needs. This skill needs practical practice in the group to consolidate their learning.
Tenth	In this meeting, the materials learned during previous meetings were reviewed and summarized by the group leader. Questions from the participants were answered, and the results of the meetings were evaluated.
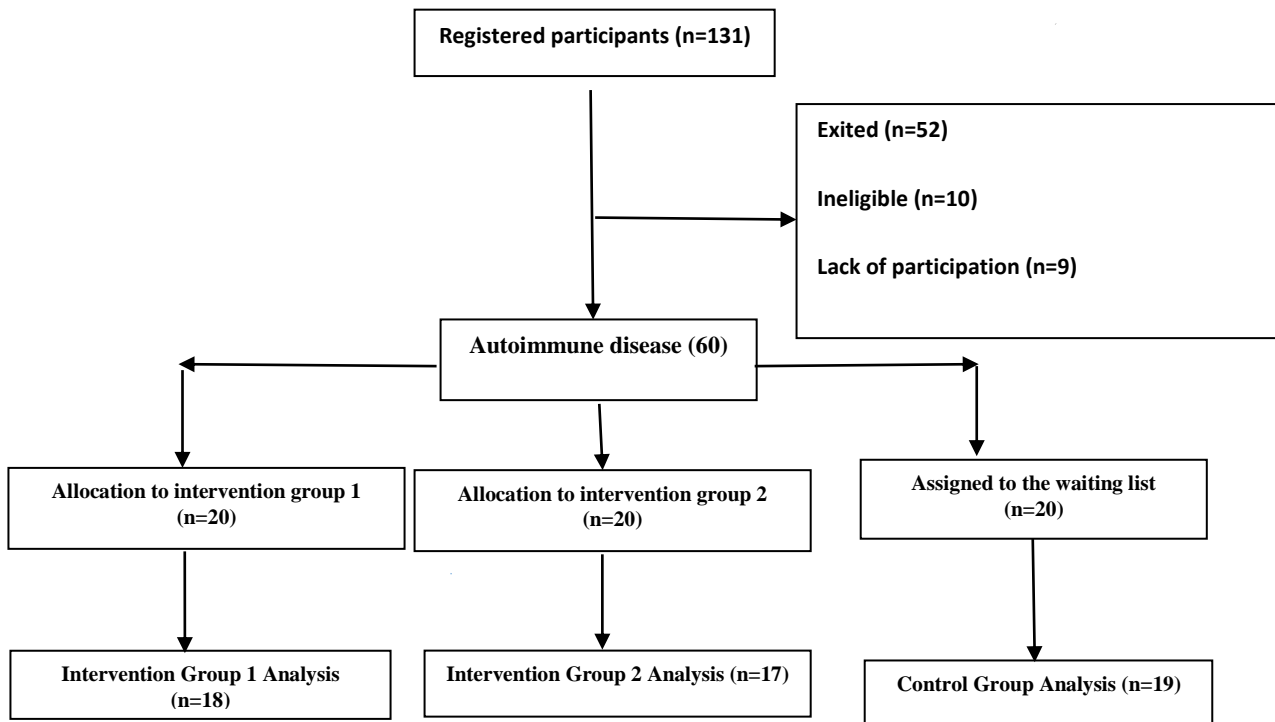
Figure 1. Flow diagram of the study

Tools

Love trauma inventory

The love trauma inventory (LTI) was created by Rosse in 2007 with the aim of measuring the severity of love trauma and the physical, emotional, cognitive, and behavioral disturbances that occur after love trauma in people (28). The questionnaire is based on a 10-item scale and is scored using a 4-point Likert scale ranging from not all the time to most of the time. The scores assigned to each answer are combined, and they range from 10 to 40 on this scale. A higher score on the scale indicates the presence of more love in the participants (29). During the investigation in Iran, the Cronbach's alpha coefficient of this scale was found to be 0.80. In the present research, the researcher obtained a Cronbach's alpha coefficient of 0.75 for this scale.

