



University of Hormozgan



Educational and Behavioral  
Research Center

## Effectiveness of Responsibility Training Based on Choice Theory on School Belonging and Quality of Teacher-Student Relationship in Female Students

Mohammad Geravandnia<sup>1</sup> , Esmaeil Sadipour<sup>2</sup> , Hasan Asadzadeh<sup>3</sup> , Soghra Ebrahimi Ghavam<sup>4</sup>

1. Ph.D. student in Educational Psychology, Department of Psychology, Faculty of Psychology and Educational sciences, Allameh Tabataba'i University, Tehran, Iran
2. Professor, Department of Psychology Faculty of Psychology and Educational sciences, Allameh Tabataba'i University, Tehran, Iran, Corresponding author E-mail: [e.sadipour@atu.ac.ir](mailto:e.sadipour@atu.ac.ir)
3. Associate Professor, Department of Psychology Faculty of Psychology and Educational sciences, Allameh Tabataba'i University, Tehran, Iran
4. Associate Professor, Department of Psychology Faculty of Psychology and Educational sciences, Allameh Tabataba'i University, Tehran, Iran

### Article Info

#### Article type:

Research Article

#### Article history:

Received 12 Feb. 2023

Received in revised form 29

Apr. 2023

Accepted 13 Sep. 2023

Published online 01 Dec. 2023

#### Keywords:

Responsibility,  
Choice theory,  
School belonging,  
Student-teacher relationships

### ABSTRACT

**Objective:** The objective of this study was to examine the effectiveness of responsibility education, based on choice theory, on the school belonging and the quality of student-teacher relationships in female high school students.

**Methods:** The research design employed an applied objective approach and utilized a quasi-experimental design (pre-test-post-test with control group). The study population consisted of second-year high school students in the 2nd district of Karaj city, enrolled during the academic year of 2022-2023. Among them, a sample of 30 individuals was selected using the available sampling method and divided into two groups: the experimental group (15 students) and the control group (15 students). The data collection instruments included the Brew et al. questionnaire on students' sense of connectedness with school (2004) and Newman's quality of learning experience questionnaire (1990). The collected data was analyzed using SPSS version 26 software and multivariate covariance analysis.

**Results:** The findings revealed a significant difference between the experimental and control groups in terms of the development of school belonging and the quality of student-teacher relationships among high school students. Specifically, responsibility education based on choice theory was found to enhance the school belonging and improve the quality of student-teacher relationships.

**Conclusions:** The provision of training and the cultivation of students' sense of responsibility not only strengthens their connection with the school but also enhances the quality of their relationships with teachers.

**Cite this article:** Geravandania, M., Sadipour, I., Asadzadeh, H. & Ebrahimi Ghavam, S. (2024). Effectiveness of responsibility training based on choice theory on school belonging and quality of teacher-student relationship in female students. *Iranian Journal of Educational Research*, 3 (2), 1-20.

DOI: <https://doi.org/10.22034/3.2.2>



© The Author(s).

DOI: <https://doi.org/10.22034/3.2.2>

Publisher: University of Hormozgan.

## Introduction

Several studies have emphasized the social dimensions of school performance and identified the influence of schools on students' psychological and academic outcomes ([Anderman, 2002](#); [Hughes et al., 2010](#)). While previous research has explored the impact of school climate ([Freeman et al., 2009](#); [Patrick et al., 2007](#)), it assumes that decision-making and preferences are universally consistent and that autonomy, competence, and relatedness are fundamental to an individual's well-being ([Martela et al., 2023](#)), providing the backdrop for social connectedness and a sense of belonging. A sense of belonging refers to the collective belief that members have their needs fulfilled through their commitment to the group ([Strayhorn, 2018](#)) and encompasses "a sense of acceptance, value, participation, and encouragement by others, as well as the perception of being an integral part of the classroom's life and activities" as highlighted by [Rainey et al. \(2018\)](#). This sense of belonging can impact a student's academic adjustment, progress, aspirations, and even their retention in school ([Strayhorn, 2018](#)).

