

The Effectiveness of Nonviolent Communication (NVC) Skills Training on Emotional Self-Efficacy and Executive Functions in Children Aged 8 to 10 Years

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Abstract

Objective

The present study aimed to examine the effectiveness of Nonviolent Communication (NVC) skills training on emotional self-efficacy and executive functions among students aged 8 to 10 years.

Method

This study employed a quasi-experimental design with a pretest–posttest control group and a two-month follow-up phase. The statistical population consisted of all elementary school students in Tehran during the 2024–2025 academic year. Using a cluster sampling method, District 5 of Tehran was selected, and subsequently, one school was chosen through convenience sampling. From the students, 30 individuals who met the inclusion criteria were selected and randomly assigned to an experimental group (n = 15) and a control group (n = 15). The experimental group received eight 60-minute sessions of Nonviolent Communication (NVC) skills training, while the control group continued with their regular educational program. Data were collected at three stages—pretest, posttest, and follow-up—using the standardized Children’s Self-Efficacy Questionnaire (Muris, 2001) and the Executive Functions Questionnaire (Gioia et al., 2000). Data analysis was conducted using SPSS version 27 and repeated measures analysis of variance (ANOVA).

Findings:

The results of data analysis indicated a significant difference between the performance of the experimental and control groups in the posttest and follow-up stages. In other words, Nonviolent Communication (NVC) training led to a significant increase in emotional self-efficacy scores and an improvement in executive functions—including inhibition, planning, organization, and working memory—in the experimental group compared to the control group. These effects remained stable during the two-month follow-up period.

Conclusion

Based on the findings of this study, it can be concluded that Nonviolent Communication (NVC) skills training is an effective and sustainable intervention program for enhancing emotional self-efficacy and strengthening executive functions in elementary school children. Implementing such programs in educational settings can make a substantial contribution to the holistic development of children’s cognitive and emotional skills.

Introduction

Communication skills are recognized as a fundamental component of children's social and emotional development. The ability to communicate effectively enables children to express their feelings and needs in a healthy manner, while also playing a crucial role in regulating emotions and making everyday decisions. Nonviolent Communication (NVC), as an approach grounded in empathy and mutual understanding, can positively influence the development of children's emotional and cognitive skills. One of the key aspects of this development is emotional self-efficacy and executive functions, which are vital for managing emotions, controlling impulses, and planning. Therefore, examining the effectiveness of NVC skills training on these dimensions can provide deeper insights into the importance of this competence in fostering children's healthy development.

In their 2016 study, Yang and Kim described the NVC model as an interactive method that facilitates the exchange of information and the peaceful resolution of conflicts. This school of thought was founded in 1984 by Marshall Rosenberg. NVC is rooted in Carl Rogers' person-centered therapy theory, which emphasizes empathy and authentic communication. Rogers asserted that the tendency toward self-actualization serves as a fundamental motivational force for humanity. In a

study by Ghanad-Tousi et al. (2016), the concept of Nonviolent Communication (NVC) was defined as attending to others' behaviors while simultaneously considering their feelings and needs. This concept has been widely applied in the training of educators, teachers, administrators, mental health service providers, and others. The NVC training program is described as a set of communicative strategies that can be implemented across diverse contexts and communities. According to Rosenberg, the core of this program is the process of empathy. This educational approach encompasses communication skills that empower individuals to establish compassionate connections with others as well as with themselves (Rezaei et al., 2019). The first principle of the Nonviolent Communication (NVC) program, as noted in the study by Jalil-Abkenar (2024), is the distinction between observation and judgment or evaluation. This principle emphasizes sensitivity to making immediate value judgments about others and highlights the irrationality of such reactions. The second principle involves the recognition and expression of emotions or feelings, which emerge as a result of unbiased and impartial observations (Alasti & Ashouri, 2023). The third principle states that individuals are responsible for their emotions and teaches how people can assume responsibility for both their own feelings and those of others (Kansky & Massarani, 2022). In their 2022 study, Sung and Kwon identified the fourth principle of Nonviolent Communication (NVC) as expressing one's requests to others in order to improve life, which involves articulating and teaching how to state needs and demands. These principles represent the distinctive features of the NVC training program, which is guided by two processes: empathic receiving of others (listening) and honest self-expression (speaking). Overall, empathic and nonviolent communication is considered one of the essential emotional abilities of human beings, with its manifestations emerging from early childhood (Givachi et al., 2017). Nonviolent Communication (NVC), by providing a framework for the adaptive expression of emotions and mutual understanding, can positively influence children's emotional self-efficacy. This is because the ability to manage and regulate emotions plays a fundamental role in social interactions and conflict resolution during this stage of development.

