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Comparing the effectiveness of social skills and cognitive-affective skills trainings on violent behaviors tendency among high school students

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Abstract

Introduction: This study aimed to investigate the effectiveness of social and cognitive-affective skills on violent behaviors tendency among high school students.

Materials and Methods: The population of this clinical trial included male high school students of Hamadan and Tehran studying in academic year of 2012-2013. The sampling in the first step was done through multi-level cluster sampling and in the second step, random substitution was used. First, the Interpersonal Aggressive questionnaire was administered to the students. Then, 120 students (60 students in each province) were chosen from among those who received the higher scores than the cut point and they were randomly distributed to the control and experimental groups (i.e., 6 groups with 20 students in each group). The social and cognitive-affective skills programs were performed in 10 sessions. In addition to the CTS questionnaire including social specifications, demographic questionnaire, Bar-On Emotional Intelligence questionnaire, Emotional Control scale, and the second version of Rahim Organizational Conflict Inventory- II (ROCI-II) were administered. To analyze the data, Covariance analysis (ANCOVA) and LSD test were used.

Results: The results indicated that there is a difference between the effectiveness of social skills and cognitive-affective skills on the tendency toward aggressive behaviors (P= 0.021, M= 2.824).

Conclusion: It seems that training cognitive-affective skills is more effective than social skills in reducing violent behaviors tendency in high school students.

Keywords: Adolescents, Affect, Cognition, Social skills, Violence.

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Introduction

Juvenile violence is one of the society's basic problems which are increasing today. It often occurs due to an individual's reaction to others' inappropriate behaviors, and covers a range of deliberate violent physical, psychological and verbal behaviors, hostility, opposition, criticism, feelings of resentment, and avoidance of issues and individuals. Violence has always been one of the world's most serious problems throughout human history (1) to the extent that about 3.5 million people are victims of violence in the

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world every year (2). In today's society, violence, in its various forms, has become a social problem and part of a normal behavior (3), which can be observed increasingly in clashes among people in the community; we see it in the school, sports ground, home and street everyday (4). Data related to offices of police also confirms this; the violence rate has risen from 36,689 in 1986 to 50,649 in 1992 to 80,036 in 2004 (5).

There is no doubt that violence in society can cause serious physical and mental harm to individuals, and can damage properties. In addition, when it is spread, it can seriously damage the social relationships (4). Anger is a satisfying, yet destructive, excitement that activates our internal system, and prepares us to deal with the potential risks of the environment (6). Anger has both harmful internal and external effects. Inability to manage anger, in addition to personal discomfort, disturbance in general health and interpersonal relationships, leads to inconsistency and harmful consequences of aggressive behaviors; it affects the individual's health of body and mind and his self-perception (7). Blomart pointed out that violence and aggressions in Belgian schools, are not only significant among high school students, but also have shown themselves as antisocial behaviors among primary school students (8). In addition, Smith and Sharp (9) and Arora and Thampson (10) introduced violence in school, specifically the annoying phenomenon which is a new form of violence, as one of the problems of education in England. Research studies refer to two general categories of aggression: reaction and action (11). Reactive aggression is anger or a retaliatory response to an actual or perceived provocative factor. This kind of aggression is the most common type among adolescents, and the adolescents who are involved with this type of aggression often gain a high score in anger measurements. Accordingly, adolescents' inference of abuse or hostile threat is rooted in their childhood experiences; they were the victims of physical abuse and violent disciplines. They are self-assertive with respect to the hostile and negative signs in their mutual relations. However, action aggression occurs without any reason; it is objective-oriented. An individual with such an aggression is not externalizing anger due to an emotional pressure; he believes that violence is a fruitful and acceptable way to achieve some goals. For such an individual, aggression is considered legitimate, justified, or necessary to achieve a goal. Adolescents tend to be overwhelmed by aggressiveness, react violently without thinking and often without regret (12). One of the reasons of this behavior is that the individual is not able to logically process the input. But why do adolescents and generally community members behave violently (verbally and practically) in facing life challenges? According to different perspectives in the field of aggression, various factors contribute to aggressive behaviors. In some cases, biological factors, such as malfunctioning of the frontal part, play a major role. In other cases, psychological or social/environmental factors play a more powerful role (13). According to Bandura's social learning approach, aggression is a form of social behavior which is learned, and its occurrence depends on factors such as aggressive experience and many cognitive and social factors (14). This theory considers aggressive behavior as a result of lack of development of social skills. Followers of cognitive view consider morbid thoughts as the main cause of aggressive behaviors. According to them, it is useful to use cognitive and social skills training and anger control techniques (15). Hence, having a coherent framework for understanding violence and aggression is helpful in many aspects, including effective therapeutic interventions. The interaction of adolescent characteristics and the complex and variable context influences the adaptability and behaviors associated with the health of individuals. Due to their particular growth period, adolescents have to face many biological, educational and social transitional events. They should find solutions to solve problems and deal with them. Due to these specific features, problematic behaviors in this period of time, such as mischief, controversy, bullying and conflict in some teens, can be due to the lack of proper control of emotions. Therefore, excitement in thoughts creates priority, shapes memory, and creates different perspectives to solve problems. In addition, to use emotions, there is a need for a rich emotional treasury; an individual needs to learn how to control his emotions (16). Many scholars have worked in this field and are seeking ways to intervene aggressive behaviors. For the past forty years, two major issues related to the aggressive behaviors have attracted the attention of many educators,

