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Comparing the Effectiveness of Emotional Intelligence and Self-Compassion Training on Mental Well-Being and Academic Self-Concept of High School Students in Hamedan

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ABSTRACT

Purpose: The purpose of this research was to compare the effectiveness of emotional intelligence training and self-compassion practices on mental well-being, academic vitality, and academic self-concept among female high school students in Hamedan.

Methodology: The research method was a semi-experimental three-group design (two experimental groups and one control group) with pre-tests and post-tests. The sample was selected using multi-stage cluster sampling from the population of female high school students in Hamedan in the academic year 2023-2024, with 60 individuals randomly chosen (20 in the first experimental group, 20 in the second experimental group, and 20 in the control group). Measurement tools included the Keyes and Magyar-Moe (2003) Mental Well-being Scale and the Liu and Wang (2005) Academic Self-concept Questionnaire. MANCOVA test and its assumptions were used to test the research hypotheses. ANOVA (one-way analysis of variance) with box plot and post-hoc tests like Tukey and Scheffé were employed for multiple comparisons in the post-test using SPSS version 23.

Findings: The results showed that both emotional intelligence training and self-compassion practices are effective in improving the mental well-being and academic self-concept of female high school students in Hamedan. Additionally, it was found that self-compassion training is more effective than emotional intelligence training in enhancing academic self-concept, but there is no significant difference in the effectiveness of emotional intelligence training and self-compassion practices on mental well-being.

Conclusion: Psychologists can help students gain more awareness of their emotions and learn how to deal with them, set meaningful and achievable goals, increase academic vitality and motivation through realistic goals aligned with personal interests, and strengthen their academic self-confidence. Students should be taught how to cope with educational stress and anxiety, find creative solutions, and learn to utilize available resources and supports.

Keywords: Self-compassion, Emotional intelligence, Mental well-being, Academic self-concept, students, high school

1. Introduction

The emergence and rise of positive psychology in recent years have led psychology to move away from focusing solely on pathology and significantly increase interest and attention towards positive psychological dimensions (Puroh et al., 2022). The World Health Organization also emphasizes in its definition of mental health that having mental health is not limited to the absence of mental disorders; it is a state of well-being and welfare, based on which, an individual can realize their abilities and talents, have the ability to adapt to the normal pressures of everyday life, and be able to have a beneficial and effective impact in their society (Behrouzi, Mohammadi, & Omidian, 2018). There are various individual, educational, and social factors that can correlate with and influence the mental health of students. One of the variables that has always been significantly related to mental health and plays a prominent role in educational, social, and family health, is mental well-being (Bucker, 2018). Mental well-being is defined as a multidimensional construct in which an individual feels satisfaction with themselves, their life, and society; this leads to pleasant and positive feelings in the individual and ensures their mental health (Martin & Cooper, 2017). Mental well-being often includes the individual's self-judgment of their own well-being, encompassing cognitive, emotional, and social components. The cognitive component is often measured as satisfaction with the quality of life and an individual's sense of their own life. The emotional component indicates the positive and negative emotions that an individual experiences in their personal life. The social component relates to the quality of an individual's relationships with others (Mayer et al., 2011). The sense of mental well-being or satisfaction with life is an area of positive psychology that strives to evaluate cognitive assessment and general judgment about satisfaction with life, experience of pleasant and unpleasant emotions of people from their lives, and includes important principles that are identifiable through their impact on all dimensions of human behavior and progress, including physical and mental health, skill and educational advancement, social competence, and creating positive social relationships (Kaykendall & Tay, 2015).

Academic issues form a significant part of the pressures of adolescence, a period in which an individual transitions from childhood and faces new roles and responsibilities in family and society (Ansaralhosseini, Abedi, & Nilforoushan, 2019). Therefore, understanding and adapting to the