"Emotional self-efficacy refers to an individual's confidence in their ability to regulate emotions and affective states (Ghafari et al., 2024). According to Bandura's theory, self-efficacy is a form of capability that is effectively organized

through emotional, cognitive, social, and behavioral skills to achieve various goals. In other words, emotional self-efficacy encompasses behavioral readiness and personal tendencies in recognizing, processing, and organizing emotional information (Kalij et al., 2024). As noted by Calandri et al. (2021), emotional self-efficacy—similar to emotional intelligence—is not limited to emotion regulation; it also includes the ability to identify and understand emotions, as well as one's beliefs about their emotional competencies.

In their 2016 study, Bahmani et al. introduced emotional self-efficacy as a construct rooted in concepts such as Thorndike's social intelligence (1920) and Gardner's intrapersonal intelligence (1983). According to Bandura's extended self-efficacy theory, as presented by Caprara et al. (2013), emotional self-efficacy comprises two dimensions: self-efficacy in managing negative emotions and self-efficacy in expressing positive emotions. The former refers to an individual's ability to regulate and improve negative emotional states when facing stressful events, and to prevent adverse outcomes.

Nonviolent Communication (NVC), by strengthening social, cognitive, and emotional regulation skills, can influence children's executive functions, as these competencies play a critical role in cognitive processes and decision-making. Farahzadi et al. (2023) define executive function as a neuropsychological construct referring to higher-order cognitive processes involved in planning and goal-directed activities. Executive functions include task initiation and follow-through, task organization, memory, attention enhancement, planning, behavioral regulation, emotional control, time management, and problem-solving. According to Taziki et al. (2015), the primary role of executive functions is to regulate and coordinate behavior, supporting individuals across various domains. As noted by Meraji-Saeid et al. (2024), executive function abilities are essential for success in everyday activities.

This study evaluates the impact of Nonviolent Communication (NVC) training on enhancing children's emotional and cognitive abilities. Its findings may contribute to improving educational practices within school and family environments. Given the importance of social interactions in shaping various developmental domains during childhood, the study focuses specifically on the age group of 8 to 10 years. The central research question addresses whether NVC skills training can

effectively improve emotional self-efficacy and executive functions in children within this age range.

Method

This study employed a quasi-experimental design with a pretest–posttest control group and a two-month follow-up phase. The statistical population consisted of all elementary school students in Tehran during the 2024–2025 academic year. A multistage cluster sampling method was used: first, District 5 was randomly selected from among the 22 educational districts of Tehran, and then one school within

that district was chosen through convenience sampling. From this school, 30 students who met the inclusion criteria were randomly assigned to two groups: experimental (n = 15) and control (n = 15).

The experimental group received Nonviolent Communication (NVC) skills training over eight 60-minute sessions, while the control group continued with their regular educational program. Data collection was conducted in the field using two standardized questionnaires: the Children's Emotional Self-Efficacy Questionnaire (Muris, 2001) and the Executive Functions Questionnaire (Gioia et al., 2000), administered at three stages—pretest, posttest, and follow-up.

Data analysis was performed using SPSS software version 27. To assess the effectiveness of the intervention, analysis of covariance (ANCOVA) was used, and to examine the equivalence of pretest scores, an independent t-test was conducted. Additionally, statistical assumptions—including normality, homogeneity of variances, and homogeneity of regression slopes—were examined and confirmed prior to analysis.

In the present study, standardized questionnaires were used to collect the required data and assess the research variables, as detailed below.

1. Emotional Self-Efficacy Questionnaire (Muris, 2001) The Emotional Self-Efficacy Questionnaire for children and adolescents was developed by Muris in 2001 to assess self-efficacy. This instrument consists of 23 items and includes three subscales: social self-efficacy (8 items, items 1–8), academic self-efficacy (8 items, items 9–16), and emotional self-efficacy (7 items, items 17–23). It is rated on a five-point Likert scale, with items such as 'How well can you express your opinion when other classmates disagree with you?' used to measure self-efficacy. Scores between 23 and 38 indicate low self-efficacy, scores between 38 and 76 indicate moderate self-efficacy, and scores above 76 reflect high self-efficacy. In a study by Tahmasian (2007), the content and face validity of this questionnaire were evaluated as appropriate, and its reliability was calculated using Cronbach's alpha, yielding a coefficient of 0.89.