researchers and mass media; they have urged many countries' official institutions to reduce and prevent this phenomenon. First, the rate of violent behaviors among people in societies has increased (17). Second, the average age of people committing violence is reduced, and more often children, especially adolescents, do so (17). Excessive concern about adolescents' violence has led to efforts to understand its symptoms and consequences, and to identify effective ways to prevent and mitigate this phenomenon (18). The results of Olweus' study (19) showed that in Norway, 15% of elementary and high school students are somehow involved in the abusive problem, as either abusers or victims. The spread of violence and aggression, especially in recent years, has been one of the most serious social harms in Iran (20). Many of the tensions at school are due to the interpersonal behaviors of the students who, despite different social and cultural backgrounds, study together; they are not trained to establish rapport and to improve social skills. With regard to coping with the verbal or physical violence of students in recent years, many actions have been taken by national education authorities or by researchers in the form of pilot interventions at the school level, the results of which are promising in terms of prevention and reduction of the students' behavioral problems. Olweus (21), Sharp (22) and Wheldall (23) are among the researchers who have presented major initiatives to combat violence at school. Most of the researchers, emphasizing prevention programs, believe that teaching some ways to prevent violence should be a part of schools' curriculum; all citizens must be trained about violence prevention as much as they are guided about heart diseases, cancer and other diseases. Social skills training (i.e., empathy, effective communication and conflict resolution) is one of these programs. In everyday life, humans need the skills to interact with others (i.e., family members, classmates, friends, teachers, co-workers, vendors and even vehicle drivers). Human beings are not able to live without communicating with others. Relationships play a key role in family, educational, occupational and social settings. Therefore, the higher the quality of communication is, the more favorable the social consequences are. Hence, the acquisition of these skills contributes to the individuals' social development (24). Forneris et al. (25) and Turner et al. (26) showed that problem solving skill training and effective communication skills training enhance adolescents' abilities to solve problems and to use social support effectively. The second strategy is to teach cognitive-affective skills, including self-awareness, problem solving and anger control. The purpose of these trainings is to enable students to identify their emotions, to distinguish negative emotions and negative behaviors, to know how emotions affect behaviors, and to be able to respond appropriately to different emotions. If emotional moods, such as sadness, anger or anxiety, are not properly addressed, they will have negative effects and consequences on physical and mental health (27). It is important to pay attention to the issue of violence among adolescents because, on the one hand, adolescents spend most of their time at school; students who are subject to verbal or physical violence in the school, or even observe it, experience a sense of insecurity and school hatred. This issue represent gradually as an academic failure or dropout (28). On the other hand, human personality is shaped in childhood and adolescence by the influence of socialization factors and institutions, which are very effective in internalizing social values in individuals (29). Therefore, considering the fact that the basis of mental health development programs is primary prevention, and the main method of the primary prevention is training and awareness raising the present study was designed to develop social and cognitive-affective skills training programs and to compare the effectiveness of these programs. Specifically, it addressed the issue that if training these skills played an effective role in psychosocial empowerment of the students and reduction of violent behaviors in high schools in Tehran and Hamadan provinces. Which of the programs, if any, was more effective?