Cognitive Emotion Regulation Questionnaire

This self-report questionnaire was created in 2002 by Garnowski, with the aim of measuring the cognitive regulation of emotion in people (30). This questionnaire includes 36 items and is measured using a 5-point Likert scale ranging from consistently to frequently. This questionnaire has nine main factors. Based on research, seven main factors were identified in the validated questionnaire in Iran (31). These factors include self-blame (including three questions), other blame (including four questions), rumination (including five questions), catastrophization (including four questions), and acceptance (including four questions) as negative factors. Moreover, there were two positive refusal factors (including eight questions) and positive reappraisal (including four questions) as positive factors. Each factor in this questionnaire is calculated separately. During the investigation in Iran, Cronbach's alpha coefficient for this scale was found to be 0.89 (32). In the present study, the researcher obtained a Cronbach's alpha coefficient of 0.79 for this scale.

Statistical analyses

In this study, descriptive measures, like mean and standard deviation, were used for descriptive statistics, and inferential statistics were analyzed with covariance. All statistical

analyses were conducted in SPSS software (version 27) using Kruskal-Wallis H, ANOVA, and MANCOVA, at a significance level of 0.05. The Kolmogorov-Smirnov test was conducted to evaluate the normal distribution, while Levene's test was used to evaluate the homogeneity of variances. Bonferroni's post-hoc test was also used to compare the means.

4. Results

This study involved data collection from participants in three stages, namely pre-test, post-test, and follow-up, and three groups of emotional intelligence, social skills, and control. First, the researcher investigated and explained the demographic variables of the research. The participants were divided into three age groups, namely 19-30 years, 31-40 years, and 41 years and above. In terms of level of education, the participants were divided into three groups, namely high school degree, Bachelor's degree, and Higher education (Ph.D. and M.Sc.). Likewise, the participants were divided into two groups of employed and unemployed according to their employment status. The Kruskal-Wallis test revealed that there were no significant differences between the participants in terms of demographic variables ($P>0.05$) (Table 3).

The researcher also examined the mean values of the research variables in the research groups which are presented in Table 4.

Table 3. Demographic characteristics in the intervention and control groups

Variables	Demographic information	Emotional Intelligence	%	Social skills	%	Control	%	Kruskal-Wallis H	P value
Age (years)	19-30	12	36.4%	9	27.3%	12	36.4%	0.882	0.643
	31-40	5	29.4%	6	35.3%	6	35.3%		
	≥ 41	1	25.0%	2	50.0%	1	25.0%		
	Total	18	33.3%	17	31.5%	19	35.2%		
Grade	High school	11	31.4%	11	31.4%	13	37.1%	0.172	0.918
	Bachler	4	36.4%	4	36.4%	3	27.3%		
	Higher education (Ph.D. and M.Sc.)	3	37.5%	2	25.0%	3	37.5%		
	Total	18	33.3%	17	31.5%	19	35.2%		
Occupation	Employed	13	34.2%	12	31.6%	13	34.2%	0.063	0.969
	Unemployed	5	31.3%	5	31.3%	6	37.5%		
	Total	18	33.3%	17	31.5%	19	35.2%		