2. Executive Functions Questionnaire (Gioia et al., 2000) The Executive Functions Questionnaire was developed by Gioia et al. (2000) to assess executive functioning. This instrument includes two forms—one for parents and one for teachers—and is scored by parents using a Likert scale, based on the child's behavioral responses in school or at home. It is designed to provide a behavioral interpretation of executive functioning in children aged 5 to 18 years.

The questionnaire consists of 86 items and covers eight subscales: inhibition (16 items), shifting attention (12 items), emotional control (9 items), initiation (7 items), working memory (11 items), planning (14 items), organization of materials (7 items), and monitoring (11 items). In addition, the questionnaire includes validity scales to assess inconsistency and negativity in responses. It is rated on a Likert scale with items such as "When given three tasks to complete, the child only performs the first or

the last.” The total score ranges from 0 to 172, with higher scores indicating stronger executive functioning and lower scores reflecting weaker performance.

In the present study, the reliability of the instruments was confirmed. Cronbach’s alpha was 0.841 for the Emotional Self-Efficacy Questionnaire (23 items) and 0.873 for the Executive Functions Questionnaire (86 items), indicating satisfactory internal consistency.

3. Session Plan of the “Giraffe Language Book” Workshop for Teaching NVC to Children

Table 3

– Session Plan of the “Giraffe Language Book” Workshop for Teaching NVC to Children

Duration	Required Materials	Main Activities	Title	Session
60 minutes	Storybook, colored ball	<ul style="list-style-type: none"> • Colorful introduction game • Collaborative poem • Story: “Giraffe’s First Day in the Jungle” 	Introduction to the World of Giraffes	1
75 minutes	Colored paper, glue	<ul style="list-style-type: none"> • Group heart-making • Emotion painting • Story: “Heart Festival” 	Giraffe’s Heart	2
60 minutes	Illustrated emotion cards	<ul style="list-style-type: none"> • Pantomime game • Emotion cards • Story: “Giraffe and the Sad Cloud” 	Giraffe’s Emotions	3
75 minutes	Cardboard ear horn	<ul style="list-style-type: none"> • Broken telephone game • Deep listening activity • Story: “The Secret of Flowers” 	Giraffe’s Ears	4
60 minutes	Hand puppet	<ul style="list-style-type: none"> • Sentence-building game • Puppet show • Story: “The Magic of Words” 	Giraffe’s Kind Language	5
75 minutes	Balloons, crayons	<ul style="list-style-type: none"> • Monster drawing • “Anger Balloon” game • Story: “Storm in the Jungle” 	Giraffe’s Anger	6
60 minutes	Old magazines, glue	<ul style="list-style-type: none"> • “Guess the Need” game • Group collage • Story: “Journey to the Mountain of Needs” 	Giraffe’s Needs	7
75 minutes	Animal masks	<ul style="list-style-type: none"> • Interactive performance • Role-playing game 	Friendship Between Giraffe and Jackal	8

Duration	Required Materials	Main Activities	Title	Session
		• Story: "Peace Pact"		
90 minutes	Decorative items	• Drawing contest • Performance • Story: "The Grand Celebration"	Giraffe Festival	9
120 minutes	Certificates, medals	• Memory book creation • Appreciation ceremony	Farewell to the Giraffe	10

Procedure

This study employed a quasi-experimental design using experimental and control groups. The implementation process was as follows: the research sample consisted of children aged 8 to 10 in Tehran, selected through convenience sampling and assigned to experimental and control groups. The experimental group participated in 10 sessions of Nonviolent Communication (NVC) skills training. These sessions were conducted interactively through games and group exercises.

To measure the variables of emotional self-efficacy and executive functions, validated and standardized questionnaires were used. Prior to the intervention, all children in both groups were assessed in terms of emotional self-efficacy, executive functions, and communication skills. The experimental group received NVC training, while the control group did not receive any intervention. After the training, all children in both groups were reassessed using the same questionnaires. Two months later, similar assessments were conducted to examine the long-term effects of the intervention.

Research Findings

Normality Assessment of the Data

Table 5 – Shapiro–Wilk Test for Research Variables

Significance Level	Test Statistic	Kurtosis SE	Kurtosis	Skewness SE	Skewness	Variable
0.937	0.985	0.833	-0.423	0.427	-0.108	Emotional Self-Efficacy
0.058	0.899	0.833	-1.543	0.427	0.046	Executive Functions

As shown in the data from Table 5, the Shapiro–Wilk test indicated no significant deviations from normality for both variables (Emotional Self-Efficacy: $p = 0.937$; Executive Functions: $p = 0.058$),

supporting the normality assumption.