Materials and Methods

In this clinical trial, pretest-posttest randomized group design was used. The population included all male high school students in Tehran and Hamadan provinces studying in 2012-2013 academic years. The sample included six groups of students (i.e., four experimental and two control groups). Four hundred students were selected by using Krejcie and Morgan's table (30) and considering the population size. Since experts suggested having at least 15 subjects in each

group (31) in experimental studies, to increase the confidence coefficient for drop of the subjects, 20 students were selected in each group. In the other words, 120 students were selected to participate in the study. The sampling in the first step was done through multi-level cluster sampling, and in the second step random substitution was used. To conduct multi-level cluster sampling, first three cities (i.e., the capital and two other cities) were selected. Then, two high schools were randomly selected from each city. In the other words, three cities (the capital, Ghahavand and Kabudrahang) were selected from among the cities of Hamadan province; three cities (the capital, Ghods and Shahriar) were selected from among the cities of Tehran province. Then, from each of the selected cities, two boy high schools were randomly selected. All students in these high schools filled out the interpersonal violence questionnaire. From each city, 20 students (i.e., a group) with the score above the cut score were selected. Thus, six groups were formed. It is worth mentioning that to consider the homogeneity of the groups and the reliability of the conditions and characteristics of individuals, the groups studied were matched in terms of their educational level. Then, the groups in each province were randomly assigned to two experimental and one control groups. The ethical considerations that were considered in this study included informed consent, voluntary participation of subjects, the right to withdraw from the study or not to disclose the information, privacy/confidentiality, and avoidance of harm and discrimination. To collect data, first of all, the first phase samples (i.e., the high school students in the capital of Hamadan, Kabudrahang, Ghahavand, the capital of Tehran, Ghods and Shahriar) filled out the interpersonal violence questionnaire (CTS). Then, in the second phase, the cases (120 boys) were randomly assigned to experimental and control groups, and the pretest was administered. The first and second experimental groups in each province were trained social skills and cognitive-affective skills during 10 sessions, respectively; however, the control groups did not receive any treatment. The instructors had at least a master's degree in one of the subfields of psychology; they were sent to cities after training and informing the teaching methods according to the specified protocol. When the treatment finished, the posttest was administered to all six groups. Training content used in this study included a social skills training program and a cognitive-affective skills training program. More specifically, each of the social skills training program and cognitive-affective training skills program was hold in 10 sessions (i.e., 90-minute group sessions), twice a week. In fact, several sources had been used to compile and structure the content of the training programs (i.e., cognitive-affective skills and social skills) (32-35).

Social skills training program

Session 1: Introduction, conducting pretest, communicating with students and motivating them, defining social skills training plan and describing its benefits and uses in life

Sessions 2 and 3: Empathy skill training. This skill was taught to students through role play and group discussions during two sessions. In the second session, the concept of empathy, its use, and inability to express it were discussed, and in the third session, the way of expressing empathy and the differences between empathic and non-empathic reactions were taught.

Sessions 4-7: Effective communication skills training. This skill was taught to students through role play, brainstorming and group discussions during four sessions. In the fourth session, communication and its types and familiarity with emotional intelligence were discussed; in the fifth session, effective communication techniques, steps and barriers of interpersonal communication were taught; in the sixth session, self-expression and courage were taught; in the seventh session, individual differences and communication styles were discussed.Sessions 8 and 9: Conflict resolution skill training. This skill was taught to learners through group discussion, role play and problem solving during two sessions. In the eighth session, conflict management and common styles of coping with conflict were discussed; in the ninth session, conflict management techniques and strategies were taught.Session 10: Summing up, exchanging views and solving problems. In this session, the issues discussed in the previous sessions were briefly reviewed and summarized. At the end of the session, the posttest was administered.