opportunities and challenges of students' academic life and the factors influencing it should be a serious focus of researchers and education specialists (Akbari Bourang & Rahimi Bourang, 2015). One of the most important concerns in school psychology is understanding how students strive to cope with academic and school-related problems (Mega, Ronconi, & De Beni, 2014). In educational environments, one of the important concepts emphasized by educational and training professionals is the improvement of students' academic self-concept. Several psychologists have claimed that the key to understanding an individual's behavior is how they perceive their academic self-concept (Franz et al., 2020; Dicke et al., 2018). Self-concept is a network of positive and negative beliefs and perceptions about oneself, acceptance, or rejection of oneself. Theoretically, self-concept is a multidimensional, multi-level, and complex psychological system that refers to a person's perception and mental evaluation of their psychological, physical, and social performance and that of others (Qingfu et al., 2017). Therefore, the set of personal attitudes towards oneself is called self-concept, which includes the following three components: Self-image, which refers to the way we describe ourselves, i.e., what we think we are (whether based on reality or otherwise). Self-esteem, which fundamentally has an evaluative aspect and refers to the extent to which we like, accept, and find value in thinking about ourselves. And ideal self, which is what we would like to be and this may have different extents and degrees (Saleh & Eldeeb, 2020).

Emotional intelligence training, by enhancing an individual's understanding of themselves and others, leads to effective communication with others and adaptation to the surrounding environment, which is necessary for success in meeting social desires (Bar-On, 2005). Therefore, the necessity of teaching emotional intelligence skills to cope with the challenges of modern life is clear to everyone (Goleman, 1995). Bar-On (2010) considers emotional intelligence as a set of competencies and skills that determine how to understand and express oneself, understand others, and deal with daily demands. In Bar-On's model, emotional intelligence has five general categories that include related capabilities and are more extensive and comprehensive compared to other models of emotional intelligence, consisting of intrapersonal skills, interpersonal skills, adaptability, stress management, and general mood. Studies indicate the role and importance of emotional intelligence in various aspects of life, including education, social relationships, and mental health (Salvera et al., 2020; Song et al., 2010).

In recent years, third-wave therapies such as self-compassion and compassion-focused therapy for accepting suffering and reducing psychological distress have been proposed. Compassion means empathy. Definitions of compassion refer to several processes, including: mindful awareness of suffering and awareness of it, and the motivation to remain open to suffering with the aim of alleviating it (Neff, 2009). According to Neff, self-compassion consists of three components: self-kindness versus self-judgment, a sense of common humanity versus isolation, and mindfulness versus over-identification. Compassion in a broader sense is a transdiagnostic treatment applicable in treating various psychological disorders, centered around shame, self-disgust, and self-attack. This treatment is based on evolutionary science and findings related to attachment (Gilbert, 2017). Self-compassion is a personality trait that can play a role in regulating the processing of unpleasant thoughts and emotions and be introduced as an effective criterion in mental health and the treatment of mental illnesses. Training in self-compassion, centered around human commonalities, increases flexibility and enables the individual to adapt to events. Self-compassion as a three-component construct including self-kindness versus self-criticism, feelings of common humanity versus isolation, and mindfulness versus over-identification (Muris & Otgaar, 2023), creates emotional security for the individual that allows them to observe themselves without fear of self-blame and enables them to understand and correct their maladaptive patterns of thoughts, feelings, and behaviors. The goal of compassion-focused therapy is to help individuals respond to self-criticism with self-kindness and compassion. A key part of the process of compassion-focused therapy is to help individuals realize that many cognitive biases/distortions are biological and innate processes created by genetics and the environment. Compassion-focused therapy encourages individuals to develop compassion motivation and practice compassionate behaviors to access healing systems (Mosabeygi, 2021).

Overall, despite the importance of mental well-being and academic self-concept, the main focus in our country's educational system is more on cognitive development, with less attention given to fostering the mental health status of students. While a vibrant and dynamic scientific community is one where elements of well-being and strong self-concept are abundant, and in the educational planning of that community, strategies for the well-being and self-concept of students are presented, research shows that so far the impact of emotional intelligence training or therapeutic

interventions based on emotional intelligence on the level of mental well-being and academic self-concept has been less studied, and there is a noticeable research gap in this area. Therefore, the researcher in this study seeks to answer the question of whether the effectiveness of emotional intelligence and self-compassion training on well-being and academic self-concept of high school students in Hamedan is different.

2. Methods and Materials

2.1. Study Design and Participants

The present research method is experimental, and its design is of the pre-test and post-test type with a control group. The statistical population of this research consists of all female high school students in Hamedan in the academic year 2021-2022, totaling 500 students. A sample of 60 students was selected through multi-stage cluster random sampling and randomly assigned into two groups: experimental and control. The statistical sample included 60 students who scored lower on mental well-being and academic self-concept in a test. They were randomly placed into three groups: two experimental groups of 20 each and one control group of 20, and were evaluated in terms of the research variables.