Hypothesis Testing of the Research

Hypothesis 1: Training in Nonviolent Communication (NVC) skills has an effect on emotional self-efficacy.

To examine this assumption, Box’s M test was conducted to assess the equality of variance–covariance matrices between the two groups. The test was not statistically significant (Box = 1.143, F = 0.168, p = 0.985), indicating that the assumption of homogeneity of covariance matrices was satisfied.

Levene’s test indicated no significant differences in error variances across groups for social self-efficacy F (1,28) =1.834, p=0.206, academic self-efficacy F (1,28) =0.792, p=0.381, and emotional self-efficacy F (1,28) =1.089, p=0.306, supporting the assumption of homogeneity of variances.

Multivariate analysis of covariance (MANCOVA) revealed statistically significant group differences across all multivariate tests (Pillai’s Trace, Wilks’ Lambda, Hotelling’s Trace, Roy’s Largest Root; F (3,23) =10.401, all p<0.001). The effect size was large ($\eta^2=0.641$), indicating that 64.1% of the variance in emotional self-efficacy was attributable to the NVC training (see Table 8).

Table 8 – Results of Multivariate Analysis of Covariance (MANCOVA)

Eta Squared	Significance Level	Error df	Hypothesis df	F Statistic	Value	Test Name
0.641	< 0.001	23	3	10.401	5.270	Pillai’s Trace
0.641	< 0.001	23	3	10.401	5.270	Wilks’ Lambda
0.641	< 0.001	23	3	10.401	5.270	Hotelling’s Trace
0.641	< 0.001	23	3	10.401	5.270	Roy’s Largest Root

Univariate ANCOVA revealed significant group differences for social self-efficacy (p<0.001), academic self-efficacy (p<0.001), and emotional self-efficacy (p<0.001). Effect sizes were large ($\eta^2=0.546$ for social; $\eta^2=0.528$ for academic; $\eta^2=0.705$ for emotional), indicating substantial improvements in the intervention group relative to the control (see Table 9). Reported F statistics were F=30.071 (social), F=27.996 (academic), and F=59.639 (emotional) (see table 9).

Table 9 – Results of Univariate Analysis of Variance (ANCOVA) for Comparing Emotional Self-Efficacy Variables Between the Two Groups

Effect Size	Significance Level	F Statistic	Mean Square	df	Sum of Squares	Component
0.546	< 0.001	30.071	59.779	1	59.779	Social Self-Efficacy
0.528	< 0.001	27.996	97.751	1	97.751	Academic Self-Efficacy
0.705	< 0.001	59.639	129.847	1	129.847	Emotional Self-Efficacy

Hypothesis 2: Training in nonviolent communication skills has an effect on executive functions.

To examine this assumption, Box's M test was conducted to assess the equality of covariance matrices between the two groups. The test was not statistically significant for Executive Functions (Box = 67.672, F = 1.291, p = 0.116), indicating that the assumption of homogeneity of covariance matrices was satisfied.

Levene's test indicated no significant differences in error variances across groups for all executive function components, including inhibition F (1,28)=3.527, p=0.071, attention shifting F (1,28)=2.224, p=0.119, emotional control F (1,28)=0.646, p=0.428, initiation F (1,28)=0.472, p=0.498, working memory F (1,28)=0.427, p=0.514, planning F (1,28)=0.176, p=0.678, organization of materials F (1,28)=0.001, p=0.994, and monitoring/control F (1,28)=0.518, p=0.478. These results support the assumption of homogeneity of variances.

Multivariate analysis of covariance (MANCOVA) showed statistically significant group differences across all multivariate tests (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, Roy's Largest Root; F (8,13) =17.777, all p<0.001). The effect size was large ($\eta^2=0.616$), indicating that 61.6% of the variance in executive functions was attributable to the NVC training (see Table 12).

Table 12 – Results of Multivariate Analysis of Covariance (MANCOVA)

Eta Squared	Significance Level	Error df	Hypothesis df	F Statistic	Value	Test Name
0.616	< 0.001	13	8	17.777	0.616	Pillai's Trace
0.616	< 0.001	13	8	17.777	0.384	Wilks' Lambda
0.616	< 0.001	13	8	17.777	10.940	Hotelling's Trace
0.616	< 0.001	13	8	17.777	10.940	Roy's Largest Root

Univariate ANCOVA revealed significant group differences across all executive function components. Specifically, inhibition $\eta^2=0.445$, F=16.026, p<0.001, attention shifting $\eta^2=0.502$, F=20.127, p<0.001, emotional control $\eta^2=0.515$, F=21.260, p<0.001, initiation $\eta^2=0.562$, F=25.693, p<0.001, working

memory $\eta^2=0.575$, $F=27.039$, $p<0.001$, planning $\eta^2=0.530$, $F=22.528$, $p<0.001$, organization of materials $\eta^2=0.298$, $F=8.480$, $p=0.009$, and monitoring/control $\eta^2=0.386$, $F=12.570$, $p=0.002$. These results indicate that NVC training produced substantial improvements in executive functions compared with the control group (see Table 13).