Cognitive-affective skills training program

Session 1: Introduction, conducting pretest, communicating with students and motivating

them, defining social skills training plan and describing its benefits and uses in life

Sessions 2-4: Self-awareness skill training. This skill was taught to students through induction and group discussions during three sessions. In the second session, the concepts of self-awareness and self-assessment were taught; in the third session, the concepts of self-concept, identity and self-esteem were discussed; in the fourth session, awareness of their rights and values was raised.

Sessions 5 and 6: Problem solving skill training. This skill was taught to learners through role play and group discussions during two sessions. In the fifth session, problem solving steps, its significance, problem-solving attitude and problem definitions were discussed. In the sixth session, the brainstorming technique, the choice of the best solution, the implementation of the chosen solution and evaluation were taught.

Sessions 7- 9: Anger control training. This skill was taught through group work, role play, and group discussions in three sessions. In the seventh session, recognizing emotions, defining anger and physical symptoms associated with anger were discussed; in the eighth session, inner speech was trained; in the ninth session, anger expression techniques, identification and alternation of the incorrect attitudes toward anger and violence, and practical ways to control angers were practiced. Session 10: Summing up, exchanging views and solving problems. In this session, the issues discussed in the previous sessions were briefly reviewed and summarized. At the end of the session, the posttest was administered.

Research instrument

A) Social and Demographic Questionnaire: This questionnaire includes demographic variables that may affect the behavior of adolescents. They include age, place of birth, grade, type of school, number of children in the family and the socio-economic status of the family.

The socio-economic status of respondents was determined through mixed methods and factors such as education, parents' occupation, type of housing and family income (36). Accordingly, weighing 1 to 5 was given to the six factors. Then the weighted average of each factor was determined. In the next step, the total rank of an individual has been obtained from the total scores of the individual's family. Finally, high, medium and low economic levels were estimated through calculating the range.

B) Interpersonal Violence Questionnaire (CTS) Adopted from Conflict Tactics Scale: One of the most important scales to estimate the tendency towards violence is Conflict Tactics Scale. Straus invented it in 1979; it was revised a number of times between 1979 and 1990. Its coefficient of validity is reported as 82% (37). Moreover, this scale has successfully been used in at least 20 countries of the world by different researchers. CTS scale is increasingly being used as a diagnostic tool in family treatment. Several studies supported this scale's reliability, validity, and factor structure (38).

Parsa Mehr et al. estimated the internal consistency of the scale factors. After eliciting the responses and conducting the analysis of the main factors through Varimax rotation method, three factors of verbal violence, minor physical and severe physical violence were identified. All components of the scale had been ranked based on the Likert scale (never, 1-2, 3-5, 6-10, and more than 10 times). To estimate violence in general, depending on the severity of each unit, weigh 1 to 3 (1 to verbal violence, 2 to minor physical violence, and 3 to severe physical violence) was assigned (39).

C) Bar-On Emotional Quotient Inventory (EQ-i): This questionnaire was used to estimate the students' level of problem solving skill, effective relationships, self-awareness, empathy with others, and coping with stress. It was created based on the Emotional-Social Intelligence model. It is a self-report scale evaluating behaviors related to emotional and social intelligence; it consists of 90 questions, and each question has a score of 1 to 5. This instrument includes five factors, which consist of a total of 15 subscales. The five factors of the questionnaire (i.e., EQ-i) include intrapersonal factor (i.e., emotional self-awareness, self-expression, self-esteem, self-actualization and independence), interpersonal factor (i.e., empathy, responsibility and interpersonal relationships), stress management factor (i.e., stress tolerance and impulse control), compatibility factor (i.e., problem solving, reality testing and flexibility), and general mood factor (i.e., optimism and happiness). Bar-On Emotional Quotient Inventory is the first valid cross-cultural questionnaire to evaluate emotional intelligence.