2.2. Measures

2.2.1. Mental Well-Being

The Mental Well-Being Scale, developed by Keyes and Magyar-Moe (2003), is used to measure emotional, psychological, and social well-being and consists of 45 questions. The first 12 questions relate to emotional well-being, the next 18 to psychological well-being, and the final 15 to social well-being, scored on a 7-point Likert scale. The internal reliability of the emotional well-being subscale was 0.91 for positive emotions and 0.78 for negative emotions. The psychological and social well-being subscales had an average internal reliability ranging from 0.4 to 0.7, and the total reliability of both these scales was 0.8 and higher. In the study by Keyes and Magyar-Moe (2003), the validity of this scale was examined using factor validity, and the results of confirmatory factor analysis supported its three-factor structure. In the study by Dost (2004), a reliability and retest reliability coefficient of 0.86 was reported. The reliability of the Mental Well-Being Scale and its subscales for emotional well-being, psychological well-being, and social well-being were 0.75, 0.76, 0.64, and 0.76, respectively (Golestan

Bakht, 2007). Cronbach's alpha for each of the above items was calculated as 0.80, 0.86, 0.80, and 0.64, respectively, indicating satisfactory internal consistency of the scale (Alinasab, Shahgholian, & Farahani, 2017).

2.3. Academic Self-Concept

The Academic Self-Concept Questionnaire was developed by Liu and Wang (2005). This questionnaire has two subscales: students' academic confidence (10 questions) and academic effort (10 questions), and the responses to these statements are set on a 4-point Likert scale, ranging from 1 (never) to 4 (always). Also, Cronbach's alpha coefficient for the academic confidence subscale was 0.72

and for the academic effort subscale was 0.76. Additionally, the validity of this questionnaire was calculated at 0.7 using factor analysis (Eslami et al., 2020).

2.4. Interventions

2.4.1. Emotional Intelligence Training

The emotional intelligence training program was conducted over 6 sessions, each lasting 90 minutes, based on the Bar-On model (2010). In each session, students were introduced to one of the areas of emotional intelligence to acquire the necessary skills in that sub-scale. The training was carried out in a completely practical manner with the participation of the students.

Table 1

Emotional Intelligence Training Session Structure

Session	Duration	Content
Session 1	90 minutes	Intrapersonal Component Training: Pre-test, introduction to group members, defining emotion, emphasizing the importance of emotions. Training on intrapersonal components of Bar-On's (2000) Emotional Intelligence model, including understanding and accepting one's own emotions, even negative ones like anger and irritation. Activities include discussions and paper-pencil exercises.
Session 2	90 minutes	Adaptability Component Training: Reviewing previous session topics, focusing on adaptability including effective coping with emotions, thoughts, and behaviors in various situations and managing emotions through role-playing. Homework assigned for recording various emotions experienced and how they are dealt with.
Session 3	90 minutes	Interpersonal Component Training: Reviewing homework, empathy skills training including understanding others' emotions and appropriate reactions, through role-playing and demonstration. Emphasizing the importance of relationships, how to establish and maintain emotional relationships with intimacy and kindness. Homework assigned for recognizing emotions in relationships and noting responses.
Session 4	90 minutes	Interpersonal Component Training: Reviewing homework and previous discussions. Training on other aspects of interpersonal emotional intelligence including social responsibility, cooperation, and constructive participation in groups through games and role-play. Homework involves noting situations of cooperation with others and their positive outcomes.
Session 5	90 minutes	Stress and Anger Control Training: Reviewing previous sessions, focusing on anxiety and anger emotions, methods to control and confront these negative emotions through various tasks like drinking water, deep breathing, and changing thoughts. Training includes discussions, role-playing, and visualization. Homework involves noting personal coping mechanisms for anger and anxiety.
Session 6	90 minutes	Optimism and Cheerfulness Training: Reviewing past sessions and homework, focusing on positive aspects of life, happiness, and expressing positive emotions through games and demonstrations. The session concludes with a post-test and summary of all sessions.

2.4.2. Self-Compassion Therapy

The content of the self-compassion-focused therapy sessions was designed based on the therapeutic model by

Gilbert (2017). A brief description of the compassion-focused therapy sessions is provided in the table below.