Table 4. Description of research variables

Groups	Variable	Mean±SD		
		Pre-test	Post-test	Follow-up
Emotional Intelligence	Symptoms of love damage	34.05±2.775	29.27±3.577	**26.72±2.739**
Social skills		33.88±3.407	25.76±2.107	**16.58±1.460**
Control		32.84±3.804	32.42±3.579	**32.00±3.756**
Emotional Intelligence	Self-blame	11.38±1.577	7.72±1.526	**8.22±1.477**
Social skills		11.58±1.277	7.11±1.053	**5.64±1.221**
Control		10.84±1.500	10.52±1.504	**10.42±1.609**
Emotional Intelligence	Other-blame	15.88±1.967	12.88±2.219	**12.33±2.376**
Social skills		16.05±1.886	12.05±1.477	**9.76±2.513**
Control		15.73±2.023	15.73±2.023	**15.57±1.261**
Emotional Intelligence	Rumination	20.33±2.425	14.66±1.328	**14.38±1.719**
Social skills		20.23±2.462	13.29±2.974	**9.35±2.059**
Control		20.63±2.629	20.63±2.629	**20.36±2.408**
Emotional Intelligence	Catastrophization	16.77±1.592	13.05±1.696	**12.77±2.016**
Social skills		16.82±1.590	13.05±1.819	**9.58±2.123**
Control		16.36±1.535	16.73±1.557	**16.42±1.865**
Emotional Intelligence	Acceptance	17.22±1.699	14.94±1.513	**14.94±1.984**
Social skills		16.94±1.784	14.94±1.560	**15.05±1.560**
Control		17.15±1.607	16.89±1.760	**17.47±1.678**
Emotional Intelligence	Positive refusal	26.50±1.689	31.77±3.172	**35.61±2.173**
Social skills		21.05±6.675	24.35±3.673	**30.29±9.923**
Control		25.00±4.358	25.73±5.495	**33.68±4.005**
Emotional Intelligence	Positive reappraisal	13.72±2.444	15.50±1.581	**18.72±1.178**
Social skills		12.70±2.756	16.00±1.060	**16.17±1.131**
Control		13.10±2.536	13.73±2.765	**13.63±2.671**

Table 4 summarizes the mean values of the scores of participants for the research variables. It can be seen that the mean score of the variable "symptoms of love damage" did not differ much among all three groups of emotional intelligence, social skills, and control at the pre-test stage. The mean scores of this variable decreased in the emotional intelligence and social skills groups at the post-test and follow-up stages, compared to the control group. However, there were no changes observed in the control group. In addition, there were no significant differences among the three groups of emotional intelligence, social skills, and control in terms of the mean score of components of self-blame, other-blame, rumination, catastrophization, and acceptance in the variable of cognitive regulation of emotion at the pre-test stage. The emotional intelligence and social skills groups had lower mean scores in terms of this variable at the post-test and follow-up stages, compared to the control group. Meanwhile, the control group remained unchanged. At both the post-test and follow-up stages, the emotional intelligence and social skills groups experienced an increase in the mean value of components of positive refusal and positive reappraisal, compared to the control group. Accordingly, no changes were observed in the control group. Results of the analysis of the covariance test were examined by the researcher (Table 5).