**Sense of Belonging** Given the significance of school belonging for various positive outcomes, such as academic achievement, cognitive and behavioral engagement, and mental health and well-being, the lack of understanding regarding the process of school belonging is concerning ([Högberg et al., 2021](#)). School belonging is sometimes conceptualized as observable behaviors, thoughts, and emotions, and creating a nurturing, supportive, and inclusive environment plays a crucial role in fostering a sense of belonging, which can be achieved through cultivating positive student-teacher relationships, providing adequate resources, and embracing diversity and individuality ([O'Keeffe, 2013](#)). Teacher-student relationships represent one of the fundamental interpersonal interactions within the school environment ([Mansoori Nezhad et al., 2016](#)). Corroborative research demonstrates that this sense of belonging is positively associated with various educational outcomes, including school attendance, end-of-year grades, academic performance, achievement, increased motivation and effort, and school completion rates. Moreover, there is a consensus regarding the role of belonging as a protective factor against loneliness, mental illness, depression, involvement in conflicts, bullying, and vandalism, disruptive behavior and emotional distress, engagement in smoking and drinking, as well as high-risk behaviors related to drug and tobacco use. Hence, it can be asserted that school belonging yields benefits in the form of enhanced

academic achievement, reduced costs of remedial education programs, and combatting substance abuse ([Ahmadi et al., 2020](#)).

Student-teacher relationships are created through a complex intersection of beliefs, attitudes, behaviors, and interactions, and these strong and supportive relationships with teachers allow them to feel more secure and competent in the school environment, and have more positive relationships with peers, establish and gain more academic achievements, and on the other hand, conflict with teachers may put students on the path to school failure, in which case they cannot connect to the academic and social resources provided in classrooms and schools ([Hamre & Pianta, 2006](#)). Statistical analysis of data from 380 participants shows that students' sense of belonging and retention is fundamentally influenced by academic participation and social participation ([Ahn & Davis, 2023](#)). This quality of communication has a two-way form, which increases when socializing with peers with different backgrounds than the individual ([Strayhorn, 2018](#)). In this regard, [Zimmer-Gembeck et al. \(2006\)](#) found that strong social interactions can help learners feel independent, engaged, and self-confident, and motivate them to be interested and enthusiastic about their educational goals. [Midgley et al. \(1989\)](#) distinguish between three areas of the school environment - organizational, educational and social climate - and explain how the characteristics of these areas can be developmentally inappropriate and affect the quality of their interpersonal communication. Because the teacher-student relationship has a separate identity beyond just interactive indicators between people ([Lari et al., 2022](#)).

According to stage-environment fit theory, students are more likely to perceive belonging in high school when schools provide a noncompetitive environment for independent exploration and a social climate conducive to supportive bonding ([Högberg et al., 2021](#)). It is the case that supportive relationships are associated with school belonging ([Allen et al., 2021](#); [Allen et al., 2018](#)). [Chiu et al. \(2016\)](#) also showed in their research results that belonging to school is more in egalitarian cultures than in hierarchical cultures. This may be due to hierarchal cultures and their emphasis on performance and competition over cooperation and mutual support, and this can, in a way, direct our attention to communication based on competition in school and its harms. Of course, it should be noted that the real key to a student's sense of belonging is the student-teacher relationship ([Allen et al., 2021](#)), which requires time and effort to form and strengthen these relationships.

Positive experiences between students and teachers play a significant role in shaping students' sense of belonging, which can have positive effects on their academic and social development. These positive relationships can lead to increased participation and overall improvement in students' academic performance. On the other hand, negative relationships characterized by a lack of communication, constant friction or conflict, and a lack of understanding can have detrimental effects on students. Students involved in negative relationships often feel excluded from their school community, develop negative attitudes towards school, and struggle academically ([Legette et al., 2022](#)). Research conducted by [Durand and Blackwell \(2022\)](#) found that being recognized as valued members of the school community and having positive relationships with peers contribute to a sense of belonging. Additionally, students' perception of equality, where all individuals are seen as equally important, is a prevailing factor in their sense of belonging.