Table 2

Compassion-Focused Therapy Session Structure

Session	Duration	Content
Session 1	60 minutes	Objective: Familiarization and relationship building, increasing group dynamics. Method: Introducing members to each other, establishing initial contact, overview of group rules, session structure and goals, introducing kindness and unkindness concepts, summarizing, and ending the session.
Session 2	60 minutes	Objective: Familiarization with the first step in well-being. Method: Review of the first session, introducing the care of well-being as the first step, identifying obstacles to the first step like negative emotions, mental pressure, etc. Homework: One-week note-taking of obstacles to peace and health, reporting feelings and actions during anger that initially felt satisfying but led to negative experiences.
Session 3	60 minutes	Objective: Familiarization with pain recognition and understanding suffering. Method: Introducing sensitivity to suffering as the second step, recognizing suffering in others' lives, responding to why others and oneself might function poorly, compassion for self and sufferings, not running away from suffering, and understanding the incomplete humanity stemming from childhood sufferings. Practice pain recognition in the group. Homework: Event recording, practicing pain recognition and understanding suffering in others' lives, and showing compassion, then reporting.
Session 4	60 minutes	Objective: Learning about emotion regulation in compassion. Method: Introducing emotion regulation systems, the compassion-based system, and the automatic system based on primary motivation and defense. Presenting concrete examples of incorrect strategies in regulating emotions. Homework: Writing about positive and negative behaviors over a week, identifying the emotion regulation system in them, and reporting.
Session 5	60 minutes	Objective: Learning techniques for changing the interpretation system in the brain. Method: Introducing components of empathy, sympathy, and non-judgment as the third step. Practicing empathy in the group and non-judgmental interpretation. Homework: Event recording and practicing alternative interpretations to judgment and blame, based on empathy.
Session 6	60 minutes	Objective: Familiarization with brain function. Method: Introducing different mind states, the old brain and its functions as shared between humans and animals, the new (analytical) brain and its functions as the distinction between humans and animals, and the third brain, known as the conscious brain, as a treasure of compassion with decision-making functions free from the first and second brains in various life situations. Homework: Living with a conscious brain for a week and reporting positive and negative outcomes.
Session 7	60 minutes	Objective: Learning to change the style of attention and interpretation in a compassion-focused manner. Method: Practicing kind attention to emotions and feelings, the second healing skill of compassion, the third step: Practicing empathetic attention, including the third skill of compassion. Group practice of empathetic attention and non-judgmental interpretation compared to logical, moral, or emotional-sensory judgments based on pleasantness or unpleasantness. Introducing compassionate reasoning as the fourth step and practical application of compassionate reasoning in a group activity. Homework: Event recording and practicing compassionate reasoning.
Session 8	60 minutes	Objective: Introduction of the third brain as a result of self-kindness. Method: Learning and teaching kind behavior as healing skills of compassion, introducing skills of compassionate attention and compassionate feeling as the fifth step, behavior, imagination, and sensory experience of compassionate feeling as the sixth step, kind feeling as a healing skill in compassion. Summarizing and concluding the session, answering members' questions, evaluating the sessions, thanking and appreciating members for participating.

2.5. Data analysis

For data analysis, descriptive statistical methods (mean and standard deviation) and inferential statistics (analysis of covariance and post-hoc tests) using SPSS-24 were employed.

3. Findings and Results

The scores of the research variables (mental well-being and academic self-concept) in both pre-test and post-test situations are presented for each group.

Table 3

Means and Standard Deviations of Research Variables Scores in Pre-test and Post-test

Variable	Situation	Control Group	Emotional Intelligence	Self-Compassion
		M	SD	M
Mental Well-being	Pre-test	149.30	6.85	151.00
	Post-test	148.95	5.54	231.75
Academic Self-concept	Pre-test	60.45	3.28	61.95
	Post-test	60.35	3.89	79.55

To ensure the equality of groups in the pre-test, a multivariate analysis of variance (MANOVA) test and its

related assumptions were used. For this purpose, seven assumptions of multivariate analysis of variance including

sample size, normality (normal distribution of data), multivariate normality, linearity, homogeneity of regression, multicollinearity, and homogeneity of variance-covariance matrices were examined. Then, the differences in the scores

of mental well-being and academic self-concept among the different groups in this study were evaluated.