Table 5. Tests of between-subjects effects and covariance analysis

Variable	Source	Dependent variable	Sum of squares	Mean square	F	P value	Eta Squared
Symptoms of love damage	Pre-test	Post-test	11.511	11.511	1.133	0.292	0.022
		Follow-up	49.745	49.745	6.796	0.012	0.120
	Group	Post-test	408.409	204.205	20.107	<0.001	0.446
		Follow-up	2225.741	1112.870	152.038	<0.001	0.859
Self-blame	Pre-test	Post-test	5.442	5.442	2.936	0.093	0.055
		Follow-up	0.553	0.553	0.258	0.613	0.005
	Group	Post-test	126.797	63.399	34.206	<0.001	0.578
		Follow-up	191.370	95.685	44.683	<0.001	0.641
Other-blame	Pre-test	Post-test	1.239	1.239	0.324	0.572	0.006
		Follow-up	2.883	2.883	0.647	0.425	0.013
	Group	Post-test	133.944	66.972	17.517	<0.001	0.412
		Follow-up	308.945	154.472	34.665	<0.001	0.581
Rumination	Pre-test	Post-test	20.030	20.030	3.630	0.063	0.068
		Follow-up	0.031	0.031	0.007	0.934	0.000
	Group	Post-test	540.849	270.425	49.004	<0.001	0.662
		Follow-up	1091.741	545.870	122.640	<0.001	0.831
Catastrophization	Pre-test	Post-test	0.416	0.416	0.143	0.707	0.003
		Follow-up	4.599	4.599	1.154	0.288	0.023
	Group	Post-test	165.979	82.990	28.587	<0.001	0.533
		Follow-up	403.726	201.863	50.653	<0.001	0.670
Acceptance	Pre-test	Post-test	1.062	1.062	0.401	0.530	0.008
		Follow-up	0.421	0.421	0.135	0.715	0.003
	Group	Post-test	46.607	23.304	8.786	0.001	0.260
		Follow-up	75.243	37.621	12.043	<0.001	0.325
Positive refusal	Pre-test	Post-test	94.342	94.342	5.640	0.021	0.101
		Follow-up	117.585	117.585	3.218	0.079	0.060
	Group	Post-test	350.669	175.335	10.482	<0 .001	0.295
		Follow-up	688.006	344.003	9.415	<0 .001	0.274
Positive reappraisal	Pre-test	Post-test	4.966	4.966	1.285	0.262	0.025
		Follow-up	4.312	4.312	1.282	0.263	0.025
	Group	Post-test	52.197	26.098	6.754	0.003	0.213
		Follow-up	231.122	115.561	34.354	<0.001	0.579

Based on the results of multivariate covariance analysis in Table 5, the P value in between-subjects effects in the variable "symptoms of love damage" at both post-test

and follow-up stages was significant (P<0.001). The research groups experienced a significant difference despite the fact that the effects of the pre-test stage remained constant. Additionally, there were notable differences in the effects between subjects when it came to self-blame, other-blame, rumination, catastrophization, and acceptance as well as positive refusal and positive reappraisal components. These differences were significant in both the post-test and follow-up stages, with a significance level below 0.05. (P<0.05). Variable components of cognitive regulation of emotion were significantly different between the research groups. The researcher examined research stages in pairs and the results are tabulated in Table 6.

Table 6. Bonferroni post-hoc test to check the difference between the three phases of the research

Variables	(I) TIME	(J) TIME	Mean difference	SE	P value
Symptoms of love damage	Pre-test	Post-test	4.296*	0.717	<0.001
		Follow-up	8.185*	1.041	<0.001
	Post-test	Follow-up	3.889*	0.768	<0.001
Self-blame	Pre-test	Post-test	2.741*	0.343	<0.001
		Follow-up	3.074*	0.420	<0.001
	Post-test	Follow-up	0.333	0.282	0.729
Other-blame	Pre-test	Post-test	2.259*	0.450	<0.001
		Follow-up	3.222*	0.500	<0.001
	Post-test	Follow-up	0.963	0.423	0.081
Rumination	Pre-test	Post-test	4.074*	0.578	<0.001
		Follow-up	5.500*	0.740	<0.001
	Post-test	Follow-up	1.426*	0.475	0.012
Catastrophization	Pre-test	Post-test	2.296*	0.403	<0.001
		Follow-up	3.593*	0.548	<0.001
	Post-test	Follow-up	1.296*	0.459	0.020
Acceptance	Pre-test	Post-test	1.481*	0.323	<0.001
		Follow-up	1.241*	0.355	0.003
	Post-test	Follow-up	-0.241	0.324	1.000
Positive refusal	Pre-test	Post-test	-3.056*	0.743	<0.001
		Follow-up	-6.481*	1.032	<0.001
	Post-test	Follow-up	-3.426*	0.756	<0.001
Positive reappraisal	Pre-test	Post-test	-1.852*	0.426	<0.001
		Follow-up	-2.944*	0.468	<0.001
	Post-test	Follow-up	-1.093*	0.415	0.033