Table 13 – Results of Univariate Analysis of Variance (ANCOVA) for Comparing Executive Function Variables Between the Two Groups

Effect Size	Significance Level	F Statistic	Mean Square	df	Sum of Squares	Component
0.445	< 0.001	16.026	20.025	1	20.025	Inhibition
0.502	< 0.001	20.127	31.174	1	31.174	Attention Shifting
0.515	< 0.001	21.260	32.835	1	32.835	Emotional Control
0.562	< 0.001	25.693	29.254	1	29.254	Initiation
0.575	< 0.001	27.039	51.043	1	51.043	Working Memory
0.530	< 0.001	22.528	28.057	1	28.057	Planning
0.298	0.009	8.480	15.418	1	15.418	Organization of Materials
0.386	0.002	12.570	15.323	1	15.323	Monitoring/Control

Discussion

Hypothesis 1: Nonviolent communication skills training affects emotional self-efficacy.

The results of the data analysis indicated that nonviolent communication skills training had a significant effect on emotional self-efficacy, such that the intervention led to improvements in emotional self-efficacy ($p < 0.05$). Among the components, emotional self-efficacy showed the strongest improvement ($\eta^2=0.705$), while social ($\eta^2=0.546$) and academic self-efficacy ($\eta^2=0.528$) also demonstrated large but comparatively smaller effects. This finding is consistent with the results of previous studies conducted by Jalil Abkenar (2024), Soltanian and Farhadi (2024), Rezaei et al. (2019), Park et al. (2025), Batūraitė Bunka et al. (2024), and Epinat Duclos et al. (2021).

In explaining the obtained findings, it can be stated that training in nonviolent communication skills increases the emotional self-efficacy of children aged 8 to 12 years. This type of training helps children to better recognize, accept, and constructively express their emotions (Rosenberg, 2003). Nonviolent communication skills consist of four main stages: observing without judgment, clearly expressing feelings, identifying fundamental needs, and making specific and effective requests. These stages

enable children to respond to both positive and negative emotions in a controlled and conscious manner, while avoiding impulsive and destructive emotional reactions (Hart & Hudson, 2004).

When children learn to express their emotions in a constructive and empathetic manner rather than suppressing or explosively releasing them, they experience a greater sense of mastery and control over their emotional states. This reflects the concept of emotional self-efficacy, which refers to a child's belief in their ability to manage emotions effectively (Bandura, 1997). Moreover, nonviolent communication training helps children to better understand their own needs as well as those of others and to express these needs more effectively. This process reduces conflicts and enhances the quality of interpersonal relationships (Shure & Spivack, 1988). Such improvements in social interactions, in turn, strengthen children's self-confidence and emotional self-efficacy (Kessel et al., 2007).

From a theoretical perspective, this finding is also consistent with Bandura's self-efficacy theory. Bandura (1997) argued that self-efficacy develops through successful experiences, observation and modeling, and social persuasion. Nonviolent communication training provides multiple opportunities for children to experience success in regulating emotions and establishing positive interactions, which in turn strengthens their belief in their ability to manage emotions effectively (Zins et al., 2004). Therefore, children who receive such training are more likely to regulate their emotions in healthier ways, leading to an increase in their emotional self-efficacy.

In conclusion, nonviolent communication skills training can be regarded as an effective psychological intervention that plays a significant role in strengthening children's emotional competencies. This type of training can lead to considerable improvements in their mental health and enhance the quality of their interpersonal relationships.

However, these findings should be interpreted with caution given the limited sample size and specific cultural context of the study.

Hypothesis 2: Nonviolent communication skills training affects executive functions.