Table 4

Results of Multivariate Analysis of Variance (MANOVA) for Post-test Dependent Variables

Dependent Variable	F Statistic	Significance Level	Effect Size
Mental Well-being	1095.58	0.001	0.975
Academic Self-concept	481.92	0.001	0.944

As can be seen in the table above, the use of emotional intelligence training and self-compassion practices has an effect on mental well-being (Sig = 0.001; F = 1095.58) and academic self-concept (Sig = 0.001; F = 481.92) in the post-test stage. Therefore, it can be said that emotional intelligence training and self-compassion practices have an

impact on mental well-being and academic self-concept. Subsequently, the Bonferroni post-hoc test was used to investigate the difference in the effectiveness of emotional intelligence training and self-compassion practices, and the results are presented in the table below.

Table 5

Pairwise Comparisons Using Bonferroni Post-hoc Test to Determine the More Effective Method

Dependent Variable	Base Group	Comparison Group	Mean Difference	Significance Level
Mental Well-being	Control Group	Emotional Intelligence	-82.80*	0.001
		Self-Compassion	-78.85*	0.001
	Emotional Intelligence	Control Group	82.80*	0.001
		Self-Compassion	78.85*	0.001
Academic Self-concept	Control Group	Emotional Intelligence	-19.20*	0.001
		Self-Compassion	-29.45*	0.001
	Emotional Intelligence	Control Group	19.20*	0.001
		Self-Compassion	29.45*	0.001

* indicates statistical significance at 0.001 level.

The results of the Bonferroni post-hoc test using adjusted means in the post-test indicate that there are significant differences in the scores of mental well-being and academic self-concept between the control, emotional intelligence, and self-compassion groups in both pre-test and post-test stages ($P < 0.001$). In other words, the groups with emotional intelligence and self-compassion training scored higher in mental well-being and academic self-concept compared to the control group. It was also found that there is a significant difference in the scores of academic self-concept between the emotional intelligence and self-compassion groups in the post-test using adjusted means ($P < 0.001$). In contrast, it was revealed that there is no significant difference in the scores of mental well-being between the two groups of emotional intelligence and self-compassion ($P > 0.05$). In other words, emotional intelligence training compared to self-compassion practices has a greater effectiveness on academic self-

concept of students, but there is no significant difference in the effectiveness of emotional intelligence training and self-compassion practices on students' mental well-being, and both are equally effective.

4. Discussion and Conclusion

The aim of this study was to compare the effectiveness of emotional intelligence training and self-compassion practices on mental well-being and academic self-concept among female high school students in Hamedan. The findings revealed that emotional intelligence training has a significant impact on the mental well-being of these students. This result is consistent with studies by Abedini Valamdehi and Ravanbakhsh (2021), Afshari Nia et al. (2018), Ghavam et al. (2015), Maleki et al. (2012), and Llamas-Diaz et al. (2022). These studies reported that

emotional intelligence leads to improved mental well-being. No contrary research was found, indicating the prominence and increased reliability of these results.

The reason emotional intelligence training significantly affects students' mental well-being is that it helps students gain more awareness about themselves, their emotions, communications, and interactions with others (Afshari Nia et al., 2018). This awareness assists them in better understanding and managing their emotions. Emotional intelligence also helps students find effective ways to manage stress and enhance their abilities to cope with pressures and challenging situations (Abedini Valamdehi & Ravanbakhsh, 2021). Awareness of emotions and management abilities in stressful conditions leads to improved psychological experience and life quality. Moreover, emotional intelligence helps students better understand themselves and others, thus enhancing the quality of their relationships and communications. Improved relationships contribute to increased positive relations and reduced psychological concerns and problems (Maleki et al., 2012). Finally, emotional intelligence enables students to control their emotional and psychological issues and focus on their academic performance. These skills help students improve their stress and psychological problems, enhancing their concentration and learning ability.