Table 7. Bonferroni post-hoc test to examine differences among three groups

Variables	(I) Group	(J) Group	Mean Difference	SE	P value
Symptoms of love damage	Emotional intelligence	Social skills	3.489*	1.078	0.006
		Control	-3.315*	1.060	0.009
	Social skills	Control	-6.803*	1.073	<0.001
Self-blame	Emotional intelligence	Social skills	0.649	0.461	0.496
		Control	-2.926*	0.453	<0.001
	Social skills	Control	-3.575*	0.465	<0.001
Other blame	Emotional intelligence	Social skills	0.817	0.662	0.669
		Control	-2.836*	0.643	<0.001
	Social skills	Control	-3.652*	0.654	<0.001
Rumination	Emotional intelligence	Social skills	1.348	0.795	0.288
		Control	-5.890*	0.774	<0.001
	Social skills	Control	-7.239*	0.786	<0.001
Catastrophization	Emotional intelligence	Social skills	-0.001	0.576	1.000
		Control	-3.705*	0.564	<0.001
	Social skills	Control	-3.704*	0.573	<0.001
Acceptance	Emotional intelligence	Social skills	-0.021	0.552	1.000
		Control	-1.956*	0.536	0.002
	Social skills	Control	-1.935*	0.544	0.003
Positive refusal	Emotional intelligence	Social skills	5.834*	1.537	0.001
		Control	5.602*	1.358	<0.001
	Social skills	Control	-0.231	1.449	1.000
Positive reappraisal	Emotional intelligence	Social skills	-0.623	0.674	1.000
		Control	1.688*	0.650	0.037
	Social skills	Control	2.312*	0.658	0.003

According to Table 6, there was a significant difference in the scores of symptoms of love damage at the pre-test, post-test, and follow-up stages (P<0.001). Significance of the difference at stages suggested that the changes in symptoms of love damage scores remained stable for three months after the interventions. Moreover, the scores of self-blame, other-blame, and acceptance were significantly different (P<0.001) among the pre-test, post-test, and follow-up stages; however, there was no significant difference between the post-test and follow-up stages (P>0.05). At the same time, the scores of the rumination, catastrophization, positive refusal, and positive reappraisal components were significantly different (P<0.001) among the pre-test, post-test, and follow-up stages, as well as between the post-test and follow-up stages. The significant difference indicated that the changes in the scores of rumination, catastrophization, positive refusal, and positive reappraisal components remain constant and persist for three months following the interventions. Table 7 summarizes the analysis of the researcher regarding the pairwise comparison between the research groups.

According to Table 7, the control group had a significant difference from the emotional intelligence and social skills groups in terms of the variable symptoms of love damage (P<0.05). Considering the significant difference between the intervention and control groups and the reduction of the mean scores of the variable symptoms of love damage, at the two stages of post-test and follow-up in the emotional intelligence and social skills groups, compared to the control group, it can be confirmed that both intervention approaches affected the symptoms of love damage and decreased them. Moreover, regarding the self-blame component, there was no significant difference between the emotional intelligence and social skills groups (P=0.496). However, there was a significant difference between the intervention groups and the control group (P<0.001). At the same time, there was no significant difference between the emotional intelligence and social skills groups in terms of other blame, rumination, and catastrophization components (P>0.05); however, there was a significant difference between the intervention groups and the control group (p<0.001).

At the same time, regarding the acceptance component, there was no significant difference between the emotional intelligence and social skills groups (P=1.000). However, the intervention groups had a significant difference with the control group. Given the significant difference between the groups and the decrease in the mean scores of self-blame, other-blame, rumination, catastrophization, and acceptance at the two stages of post-test and follow-up in the intervention groups, compared to the control group, it can be confirmed that both intervention approaches in the current research were effective on these components and reduced them. Moreover, there was no significant difference between the emotional intelligence and social skills groups in terms of positive refusal and positive reappraisal components (P=1.000); however, there was a significant difference between the emotional intelligence group and the control group in terms of both components (P<0.05).