Choice theory asserts that individuals have the right to choose their thoughts, feelings, and behaviors ([Glasser, 2013](#)). According to this theory, all human behavior is driven by the desire to satisfy five basic human needs, and the way in which these needs are satisfied varies for each individual. It is important to note that all behavior is intentional and represents an individual's best effort to fulfill their basic needs ([Rudin & Jusoh, 2020](#)).

[Glasser \(1999\)](#) further emphasizes that adopting the theory of choice means accepting responsibility for our own lives, which in turn grants us freedom ([Wubbolding, 2013](#)). This responsibility and freedom also contribute to the formation and maintenance of relationships. By increasing our self-control, we are able to make more responsible choices and cultivate healthy communication habits within our relationships, such as support, encouragement, active listening, acceptance, trust, respect, and effective conflict management ([Wubbolding, 2013](#)). The theory of choice highlights the idea that humans possess freedom, have the capacity to make decisions, and are accountable for those decisions ([Rudin & Jusoh, 2020](#)). Furthermore, individuals utilize logical reasoning to make rational choices that align with their personal goals ([Nickerson, 2021](#)).

A central tenet of choice theory is that behavior is influenced by the presence or absence of satisfactory relationships, and the cultivation of such relationships facilitates the learning process ([Bradley, 2014](#)). Additionally, the theory prepares individuals to take responsibility for their actions.

According to [Glasser \(2013\)](#), the disregard for the needs and desires of others can result in the deterioration of social relationships. This concept, known as social commitment in sociology ([Sahebi et al., 2015](#)), plays a role in addressing human problems. Thus, the assumption of responsibility becomes a crucial precondition for problem-solving. Through the acceptance of responsibility, individuals express their opinions and thoughts, while effectively managing various situations and circumstances. Responsibility training serves as a vital mechanism for the implementation of social laws and norms, contributing to the reduction of problems and the enhancement of attributes such as resourcefulness, deliberate actions, efficient organization, and optimal time management ([Amarloo & Shareh, 2018](#)). Consequently, both responsibility and its education, with the understanding that individuals possess freedom in their choices, can positively influence personal and social development, particularly within educational settings. However, it remains unexplored how it impacts the sense of belonging to the school and the quality of student-teacher relationships. Hence, it is crucial to focus on enhancing the quality of student relationships and the sense of belonging to the school by integrating the teaching of responsibility based on the theory of choice. In this research, we aim to assess the effectiveness of the responsibility package training grounded in the choice theory on the sense of belonging to the school and the quality of student-teacher relationships.

### Materials and Methods

The research employed a quasi-experimental design of pre-test-post-test nature with a control group. The study focused on female students in high school in the 2nd district of Karaj city, during the academic year of 2023. The sample size of 30 individuals, divided into two groups of 15 each, was determined based on the principles of the research method. The criteria for participation in the study included interest and commitment to attending all sessions, while non-cooperation and missing more than one session were the criteria for exclusion. Ethical considerations, such as confidentiality and privacy protection, were addressed before the test. Informed consent forms were obtained from the participants, and anonymous questionnaires were distributed. The questionnaires were completed before the educational package was implemented by both the experimental and control groups. The experimental group received a theory-based responsibility

training package consisting of 10 sessions, each lasting 90 minutes, while the control group did not receive any training. Post-test questionnaires were then administered to both groups. Statistical analysis was conducted using SPSS26 software, specifically employing multivariate analysis of covariance to test the hypotheses. Various questionnaires were utilized to collect the necessary data.