This test was revised in 1997. This revision was made by the author while it was

administered to 3831 participants (48.8% men and 51.2% women) from all over the world. The responses were analyzed through factor analysis, and finally a general scale for EQ and 15 subscales were developed. In this revision, Cronbach's alpha coefficient was used to estimate the reliability, which turned out to be 0.76 for the sample, and ranged from coefficient of 0.69 (e.g. social responsibility) to a coefficient of 0.86 (e.g. self-esteem) for the subscales. These results showed an acceptable reliability. After one month, the test-retest reliability was reported as 0.85, and after four months, it was reported as 0.75. Test validity was investigated through construct validity using various tools that supported the test validity. In sum, it was shown that the five factors estimate the overall structure of non-cognitive intelligence. In Iran (40), the test was standardized considering the students of the University of Isfahan. In the standardization of the questionnaire, Bar-On 117 item questionnaire was used, and the number of questions reduced to 90 after three steps. In Kajbaf Nejad et al., Cronbach's alpha reliability coefficient was reported as 0.93 and split half reliability coefficient was reported as 0.88. The reliability coefficient was estimated through Cronbach's alpha (r=0.93) and the Gutmann method (Lambda 0.91). All of which are psychometrically acceptable (41).

D) Effective Control Scale (ECS): It is an instrument to estimate individuals' control over their emotions. It consists of 42 questions with four sub-scales of anger, depression, anxiety and positive affection. The phrasal responses are set on a seven-point scale from "strongly disagree" (i.e., score 1) to "strongly agree" (i.e., score 7). The responses to the questions 9, 14, 12, 16, 17, 18, 21, 22, 27, 30, 31 and 38 were reversed. In other words, score 7 was assigned to "strongly disagree", and score 1 was assigned to "strongly agree". Using a sample of undergraduate students, Williams et al. (42) estimated the internal validity and test-retest reliability as 0.94 and 0.78 while considering the entire scale, 0.72 and 0.73 while considering the anger sub-scale, and 0.84 and 0.64 while considering the positive affection sub-scale, respectively. Concurrent validity and construct validity were also estimated. In addition, Dahesh (43) investigated a sample of 200 high school students, and reported the reliability coefficient (Cronbach's alpha) of Effective Control Scale as 0.84, that of anger subscale as 0.53, and that of positive affection as 0.60, which indicate the viability of using Effective Control Scale in research studies. Furthermore, in reexamination of the validity of the scale, Dahesh (43) reported that in addition to the content validity which was carried out by the experts, another indicator was used to estimate the internal validity; each scale measured through subscales was also measured by the entire scale. Thus, it was expected to have a significant relation between the entire scale and each of the subscales.

The obtained values were as follows: correlation coefficient of Effective Control Scale and anxiety subscale was 0.71, and that of Effective Control Scale and positive affection was 0.67. In fact, all observed coefficients were statistically significant considering the confidence level of 0.99. Therefore, the validity of the scale was supported (43).

E) Rahim Organizational Conflict Inventory-II (ROCI-II): This inventory is a self-report instrument used to estimate the degree of communication conflict. It includes 28 items and consists of 5 sub-scales.

Each sub-scale shows a particular conflict resolution method, and gaining the highest score in each of the subscales indicates the use of the same conflict resolution method by an individual. The subscales of this inventory include obliging method (7 items), integrating method (6 items), dominating method (5 items), accommodating method (4 items), and avoiding method (6 items). Obliging method represents the exchange of information and the examination of differences in order to achieve a mutually acceptable solution.

This subscale is associated with the problem solving method and can lead to an innovative solution to the problem. Integrating method represents an attempt to reduce disagreements and emphasizes similarities in order to meet the expectations and concerns of others. An individual using this method ignores his needs and problems. Dominating method is characterized by a threatening direction. An individual using this method does anything to accomplish his goal; he ignores the needs and expectations of others. Accommodating method is in the midpoint of attention to one's expectations and needs and those of others; it refers to the division of concessions between the parties. The avoiding method deals with isolation, giving responsibility to others and

blaming others. An individual using this method is incapable of meeting his own and others' expectations. The reliability of this scale ranges from 0.72 to 0.83 in different studies (44). In the present study, the internal consistency estimated through Cronbach's alpha was 0.81. Moreover, the construct validity of this scale was also supported through factor analysis (45).