The findings also demonstrated that emotional intelligence training significantly impacts the academic self-concept of high school students in Hamedan. This result aligns with the studies of Tamanaiefar et al. (2010) and Garcia-Martinez et al. (2023). Tamanaiefar et al. (2010) showed a positive and significant relationship between emotional intelligence and academic self-concept, and Garcia-Martinez et al. (2023) additionally confirmed that emotional intelligence reduces academic stress levels through effective self-concept. Emotional intelligence training helps students improve their ability to recognize and analyze their own and others' emotions, enhancing their positive self-concept and confidence in academics (Garcia-Martinez et al., 2023). Furthermore, the ability to communicate effectively, solve problems in groups, and cooperate is strengthened by emotional intelligence (Tamanaiefar et al., 2010). These skills can lead to increased academic self-concept and efforts to achieve educational goals. Emotional intelligence also creates motivation and interest in students for learning. Finally, students with strong emotional intelligence are better equipped to handle academic stress, knowing the best ways to reduce stress and

interact healthily with the educational environment, contributing to a positive academic self-concept.

Additionally, the findings indicated that self-compassion training has a significant effect on the mental well-being of high school students in Hamedan. This finding is consistent with the studies of Soleymanpour Moghadam et al. (2022), Monemian et al. (2021), Aghili and Asadpour (2020), Varaei et al. (2017), and Muris and Otgaar (2023). These studies showed a positive and significant relationship between self-compassion and mental well-being, with self-compassion leading to improved mental well-being. Morris and Outagar (2023) stated that self-compassion, as an emotional motivational system, controls individuals' negative emotions through engagement in supportive actions and attachment, ultimately maintaining group bonding (Monemian et al., 2021). As humans develop the mental capacity for self-reflection, they can show compassion towards themselves when facing obstacles and related negative emotions. This self-compassion enables them to effectively cope with such emotional turmoil and ensures their full participation in social life (Soleymanpour Moghadam et al., 2022; Varaei et al., 2017). No contradictory research was found.

The reason self-compassion training significantly affects students' mental well-being is that compassion and empathy towards others, such as peers and colleagues, allow students to form stronger and more positive connections with others. These connections may enhance the sense of tolerance and acceptance of their own and others' abilities. These interactions also create opportunities for new learning, support, and guidance (Aghili & Asadpour, 2020). Additionally, compassionate people tend to help others and be present during challenges and problems. This presence alongside others reduces feelings of loneliness and isolation and strengthens social relationships. Moreover, compassion requires positive affect and kindness. Students who are compassionate can reassure themselves of their worth and value, enhancing their self-esteem. Self-compassion can also facilitate improved empathy and cooperation within groups (Varaei et al., 2017). Compassionate students can support their classmates without fear of criticism and humiliation, leading to positive cooperation and interaction within the group. This empathy and cooperation can directly improve students' academic performance and behavior (Monemian et al., 2021). Finally, self-compassion helps students accept differences and diversity in ways and personal talents, promoting self-esteem, intimate relationships, and a sense of belonging to the group.

Another finding of this research was that self-compassion training significantly impacts the academic self-concept of high school students in Hamedan. This result is consistent with studies by Harouni and Khoshakhlagh (2022) and Zhou et al. (2022). Harouni and Khoshakhlagh (2022) showed that self-compassion explains academic self-concept, and Zhou et al. (2022) stated that self-compassion is a significant predictor of self-concept.

The reason why self-compassion training significantly affects students' academic self-concept is that self-compassion can increase their self-confidence. When students are kind and compassionate towards themselves, they feel valuable and deserving of success (Harouni & Khoshakhlagh, 2022). This self-confidence can give them more faith in their abilities and improve their academic self-concept. Additionally, self-compassion can help students place greater value on their efforts in education. When students are self-aware, evaluate themselves, and show more interest in learning, they are likely to put more and better effort into their studies. Moreover, self-compassion can impact students' concentration and attention in academic matters. When students treat themselves with attention, respect, and encouragement, they are better able to control their study habits and learning processes, thereby improving their academic self-concept. Furthermore, self-compassion can encourage students to learn and advance in their studies (Zhao et al., 2022). When students realize that their commitment and efforts are recognized and appreciated, they feel that their efforts can lead to positive outcomes, which can influence their academic self-concept. Lastly, self-compassion can increase students' motivation and enthusiasm for learning. When students view themselves with warmth and support, they find more meaning and motivation for studying and achieving their goals (Harouni & Khoshakhlagh, 2022).