The results of the data analysis showed that nonviolent communication skills training had a significant effect on executive functions. Among the components, working memory ($\eta^2=0.575$) and initiation ($\eta^2=0.562$) showed the strongest improvements, followed by planning, emotional control, attention shifting, and inhibition ($\eta^2=0.445$ - 0.530). Organization of materials ($\eta^2=0.298$, $p=0.009$) and monitoring/control ($\eta^2=0.386$, $p=0.002$) demonstrated smaller but still significant effects, demonstrating smaller but still significant effects, confirming that the intervention improved executive functions overall ($p < 0.05$). This finding is consistent with the results of previous studies conducted by Sobhani Najafabadi et al. (2024), Pirhadi Tavanadosti et al. (2024), Bakhshoudeh and Nakouei (2024), Motamedi et al. (2023), Amiri (2022), and Kim & Kyung-Jo (2022).

In explaining the obtained findings, it can be stated that nonviolent communication skills training improves the executive functions of children aged 8 to 12 years, as it helps them strengthen their

cognitive and behavioral skills for better management of emotions and social interactions. Executive functions are a set of cognitive abilities—including inhibition, attention shifting, emotional control, initiation, working memory, planning, organization of materials, and monitoring—that are essential for regulating behavior and making goal-directed decisions in children’s daily lives (Miyake et al., 2000).

Nonviolent communication training, with its emphasis on emotional self-awareness, active listening, and the effective and empathetic expression of feelings and needs, enables children to better regulate their behavior in challenging situations (Gross, 2014). Such behavioral regulation requires the simultaneous use of multiple executive functions, allowing children to control their emotions, maintain focused attention, plan appropriate responses, and participate effectively in social interactions (Bandura, 1977).

Moreover, the exercises included in nonviolent communication training contribute to the enhancement of children’s working memory, as understanding others’ messages and providing appropriate responses require the simultaneous processing and retention of relevant information (Baldwin et al., 2010). Improvements in planning and organization resulting from communication skills training also enable children to define their behavioral goals more effectively and to take purposeful steps toward achieving them (Carlson et al., 2005).

From a theoretical perspective, this finding is consistent with cognitive and psychological models related to executive functions in children. Previous studies have shown that strengthening self-control, emotion regulation, and attention—core components of nonviolent communication training—enhances children’s executive functions (Gross, 2014; Bandura, 1977). Moreover, effective communication skills require a high degree of cognitive coordination, which in turn contributes to improved functioning of brain regions associated with executive functions in children (Carlson et al., 2005).

In conclusion, nonviolent communication training, by providing continuous practice opportunities, fostering successful experiences in emotion regulation and behavioral adjustment, and promoting positive social interactions, strengthens various components of children’s executive functions. As a result, it leads to overall improvements in these cognitive and behavioral abilities. This, in turn, can enhance children’s mental health, the quality of their interpersonal relationships, and their effectiveness in different life situations.

These findings highlight the importance of integrating nonviolent communication training into early school years, where foundational socio-emotional and executive skills are rapidly developing.

The present study, however, had certain limitations. Since it was conducted within a specific and limited statistical population, caution should be exercised when generalizing the findings.

Limitations and Future Directions

While the findings of this study are encouraging, several methodological limitations warrant careful consideration.

First, the use of convenience sampling and the naturalistic conditions of the study limited the ability to fully control for confounding variables such as parenting style, family environment, and children's prior experiences with emotional skills.

Second, the generalizability of the results is constrained, as the study was conducted on a specific sample of children aged 8 to 10 years living in Tehran. Caution should therefore be exercised when extending these findings to other age groups or different geographical and cultural contexts.

Third, the reliance on self-report questionnaires as the primary assessment tool may have introduced bias, particularly due to children's tendency to provide socially desirable responses, which could reduce measurement accuracy.

Future research could build on these findings in several ways. Designing and implementing emotion-based games and role-playing activities in school settings may provide children with opportunities to practice nonviolent communication skills and strengthen their emotional self-efficacy. Establishing peer-support groups within classrooms could create safe spaces for children to share feelings and needs while practicing emotional expression. Developing parent-focused educational packages, including stories and home activities, may further reinforce children's ability to recognize and manage emotions through nonviolent communication. Additionally, interactive technologies such as educational apps and digital games could be employed to enhance both executive and emotional skills within the framework of nonviolent communication.

Finally, it is recommended that future studies be conducted with larger and more diverse samples, across different age ranges and time points, to allow for comparison of results and broader generalization to other populations.

Conclusion

In conclusion, the present study provides preliminary evidence that nonviolent communication skills training may be associated with improvements in children's emotional self-efficacy and executive functions. The strongest indications were observed in emotional self-efficacy and specific executive components such as working memory and initiation, while other domains—including planning, emotional control, attention shifting, and inhibition—also showed notable but comparatively smaller effects.