The control group was compared to the emotional intelligence and social skills groups at both the post-test and follow-up stages. Findings of the current research confirmed that both intervention approaches had an effect on these components and increased them. No significant difference was observed between the social skills and control groups in terms of the positive refusal component (P=1.000). It is evident that the social skills method was ineffective for the positive refusal component, and there were no significant changes observed when compared to the control group.

5. Discussion

This research was conducted to examine the effectiveness of emotional intelligence training and social skills training on symptoms of love damage and cognitive emotion regulation in women with the experience of love failure. According to the results of the present study, both emotional intelligence training and social skills training were effective in reducing love trauma symptoms. Moreover, emotional intelligence training and social skills training were effective in reducing self-blame, other-blame, rumination, catastrophization, and acceptance.

In contrast to previous research (16, 21), findings of the present study implicitly addressed the effect of emotional intelligence training and social skills training on love damage symptoms and their reduction. Sergi et al. (2021) stated that emotional intelligence can aid individuals in managing negative emotions and understanding emotions of other people (16). Another study found that social skills training programs have a positive impact on the development of interpersonal and emotional skills (21).

To explain this finding, it can be said that "emotion regulation" is linked to the monitoring of emotions, while "social skills" are related to tenacity to deal with all adversity, empathy, and communication abilities. Risk of depression and anxiety after negative events, including love trauma, can be reduced by the ability to recognize and control emotions in relation to social context. Life of a person can be positively impacted by emotional intelligence as it increases assertiveness and regulates the harmful effects of attention bias (16). Social skills are learned behaviors and social norms that enable individuals to engage in specific types of interactions, which elicit positive responses from others and prevent negative responses. Socially learned behaviors involve social interaction that enables individuals to function appropriately in various situations. According to the nature of social skills, they enhance relationships and improve self-esteem in individuals. Social skills training, unlike emotional intelligence training, teaches people how to use social situations to become independent adults. Regardless of their cognitive shortcomings, individuals should maintain their individuality, have a suitable social life, and take advantage of the opportunities available in society for development (33).

Another finding of the research, which showed that emotional intelligence training and social skills training are effective on the components of self-blame, other people's blame, rumination, catastrophization, and acceptance, and reduce these components, was implicitly consistent with those of previous research (34-36). The results of the research confirmed that emotional intelligence has a positive impact on acceptance levels, focusing on planning, self-blame, and catastrophic strategies (34). Research results also revealed a negative relationship between emotional intelligence and rumination; accordingly, an increased level of emotional intelligence reduces rumination (35). A study also suggested that social skills training leads to an increase in the use of positive emotion strategies and the improvement of appropriate social skills (36).

To explain this finding, it can be stated that poor emotional regulation enhances the impact of stressful events and causes worry and rumination (16). However, emotional intelligence training can aid in the regulation of emotions. To achieve desired goals, emotion regulation involves both internal and external processes that monitor, evaluate, and change emotional responses, particularly intense and negative emotions. Management and regulation of emotions can be done through unconscious cognitive processes, like selective attention, memory distortions, denial, and projection, or more conscious ones, like self-blame, other-blame, rumination, and catastrophization. The process of emotion regulation involves influencing the emotions of

an individual and how they are experienced and expressed. Usage of more adaptive strategies to regulate emotions is associated with higher emotional intelligence (35). In comparison with emotional intelligence, social skills training leads to one's awareness of emotions and expressions of emotions, especially positive emotions in life situations, reducing negative feelings, such as rumination and blame, which consequently improves the level of adaptation in the dimensions of social and emotional adjustment. Behavior modification programs use social skills training to modify maladaptive behaviors (36).

Furthermore, other findings of the present study indicated that emotional intelligence training influences the positive reassessment component and increases it, which is implicitly consistent with the results of previous research (34, 37). In a study performed by Celce et al., the positive reassessment component was shown to be influenced by emotional intelligence training (2023). Another study found that cognitive reassessment is associated with emotional intelligence ability.