In addition, this study's findings indicated that there is a significant difference in academic self-concept scores between the emotional intelligence and self-compassion groups, with self-compassion training being more effective than emotional intelligence training on academic self-concept. No contrasting research was found regarding this finding.

One of the reasons why self-compassion training is more effective than emotional intelligence training on academic self-concept is that compassion means paying kind, reciprocal, and genuine attention to the woes and troubles of others. When a person experiences compassion and understands that others are aware of them and their

problems, it promotes an improvement in their self-concept. For example, in an educational environment, compassion training can create a significant improvement in students' academic self-concept (Afshari Nia et al., 2018). When students are involved in a compassionate classroom and feel that their teacher and classmates are eagerly paying attention to their learning and progress, their self-belief and confidence increase. This increased self-belief can lead to greater effort and facilitate learning. Additionally, compassion training for students can improve social relationships and create a supportive and friendly environment in the classroom. When students interact with each other as a compassionate community, the sense of inclusiveness and acceptance in the group rises, influencing their academic self-concept (Soleymanpour Moghadam et al., 2022).

Finally, it was found that there is no significant difference in mental well-being scores between the emotional intelligence and self-compassion groups. This means that emotional intelligence training and self-compassion training are equally effective in enhancing students' mental well-being. No contrasting research was found regarding this finding.

The reason there is no significant difference in mental well-being scores between the emotional intelligence and self-compassion groups is that both compassion and emotional intelligence are associated with positive and constructive relationships with others. In this case, compassion and emotional intelligence can help students form good relationships with their classmates and teachers, feel a sense of belonging to the educational environment, and benefit from the support and empathy of others. These positive and supportive relationships can significantly contribute to the mental well-being of students. Additionally, emotional intelligence, which entails recognizing and managing emotions, helps students improve negative emotions and reduce the occurrence of stress and anxiety (Garcia-Martinez et al., 2023). Likewise, compassion, which involves empathy and attention to the pain and suffering of others, helps students understand others' emotions and show appropriate responses. This management of emotions and empathy can strengthen students' mental well-being. Furthermore, both emotional intelligence and compassion are related to self-awareness. Self-awareness helps students have a deep understanding of themselves, define their beliefs and personal values, and adhere to their goals and values. This self-awareness can lead to improvements in life outlook, fulfillment of needs,

and personal growth, which in turn promote mental well-being. Additionally, compassion and emotional intelligence can help students have more motivation, enthusiasm, and drive in their studies and achievements. This eagerness and drive can be influential in their growth and advancement, and through improving academic performance and progress in the educational path, they can assist in their mental well-being and academic self-concept (Tamaneifar et al., 2010).

The study's limitations primarily include its restricted demographic focus, as it only encompassed female high school students in Hamedan, potentially limiting the generalizability of the findings to other groups or regions. The reliance on self-reported measures may also introduce bias, as such measures are subject to personal interpretations and accuracy of self-assessment. Additionally, the relatively short duration of the intervention and follow-up periods might not capture the long-term impacts of emotional intelligence and self-compassion training, thereby potentially overlooking sustained or delayed effects.

For future research, it would be beneficial to expand the study's demographic scope to include a more diverse range of participants, such as male students and students from different geographical or cultural backgrounds, to enhance the generalizability of the findings. Longitudinal studies could be conducted to examine the long-term effects of emotional intelligence and self-compassion training on mental well-being and academic self-concept. Additionally, incorporating objective measures, such as academic performance records or physiological stress indicators, could provide a more comprehensive assessment of the interventions' impacts. Exploring the underlying mechanisms through which these trainings influence mental well-being and academic self-concept would also add depth to the current understanding.

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In terms of practical applications, educators and mental health professionals working with high school students could integrate emotional intelligence and self-compassion training into their curricula or therapeutic practices. This integration could be tailored to address the specific needs of different student groups. Schools and educational institutions might also consider training teachers in these areas to foster a more supportive and empathetic learning environment. Furthermore, developing and implementing workshops or programs that specifically target the development of these skills in students could be a proactive approach to enhancing their psychological well-being and academic performance. Such initiatives should aim to create a sustainable and inclusive approach to student development, considering the diverse needs of different student populations.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics principles

In this study, ethical considerations such as obtaining full consent from all participants, maintaining confidentiality and secrecy of information, and allowing participants to withdraw from study.

Authors' Contributions

All authors contributed equally.

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