These findings suggest that structured, skills-based interventions focusing on nonviolent communication could contribute to strengthening children's socio-emotional and cognitive capacities. At the same time, the results should be interpreted with caution, given the methodological limitations and the specific age and cultural context of the sample.

Future validation through larger and more diverse studies will be essential to determine the robustness and generalizability of these outcomes. Nevertheless, the present evidence points toward the potential value of integrating nonviolent communication training into educational and developmental programs,

where it may serve as a supportive approach for fostering children's emotional competencies and executive functioning.

Declarations

Ethics Approval and Consent to Participate

The study was conducted in accordance with the ethical standards of the Declaration of Helsinki and the APA Ethical Principles of Psychologists and Code of Conduct. Participation was voluntary, and all data were collected and analyzed anonymously to ensure participants' privacy. Written informed consent to participate was obtained from all participants' legal guardians. The study protocol was approved by the Ethics Committee of Azad University, approval code: IR.IAU.TMU.REC.1404.194.

Consent for Publication:

Not applicable.

Competing Interests:

The authors declare that they have no competing interests.

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Availability of Data and Materials:

The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

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Authors' Contributions:

Both authors contributed equally to the study design, data collection, analysis, and manuscript preparation.

References

1. Alasti, Y., & Ashouri, M. (2023). [The effect of nonviolent communication training program on depression, anxiety, and stress in adolescents with hearing impairment]. *Empowerment of Exceptional Children*, 14(1), 1–10. <https://doi.org/10.22034/ceciranj.2023.351008.1678>
2. Amiri, A. (2022, March). [The effectiveness of nonviolent communication training on relational and overt aggression in first-grade students of Qaemshahr]. Paper presented at the *6th National Conference on Humanities and Psychological Studies*, Tehran, Iran.
3. Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company.
4. Batūraitė-Bunka, A., Jurevičienė, M., & Skoczowsky-Danielsen, G. (2024). Unveiling the effects of nonviolent communication training on youth empathy. *Social Welfare: Interdisciplinary Approach*, 14, 70–87. <https://doi.org/10.15388/SW.2024.14.35183>
5. Bakhshoudeh, M., & Nakouei, N. S. (2024). [The mediating role of executive functions in the relationship between positive parenting and aggression]. *Journal of Research in School and Virtual Learning*, 12(3), 19–28. <https://doi.org/10.30473/etl.2025.71095.4192>
6. Calandri, E., Graziano, F., Cattelino, E., & Testa, S. (2021). Depressive symptoms and loneliness in early adolescence: The role of empathy and emotional self-efficacy. *The Journal of Early Adolescence*, 41(3), 369–393. <https://doi.org/10.1177/0272431620919156>
7. Carlson, S. M. (2005). Developmentally sensitive measures of executive function in preschool children. *Developmental Neuropsychology*, 28(2), 595–616.
8. Epinat-Duclos, J., Foncelle, A., Quesque, F., Chabanat, E., Duguet, A., Van der Henst, J. B., & Rossetti, Y. (2021). Does nonviolent communication education improve empathy in French medical students? *International Journal of Medical Education*, 12, 205–218. <https://doi.org/10.5116/ijme.615e.c507>
9. Farahzadi, N., Ghorban Shiroodi, S., Khalatbari, J., & Zarbakhsh, M. (2023). [The effectiveness of executive functions training on self-control and social competence of children with low self-control]. *Applied Psychological Research Quarterly*, 14(2), 145–161. <https://doi.org/10.22059/japr.2023.333106.644057>
10. Ghafari, M., Khani, L., Rezaei, A., & Alikhan Begi, P. (2024). [The effect of moral agency on predicting cyber infidelity of spouses with the mediating role of emotional self-efficacy]. *Journal of Bioethics*, 13(38), 1–12. <https://doi.org/10.22037/bioeth.v13i38.36475>
11. Givachi, E., Navabinejad, S., & Farzad, V. (2017). [Comparison of the effectiveness of cognitive-behavioral therapy and the nonviolent communication model on reducing externalizing problems of children]. *Journal of Shahid Sadoughi University of Medical Sciences*, 25(5), 333–346. <https://sid.ir/paper/35881/fa>
12. Gross, J. J. (Ed.). (2014). *Handbook of emotion regulation* (2nd ed.). Guilford Press.
13. Jalil-Abkenar, S. S. (2024). [The effect of nonviolent communication training on parenting self-efficacy and psychological well-being of mothers of children with hearing impairment]. *Psychological Studies*, 20(3), 107–123. <https://doi.org/10.22051/psy.2024.47900.2998>