**Sense of Connectedness with School Scale:** This questionnaire was designed in 2004 by [Brew et al. \(2004\)](#) in the form of positive sentences on a Likert scale (from strongly agree to strongly disagree). The mentioned questionnaire was also revised in 2005 by Betty and Barry, which generally has 6 subscales, including teacher support, belonging with peers, fairness and safety, academic engagement, relatedness of self with school and engagement in community. The reliability coefficient through Cronbach's alpha for the whole questionnaire is 0.75 and for the components of feeling of belonging with peers 0.73, teacher support 0.89, fairness and safety 0.75, engagement in community 0.84, relatedness of self with school 0.69 and academic engagement 0.78 have been reported ([Brew et al., 2004](#)). In Iran, [Makian and Kalantar Kousheh \(2015\)](#) reported the Cronbach's alpha coefficient of the whole questionnaire as 0.88 and the Cronbach's alpha coefficient of the subscales from 0.56 to 0.82. In the present study, the reliability coefficient was estimated at 0.85 based on Cronbach's alpha.

**Student-Teacher Relationship Quality Questionnaire:** This questionnaire is a part of [Neuman \(1990\)](#) quality of learning experience questionnaire. The items of this questionnaire are on a 5-point Likert scale from weak to very good with a score of 1 to 5. [Neuman \(1990\)](#) reported the validity of this tool as favorable and the reliability coefficient of each of the subscales as 0.71, 0.76, 0.86 and 0.91, respectively [Neuman \(1990\)](#). In [Naami \(2009\)](#), the internal consistency coefficients of the four domains were calculated using Cronbach's alpha method as 0.88, 0.82, 0.87 and 0.92. [Naami \(2009\)](#) calculated the reliability coefficients of the four areas as 0.71, 0.74, 0.86 and 0.91. In the present study, the reliability coefficient was estimated at 0.82 based on Cronbach's alpha.

**The responsibility training package based on choice theory:** The authors while reviewing the recent ten-year research literature from reliable domestic and foreign scientific databases in connection with the theory of reality therapy (choice theory), collected the educational implications of this theory, especially the concepts that were in the field of responsibility, using

comparative content analysis method (whole to part; theory to category) and data coding according to the categories, implications of Glasser's choice theory of responsibility were extracted. In this method, without having any generalization or definition in mind, researcher studies the text and summarizes the results of this analysis. Then, by creating a classification matrix, select the classes and start coding the selected content while placing these classes as a basis. Finally, meaningful content validity is calculated for the designed package. Then this package was presented to 10 experts in psychology and reality therapy theory (choice theory) to check its validity. Content Validity Index (CVR) and Content Validity Index (CVI) were used to check the content validity of the package. The minimum acceptable CVR was 0.62 based on the number of scoring experts for 10 experts. This index for closed components was higher than 0.70. Also, the minimum acceptable value for the CVI index is equal to 0.79, the value of this index for the components of this package was 0.90 and above. Finally, this package was compiled in ten sessions (table 1).

**Table 1.** Responsibility training package based on choice theory

Session	Content
First session: Introduction and generalities	Familiarity with the environment and goals of holding the intervention and conducting the pre-test and introducing the ten principles of choice theory, destructive behaviors and replacement of constructive behaviors.
The second session: needs	Familiarization and better understanding of basic or genetic needs in the selection theory, the difference between the perceptual world and the desirable world, paying attention to one's own and others' needs, and methods of prioritizing needs.
The third session: relationships	Getting to know the important axes of relationship, four types of relationship, paying attention to the characteristics of effective communication and destructive communication and the necessary capabilities to create effective communication.
The fourth session: types of responsibility	Familiarity with responsibility and its types, individual and social responsibility and shirking responsibility and examples of both types
The fifth session: Failure and selective behaviors	Familiarity with failure and inefficient and ineffective behaviors to deal with it, people's reaction in the face of failure and failure and methods of overcoming failure and failure based on choice theory
Sixth session: problem solving skills	Getting to know the problem solving process, required skills, common individual mistakes and optimal problem solving from the perspective of choice theory
Seventh session: <b>Choice</b> in humans and constructive and destructive habits	Familiarity with the importance of choice in human life, choice theory's view of choice, effects and consequences of effective and ineffective choice, destructive and constructive habits and its relationship with choice.
The eighth session: planning	Familiarity with planning and its principles, goal and target selection, prioritization and planning according to human choice and control resources.
Session 9: Understanding and discovering desires	Familiarity with desires, the difference between individual and collective desires, goal orientation and planning based on desires based on choice theory
Tenth session: Summary	Summary and implementation of the post-test