Results

Considering the covariance assumptions, the assumption of the homogeneity of variances was investigated through Levine's test. In addition, the normality of the distribution of data was checked through Kolmogorov-Smirnov test; the distribution of data in all groups was normal ($P<0.05$). Regarding the insignificance of the correlation between the groups and pretest ($P<0.05$), the assumption of homogeneity of regression was supported. With regard to the demographic characteristics of this study, the highest age of the participants was 17 years, and the lowest age was 14 years; the mean age of Hamadan cases (15.19 years) was more than that of Tehran cases (14.83 years). Furthermore, the control group had higher mean age (15.28 years) than the experimental group (14.77 years). As for the parents' education level, the highest frequency was related to junior high school in fathers (30.4%) and mothers (27.0%). The lowest frequency was related to illiterate for fathers (5.2%) and higher education (11.3%) for mothers.

The parents' education level in Tehran cases was somehow more than that of Hamadan cases. With regard to the parents' occupation, most of the fathers were businessmen (36.5%), and most of the mothers were housewives (98.2%). Only 1.8% of mothers had professional job. Finally, the data showed relative homogeneity of family income status in all groups although the monthly income of Tehran cases was somehow higher than that of Hamadan cases.

Table 1 represents the pretest descriptive statistics regarding the status of violence in the experimental and control groups of Hamadan and Tehran provinces.

In general, experimental group 1 (93.60) had the highest level of violence, and experimental group 2 (48.11) had the lowest level of violence. The mean of general tendency towards violence in Tehran cases (55.78) was approximately equal to that of Hamadan cases (55.98).

Table 1. The descriptive statistics regarding the status of violence in pre-test phase

Descriptive statistics	Group	General violence	
		M	SD
Group cognitive-affective skills	Experimental 1	60.93	7.12
	Experimental 3	55.05	5.65
Group social skills	Experimental 2	48.11	8.87
	Experimental 4	56.40	5.79
Control group	Control 1	59.30	16.99
	Control 2	55.90	6.97
Total	Hamadan province	55.98	12.91
	Tehran province	55.78	6.08

Table 2 shows the posttest descriptive statistics regarding the status of violence in the experimental and control groups of Hamadan and Tehran provinces. In general, it indicates that violence decreased in all experimental groups, and the violence in Hamadan cases (25.14) was less than that of the Tehran cases (26.85).

Table 2. The descriptive statistics regarding the status of violence in post-test phase

Descriptive statistics	Group	General violence	
		M	SD
Group cognitive-affective skills	Experimental 1	51.93	7.78
	Experimental 3	48.80	5.95
Group social skills	Experimental 2	40.11	6.47
	Experimental 4	54.30	8.26
Control group	Control 1	59.61	19.40
	Control 2	54.25	9.95
Total	Hamadan province	50.26	14.76
	Tehran province	52.45	8.49

Table 3 represents the data concerning the effect of social skills training on the students' tendency towards general violence. As it is evident, social skills training had a significant positive effect on general violence (F=8.903, P<0.01). Furthermore, the standardized mean scores of violence in the posttest show that the experimental groups (i.e., those who received social skills training) had lesser tendency towards violence than the control groups (those who received no training).

In fact, 0.107 of the variance shows the decrease in violence in posttest due to the trainings.