14. Kalij, F., Akbari, M., Alavi, M., & Atashi, V. (2024). [The effect of emotion regulation training program on emotional self-efficacy of patients with chronic heart failure: A randomized clinical trial]. *Education & Ethics in Nursing*, 13(3–4), 127–136. <https://doi.org/10.22034/ethic.2024.2037199.1102>
15. Kansky, R., & Maassarani, T. (2022). Teaching nonviolent communication to increase empathy between people and toward wildlife to promote human–wildlife coexistence. *Conservation Letters*, 15(1), 1–11. <https://doi.org/10.1111/conl.12862>
16. Kessel, F., Rosenfield, P. L., & Anderson, N. B. (2007). *Interdisciplinary research: Case studies from health and social science*. Oxford University Press.
17. Kim, H. K., & Jo, H. K. (2022). Effects of a nonviolent communication program on nursing students. *SAGE Open*, 12(3), 1–11. <https://doi.org/10.1177/21582440221096139>
18. Kim, H, Kyung Jo, H, (2022), Effects of a Nonviolent Communication Program on Nursing Students, Original Research
19. Meraji-Saeid, P. S., Hashemi, Z., & Fouladi, F. (2024). [The relationship between parenting styles and creativity: The mediating role of executive functions]. *Cognitive Psychology Quarterly*, 12(2), 65–80.
20. Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T. D. (2000). The unity and diversity of executive functions and their contributions to complex “frontal lobe” tasks: A latent variable analysis. *Cognitive Psychology*, 41(1), 49–100. <https://doi.org/10.1006/cogp.1999.0734>
21. Pirhadi Tavanadashti, R., Arefi, M., & Sajadian, I. (2024). [The effectiveness of nonviolent communication training based on Marshall Rosenberg’s theory on empathy and meaning of life in students with violent symptoms]. *Journal of Modern Psychological Researches*, 19(73), 194–203. <https://doi.org/10.22034/jmpr.2023.54836.5355>
22. Park, J., Jung, H., Lee, Y., & Choi, Y. (2025). Effects of a nonviolent communication education program on empathy, interpersonal relationships, stress, and resilience among Korean nursing students. *Iranian Journal of Public Health*, 54(3), 578–588.
23. Rezaei, Z., Behpajoo, A., & Ghubari Bonab, B. (2019). [The effectiveness of nonviolent communication training program on mother–child interaction in mothers with children with intellectual disabilities]. *Archives of Rehabilitation*, 20(1), 40–51.
24. Rosenberg, M. B. (2003). *Nonviolent communication: A language of life* (2nd ed.). PuddleDancer Press.
25. Sobhani Najafabadi, A., Fadavi, M. S., & Mahdad, A. (2023). Development of a non-violent communication training package and investigating its effectiveness on social anxiety and bullying of aggressive male students. *Applied Psychological Research Quarterly*. Advance online publication. <https://doi.org/10.22059/japr.2024.363338.644704>
26. Shure, M. B., & Spivack, G. (1988). Interpersonal cognitive problem solving. In R. H. Price, E. L. Cowen, R. P. Lorion, & J. Ramos-McKay (Eds.), *Fourteen ounces of prevention: A casebook for practitioners* (pp. 69–82). American Psychological Association. <https://doi.org/10.1037/10064-006>

27. Soltanian, M., & Farhadi, H. (2024). [The effectiveness of unified transdiagnostic treatment on subjective well-being, emotional competence, and emotional self-efficacy in high school adolescents with nomophobia symptoms]. *Behavioral Sciences Research*, 22(4), 666–676.
28. Sung, J., & Kweon, Y. (2022). Effects of a nonviolent communication-based empathy education program for nursing students: A quasi-experimental pilot study. *Nursing Reports*, 12(4), 824–835. <https://doi.org/10.3390/nursrep12040080>
29. Tahmassian, K. (2007). [Validation and standardization of the children and adolescents' self-efficacy questionnaire]. *Applied Psychology*, 4–5, 373–390.
30. Taziki, M., Alizadeh, H., Hakimi Rad, E., Farrokhi, N., & Moghaddas, A. (2015). [Comparison of executive functions in institutionalized children and normal children]. *Advances in Cognitive Science*, 17(4), 63–70. <https://sid.ir/paper/83165/fa>
31. Yang, J. W., & Kim, S. (2016). Integrative review of nonviolent communication intervention studies. *Perspectives in Nursing Science*, 13(1), 36. <https://doi.org/10.16952/pns.2016>
32. Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. J. (2004). The scientific base linking social and emotional learning to school success. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?* (pp. 3–22). Teachers College Pres