**Research implementation method:** An explanatory meeting was conducted prior to the implementation of the emotional intelligence training program to garner the students' active participation in the training sessions. During this meeting, the trainers elucidated the advantages of the intervention program for the students. The research employed a 10-session responsibility training for the experimental group, with each session taking place weekly and lasting for 90 minutes. This training program was administered to the experimental group over a span of two months. The control group, on the other hand, did not receive any intervention in the realm of responsibility training. Prior to the implementation of the training package, both the experimental and control groups completed research questionnaires. Subsequently, the responsibility training package, which was based on selection theory, was implemented. Following the implementation of the educational package, the aforementioned questionnaires were administered to both the experimental and control groups.

## Results

In this section, the descriptive indices, the scores of the research variables in the experimental and control groups have been discussed. The participants of this research included students of different educational levels of the second level of high school (first 9 people, second 11 people and third 10 people). The scores obtained from the pre-test and post-test variables of the feeling of belonging to the school and the quality of student-teacher relationships in the experimental and control groups are presented in Table 2.

**Table 2.** Descriptive indicators of feeling of belonging to school and the quality of student-teacher relationships

Variable	Group	Phase	Mean	SD
Belonging to school	Experimental	Pretest	86.80	<b>10.76</b>
		Posttest	108.26	<b>13.15</b>
	Control	Pretest	73.87	<b>7.52</b>
		Posttest	73.53	<b>7.02</b>
Quality of student-teacher relationships	Experimental	Pretest	5.13	<b>1.68</b>
		Posttest	7.67	<b>1.67</b>
	Control	Pretest	4.53	<b>1.50</b>
		Posttest	4.67	<b>1.58</b>



**Table 3.** Levene's test to check the homogeneity of variances of research variables

Variable	DF1	DF2	F	P
Belonging to school	1	28	2.15	0.15
Quality of student-teacher relationships	1	28	0.41	0.52

Before data analysis, Levene's test and Box's M test were used to assume normality of data distribution and homogeneity of variance in groups. The results showed that the Box's M statistic in degree of freedom 3 equals 5.794 with a significance level of 0.148; Also, according to Table 3, the results of Levene's test, the test statistic was not significant for any of the variables. Therefore, the assumption of homogeneity of variances and normality of distribution in groups is established.

**Table 4.** Multivariate covariance analysis of sense of belonging to school and quality of student-teacher relationships

Effect	Test	Value	F	Hypothesis DF	Error DF	P	Effect size
Group	Pillai's trace	0.695	28.480	2	25	0.001	0.695
	Wilks' lambda	0.305	28.480	2	25	0.001	0.695
	Hotelling's trace	2.278	28.480	2	25	0.001	0.695
	Roy's largest root	2.278	28.480	2	25	0.001	0.695

To compare the experimental group and the control group and investigate the effect of responsibility training based on choice theory on the belonging to the school and the quality of student-teacher relationships based on the scores of the post-tests, after controlling the effect of the pre-tests, first a MANCOVA was performed on the data. Then, the research hypotheses were tested. As seen in Table 4, the overall effect of the group is significant, because the F value of all four tests is significant at the level 0.001. This means that there is a significant difference between the experimental and control groups in at least one of the dependent variables.