Table 3. The effect of social skills training on the tendency towards general violence

Variables	Sum of squares	df	Squares' mean	F	P	η2
Revised model	12146.555	2	6073.278	212.218	0.001	0.582
Participants	188.042	1	188.042	6.571	0.012	0.082
Pretest	10445.360	1	10445.360	364.991	0.001	0.831
Group effect (independent variable)	254.800	1	254.800	8.903	0.004	0.107
Error (within group)	217.743	74	28.618			
Total	222693.877	77				
Total corrected	14264.298	76				

Table 4 represents the data concerning the effect of cognitive-affective skills training on the students' tendency towards general violence. As it is evident, the training of cognitive-affective skills had a significant positive effect on the general violence (F(1,73)= 36.713, P<0.001). In fact, the standardized mean scores of violence in the posttest show that the experimental groups (i.e., those who received cognitive-affective skills training) had lesser tendency towards violence than the control groups (i.e., those who received no training). In addition, 0.335 of the variance shows the decrease in violence in the posttest due to the trainings. This finding suggests that the effect of teaching cognitive-affective skills might be more than that of teaching social skills.

Table 4. The effect of cognitive-affective skills training on the tendency towards general violence

Variables	Sum of squares	df	Squares' mean	F	P	η2
Revised model	9381.961	2	4690.981	193.442	0.001	0.841
Participants	117.040	1	117.040	4.826	0.031	0.062
Pretest	8577.585	1	8577.585	353.714	0.001	0.829
Group effect (independent variable)	890.279	1	890.279	36.713	0.001	0.335
Error(within group)	1770.252	73	24.250			
Total	228977.563	76				
Total corrected	11152.213	75				

Table 5 shows the results of LSD post hoc test, examining the difference in the effect of social and cognitive-affective skills trainings on the tendency towards violence among high school students. As it is evident, the mean difference between the groups receiving social skills training and those receiving cognitive-affective skills training was not significant in terms of verbal violence (M=0.482, P=0.648) and practical violence (M=0.980, P=0.085); however, it was significant in terms of general violence (M=2.824, P=0.021). Accordingly, it can be concluded that there was a difference in the effectiveness of social and cognitive-affective skills trainings on the students' tendency towards violence. Teaching cognitive-affective skills was more effective in reducing violence than teaching social skills.

Table 5. The results of LSD post hoc test examining the difference in the effect of social and cognitive-affective skills trainings on the students' tendency towards violence

Groups	MD	SE	P
Difference in the effect on general violence	2.824	1.206	0.021

Discussion

The findings of the present study showed that teaching social skills to high school students reduced the tendency towards general aggressive behaviors. This finding is consistent

with those of Dodge et al. (46), McDonald et al. (47), Webster and Dahl (12), Gainer et al. (48), Golchin (49), Rahimi (50) and Refahi (51). The mentioned studies emphasized the role of weak social skills (e.g., the ability to communicate effectively with others, empathy, and conflict resolution) as a factor causing violence. Similarly, Nangle et al. (52) showed that by giving responsibility to children through teaching social skills, the risk of antisocial behaviors could be reduced. In their study, Attari et al. (53) showed that therapeutic intervention increased the individual-social adjustment of delinquents. Refahi (51) stated that social skills training (i.e., coping ability, problem solving, communication skills and self-awareness) reduced suicide incentives in teenagers who had committed suicide.

On the other hand, Pourcharnari and Golzzari (54) showed that training social skills training was effective in changing the attitude of high school students towards drug abuse. In addition, in a longitudinal study, Elias (55) described the implications of primary prevention and life skills training to children. According to him, training increases socially-accepted behaviors and reduces negative and self-destructive behaviors. Jaafari (24) found that life skills training increased stress adjustment ability in adolescents. Furthermore, Nuananong (56) concluded that life skills training had a significant effect on preventing tobacco and substance abuse among high school students.

Rahimi and Soleimani (57) found that teaching life skills to children significantly increased their social interactions. Hartop (24) believed that effective social skills could control aggressive impulses. In addition, research findings of Chalmouth and Tavansend (24) indicated that teaching how to understand others' views was helpful in increasing the ability to solve interpersonal problems and reducing the aggression of adolescent delinquents.

Therefore, social skills training can be effective in reducing aggressive behaviors (58) because violence is a kind of immature social behavior which is learned through observation of inappropriate models (59). On the other hand, weaknesses in communicating with others can lead to aggressive behaviors because numerous studies showed that the lack of social skills created problems regarding interpersonal relationships and behavioral-affective areas (60), reduced students' adjustments (61), and encountered students with disabilities to deal with all affairs (24).