The explanation for this finding lies in the fact that emotional intelligence involves accurate comprehension, evaluation, and expression of emotions. One of the primary aspects of emotional intelligence is the ability to successfully regulate emotions. Cognitive reassessment is a cognitive modification that involves reevaluation of a situation that caused emotional arousal to correct its emotional impact. By evaluation of a potentially stressful situation from another perspective, such as arguing with a friend, the emotional burden can be reduced. Higher emotional intelligence makes it easier for us to regulate our emotions and interpret an exciting situation. People who possess higher emotional intelligence prefer to employ more adaptive reassessment strategies rather than suppression of their emotional responses. Conversely, the application of cognitive reassessment is associated with more favorable results in the areas of affective,

social functioning, and well-being.

However, regarding the effect of social skills training on the positive reassessment and positive refusal component, the lack of previous research on this effect means that there is no evidence of a non-aligned research background directly addressing this particular sample group. Consequently, an explanation and justification were provided for the alignment of the study findings with the backgrounds related to the therapeutic approach from a single perspective. According to a previous study, social skills training has been shown to have a positive impact on the development of interpersonal and emotional skills (21). Another research concluded that social skills training is effective in improving and increasing self-efficacy (38).

To explain this finding, it is necessary to state that appropriate social skills are necessary for social competence. Hence, deficits in social skills have a profound and lasting effect on social and emotional well-being (22). Social skills can lead to a sense of calmness and self-confidence, and they are tools that enable people to connect, learn, ask for help, meet their needs in the right ways, collaborate with others, make friends, develop healthy relationships, recognize their strengths and weaknesses in society, take care of themselves, and interact with society in general. Social skills have a significant impact on many functional areas of one's life, such as self-efficacy, high self-esteem, positive self-concept, happiness, positive behavior, and life satisfaction (38).

There were some limitations in the current study. This research analyzed different variables, such as family factors, individual factors, educational background, and economic status that could be effective factors for women with the experience of love failure. Consequently, it was possible for these factors to affect the results of the research. In addition, self-report questionnaires were employed in this study. Since the respondents read the questions in the self-report questionnaire

without the involvement of researchers, their responses might have been biased.

6. Conclusion

The results showed that both emotional intelligence training and social skills training were effective on the variable of love damage symptoms and components of self-blame, other-blame, rumination, catastrophization, and acceptance, and reduced them. Both interventions used in the present study improved the positive reassessment component. However, the social skills training method was not effective for the positive refusal component. The research suggested that counselors and therapists use emotional intelligence and social skills training to improve and treat people with failure. It is suggested that other researchers investigate the effectiveness of this therapy in other areas, such as age, gender, and clinical settings.

Availability of data and materials: The corresponding author can provide the information upon request either during submission or after the publication of the article.

Conflicts of interests: The researchers confirm that the study was carried out without any commercial or financial conflicts of interest.

Consent for publication: The Publisher is sent a signed Consent to Publish to obtain permission from the Authors to publish their Work**.**

Ethics approval and consent to participate:

This study was approved by the Islamic Azad University, Science and Research Branch, with the Ethics Code of IR.IAU.SRB.REC.1402.232. The study was conducted in accordance with the principles of the Helsinki Declaration.

Author contributions: E. P: Contributed to the conception of the work, revising the draft; S.A.: Approving the final version of the manuscript, E. P: Agreeing on all aspects of the work; S.P. M.: Contributed to the data analysis and interpretation, critical revision, and approval of the final version of the manuscript; F. J.: Contributed to acquiring data, drafting the manuscript, and approving the final version; L.M. N. and M. M.: Contributed to the conception and design of the study, critical revision, and approval of the manuscript's final version; F. J.: Contributed to the conception and design of the study, data interpretation, drafting of the manuscript and critical revision, and approval of final version.

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