**Table 5.** Univariate covariance analysis of sense of belonging to school and quality of student-teacher relationships

Source	Variable	SS	DF	MS	F	P	Effect size
Group	Belonging to school	5639.552	1	5639.552	50.054	0.001	0.658
	Quality of student-teacher relationships	50.518	1	50.518	26.801	0.001	0.508

As can be seen in Table 5, the F ratio of univariate covariance analysis in the feeling of belonging to the school ( $F = 50.054$  and  $p = 0.001$ ) and the quality of student-teacher relationships ( $F =$

26.801 and  $p = 0.001$ ) ) are significant. These findings show that there is a significant difference between the experimental group and the control group in the variables of feeling of belonging to the school and the quality of student-teacher relationships.

## Discussion

Examining the results of this research showed that the quality of student-teacher relationships in students who were subjected to the intervention of the educational package of responsibility based on the choice theory is higher than the students who were not subjected to any intervention; Therefore, the hypothesis of the research is confirmed that this finding is in line with the research results of [Matsko et al. \(2023\)](#), [Chen and Liu \(2024\)](#) and [Legette et al. \(2022\)](#). Research has shown that the interpersonal behavior of the instructor, in addition to the learner's motivation, academic progress and happiness, affects the success of learners. In terms of learner well-being and academic outcomes, interpersonal behavior has the potential to influence the learning process, and learners can establish a secure foundation in the learning environment through positive, high-quality relationships with their instructors, often enabling them to master academic content effectively. The constructive connection between teacher-student relationships and learners' social-emotional well-being is also often deeply rooted, as how teachers treat students affects how students treat each other ([Zheng, 2022](#)). Studies show that students who develop positive attitudes towards school also feel more responsible, feel more connected and more involved in school, and have a greater desire to develop social behaviors. In this way, it can be assumed that this can create a positive attitude towards school, which in turn can facilitate the initiation of social behaviors and teacher-student communication, and this communication and social behavior, given the positive value that social behaviors have for growth are very efficient and effective in school ([Legette et al., 2022](#)).

A range of experiences support a person's participation and responsibility and guide and strengthen learning ([Billett, 2023](#)), which is due to the quality of relationships and its characteristics. According to attachment theory, the teacher may be a relationally and emotionally important adult for the child. In this way, by providing a warm and loving relationship characterized by emotional closeness, the teacher can stimulate prosocial behaviors in the child through which the child learns and can be reinforced by the same teacher. In addition, the teacher plays an important role in

mediating relationships between classmates, helping them manage conflicts within the class group, encouraging correct behavior and discouraging incorrect behavior. As a result, a positive student-teacher relationship can reduce the frequency of aggressive behaviors and ultimately promote prosocial behaviors, which generally contribute to a greater sense of participation, sense of responsibility, and positive relationship atmosphere in the classroom ([Longobardi et al., 2021](#)). On the other hand, this quality can, by strengthening the motivation and active learning, lead to learning the way of learning and the interest of the learners in continuous learning and the realization of short-term (internal reward), long-term (career success) and extensive personal growth (from job position to free time) ([Abbasi et al., 2018](#)) and improve the quality of student-teacher relationships.

Creating flexible and compassionate interactions with educators enables learners to feel more confident, protected, and aware in the learning environment. Additionally, it enables and facilitates positive peer relationships and is associated with superior academic performance and learning is a socially mediated process. In this process, a positive relationship with the teacher, characterized by closeness and support, can provide students with a supportive communication context that can improve outcomes, eliminate distress, regulate emotions, instill security, and motivate. create learning ([Longobardi et al., 2021](#)). [Pianta \(2006\)](#) proposed the interpersonal relationship between instructors and learners as a concept of instructor-learner dependency. This can be seen as educators' awareness of their relationship with learners, which includes three dimensions, friendship, struggle, and dependence. The dimension of intimacy (friendship) can reflect warmth, intimacy and safety in the relationship between the instructor and the learner. The conflict dimension reflects the degree to which educators perceive communication as bad, unpredictable, contradictory, and uncomfortable. Finally, the development of learners in dependence on others refers to the dependence dimension. In fact, instructor-learner conflict has been considered as one of the most important characteristics of the instructor-student relationship that affects learners' adjustment in the classroom ([Han & Wang, 2021](#)) and this is caused by the level of commitment to tasks and responsibilities in the classroom. class and school. Experiential and educational experiences and activities, when they provide opportunities for children to be independent and develop their own ideas, can provide context for learners to practice their learning behaviors,