Theories and research studies which supported the impact of social skills on reducing violence and aggression (e.g., social learning approach) considered aggression as a form of social behavior which is learned and occurs depending on factors such as the aggressive individuals' experiences and reinforcement of aggressive behaviors (14). Based on this approach, the mechanism underlying the effect of social skills acquisition on reducing aggression was explained through social development of adolescents. The results of this study indicated that training of cognitive-affective skills was effective in decreasing the high school students' tendency toward general aggressive behaviors. This finding is consistent with those of Pakaslahti and Yarounin (62), Smite and Garrie (63), Shalter et al. (64), Momtaz (65) and Eskandari (66).

In fact, these researchers emphasized cognitive and affective deficiencies, including problem solving skills, self-awareness and anger control, as the individual factors causing violence.

Whitfield (67) found that anger control training, as a cognitive-behavioral approach, reduced maladaptive behaviors and improved self-control among aggressive adolescents in different situations. Furthermore, Caboosi and Ghorbani (68) showed that cognitive/behavioral training of anger control skill was effective in decreasing general aggression and aggressive thoughts, behaviors and feelings among adolescents with behavioral disorder in quasi-family institutions. In an investigation on the effectiveness of problem solving skills training on decreasing depression among 15-18 year old students in Zahedan, Kahrazehi (69) found that teaching problem-solving skill reduced students' depression.

Tang (70) reported that group therapy of anger control through cognitive-behavioral approach improved the adaptive mechanisms of anger and reduced the sensitivity to the incentives in patients with aggression and violence. From the point of view of cognitive approach, processes such as an individual's perceptions of events, and his interpretations and inferences are the main factors causing any behavior, including aggressive behaviors. According to this theory, aggressive children interpret others' behavior

as a sign of aggressiveness and act according to this information processing (62).

Egins also argued that aggression is a direct result of adverse moods such as anger, frustration and depression, which are the result of failure in achieving goals, or gap between expectations and achievements (71). Referring to the findings of this study which showed the positive effect of training social skills (i.e., empathy, effective communication and conflict resolution) and cognitive-affective skills (i.e., self-awareness, anger control and problem solving) on decreasing the students' tendency toward aggressive behavior, and the superiority of the effect of cognitive-affective skills training over social skills training , it can be concluded that workshops can have a significant impact on the improvement of mental health and reduction of the tendency towards aggression if the content of these workshops is in line with the lessons provided to students. There were some limitations in conducting this study. First, due to the intensive high school curriculum, the school officials and students preferred to have training classes when the curriculum courses were not difficult. This issue resulted in some differences between the experimental groups. Second, there was no proper training room to hold skills training workshops in the schools. Third, the administrative bureaucracy was time-consuming to obtain a permission to enter schools and to conduct a research study.

It is recommended to present some workshops on social skills and cognitive-affective skills for students with violent behaviors. Since cognitive-affective skills have a greater impact on reducing violent behaviors of students than do social skills, it is important to emphasis these skills in the curriculum and workshops.This study focused on empathy, effective communication and conflict resolution as social skills, and self-awareness, anger control and problem solving as cognitive-affective skills. Future studies can focus on other life skills, and compare their effectiveness in reducing violent behaviors. Researchers can also use the educational protocol of this study to examine and compare the effect of social and cognitive-affective skills on solving other individual and social problems.

Conclusion

According to the present results, the use of social and cognitive-affective trainings has an effective role in reducing violence and increasing individuals' cognitive, affective and social skills, educational institutions (especially elementary schools, junior high schools and high schools) need to hold some workshops and training courses on social skills and cognitive-affective skills for the students with violent behaviors. These programs develop social and psychosocial capabilities which help individuals to effectively deal with life conflicts, to interact in a self-consistent and adaptive manner with other people, society, culture and environment, and to ensure their mental health.

Therefore, learning and practicing these skills can change an individual's attitudes, values and behaviors; many mental problems can be prevented by the emergence of positive and healthy behaviors.

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