understand full commitment, and thus, the characteristics of effective learning ([Longobardi et al., 2021](#)). [Bandura \(1982\)](#) suggests, "Students' beliefs in their efficacy to regulate learning and master academic activities determine their aspirations, motivation levels, and academic achievements". Teachers tend to establish a closer and more positive relationship with children who demonstrate social behavior and academic commitment. In these cases, teachers tend to form closer relationships with these children, spend more time teaching them, and generally become more involved. Therefore, it is possible that in such relational contexts, the child is not only more supported from an emotional and educational point of view, but also helps to improve it. The relationship between academic performance and prosocial behavior has been widely covered in the literature ([Longobardi et al., 2021](#)). Since the learning experience is a complex concept and there is no limit to its size, shape and scale, a positive learning environment is created when cooperative teaching and learning are valued and there is trust and relationship between students and between teachers and students. In order to build this trust leading to participation, a learning environment must first be provided in which all students feel valued, safe and supported ([Dyrbye et al., 2021](#)).

In their relationships with learners, educators tend to act as a reference to reinforce appropriate behavior and moderate inappropriate interactions. They also tend to act as initiators of social communication and constructive communication with students. Among these three dimensions, closeness in the relationship between teachers and learners is the most desirable. In addition, it is also noted that closeness (friendship) is the only positive dimension of the relationship between educators and learners, because education is a practice imbued with positive emotions. Studies show that a favorable instructor-learner relationship, characterized by good communication, assistance, and personal communication, minimizes learner tension and reduces symptoms of internalizing and externalizing behaviors, and increases the speed of their influence and the learner's adaptation to educational environment affects. Teachers have a significant role to play in ensuring that these relationships are formed and then remain supportive of their students. Some authors argue that a good quality teacher-student relationship is a protective factor for child development, victimization risk, and peer group membership, which is associated with greater development and better prosocial behavior ([Longobardi et al., 2021](#)).

In examining the second hypothesis and that the sense of belonging to the school of students who have been subjected to the intervention of the responsibility training package based on the choice theory is more than the students who have not been subjected to any intervention, the results of the research showed that the hypothesis is confirmed and the responsibility training increases the sense of belonging to the school. This finding is consistent with the researches of past studies ([Durand & Blackwell, 2022](#); [Longobardi et al., 2021](#); [Naami, 2009](#)). In other words, increasing the student's responsibility causes more involvement in activities, more motivation to participate in school activities and finally the feeling of belonging to the school, which itself affects the learning of knowledge and students' motivation. With the increase in the sense of belonging, the basis of a person's decision regarding the regulation of his relationship with the environment or a specific subject also changes, and with the change of relationship, responsible behavior is seen more in the person; Therefore, the feeling of belonging is the seed of a process during which a person feels a commitment and responsibility towards a place, object or material, in a way that creates a positive feeling towards the environment or the subject in question and this feeling of belonging to school can significantly moderate the effect of attachment to peers on school misbehavior and in a way, reduce irresponsible and destructive behaviors.

[Murphy and Zirkel \(2015\)](#) identify what they call "salient concerns" about belonging in school, as some students' social identities make them vulnerable to "negative stereotypes and social identity threat"—threats that may be perceived by one's social group in a special place should be set without value" and in this way the school is effective in promoting children's sense of trust, responsibility towards society and moral values ([Kathuria & kumar Pandya, 2020](#)). Social responsibility, like other social behaviors, is behavioral in appearance, but in fact, this feeling of commitment and adherence to others is based on a comprehensive and comprehensive attitude and has three cognitive, emotional and behavioral dimensions. The deeper and more comprehensive this attitude is, the higher the probability of responsible behavior, commitment and belonging will be on the part of the individual ([Shams, 2022](#)). In this sense, belonging is not just a fixed characteristic that distinguishes people, but it is a state that changes within people over time ([Gillen-O'Neel, 2021](#)) and a person experiences a sense of belonging when "feelings of acceptance, respect, inclusion and support the community in which it participates" and this concept in school should mean the

way in which students feel accepted, respected, involved and supported by the educational and environments in which they are involved ([Berryman & Eley, 2019](#)).

School has emerged as a positive indicator of trust, more responsibility, and a sense of community connection and adaptation, which promotes the development of social skills and also strengthens the social network of young children. The connection with the school is also seen as a shield against various risky behaviors such as emotional distress and substance abuse (([Kathuria & kumar Pandya, 2020](#)), which is a protective feature resulting from a sense of belonging as a result of responsible and committed behaviors towards school activities. [Berryman and Eley \(2019\)](#) argue based on the "belonging hypothesis" that belonging is a basic human motivation and thus has positive emotional and behavioral consequences that manifest in the social environment with a sense of belonging.

According to self-determination theory, when an environment is constructed to facilitate belonging, individuals are more likely to internalize the values of the environment and, therefore, feel positive about the environment and engage in behaviors that are consistent with those values ([Ryan & Deci, 2000](#)). [Eccles et al. \(1993\)](#) stage-environment fit theory, applying the belonging hypothesis and self-determination theory, suggests that when schools meet students' developmental needs (one of which is belonging), students will have higher academic engagement, motivation, and achievement and they consider themselves committed and obliged to accompany the school and its processes.

Our findings support the importance of school performance programs that provide an environment that provides multiple psychosocial benefits such as fostering a sense of belonging and social responsibility which encourages children's sense of connectedness to engage in civic activities. The feeling of belonging is the basis of the individual's decisions about regulating his relationship with the environment or a certain matter; Therefore, the feeling of belonging is the point of the process during which a person feels a sense of obligation and responsibility towards a place, object or matter, in a way that causes a positive feeling towards the environment or the matter in question ([Shams, 2022](#)). Relationships based on care, trust, respect, affection, openness and cooperation can promote students' progress, develop identity and belonging to the school and teacher's responsibility and even promote these characteristics . The results of the research by [Kathuria and kumar Pandya \(2020\)](#) showed that the school has emerged as a factor that promotes the child's

sense of belonging, school and family compatibility, and at a close level, it has an effect on children and their relationship with other members of society. By acquiring a range of knowledge, skills, attitudes and values from school, children become social and empowered and communicate with others. Most importantly, this process enables them to integrate themselves into the mainstream of society and take responsibility for the activities and currents of the social environment.

This research, like many researches in the field of behavioral sciences, faced limitations. The selected population of this research was the girl students of the high school; therefore, one should be cautious in generalizing the results to other groups. According to the results and findings of the research, it is suggested that researchers and teachers in their fields of work use the educational package in other fields of learning and education and in addition to conducting research in other groups and societies, especially in social fields, to cultural and social comparisons. Also, considering the importance of responsibility in teenagers, it is suggested focusing on the category of responsibility, appropriate content should be included in educational courses. Practical action should be taken to inform families, teachers and social groups related to teenagers and even elementary school students. To provide the ground for holding workshops and educational content in schools. The role of responsibility education in the educational steps of parents and the educational steps of teachers should be explained and the ground for the participation of teachers and parents should be provided.

## Conclusion

Undoubtedly, progress, empowerment and effective education in the school environment depends on the quality of feeling, relationships and educational approach of the school, which can make the student belong to the school on the one hand, and on the other hand, create constructive and promising relationships in the school. The current research, which studied the variables related to this matter, showed that through training responsible and committed people, in the school environment, it is possible to help their sense of belonging for dynamic achievement of educational and training goals, and on the other hand, this commitment and accountability has helped to increase the quality of teacher-student communication and can even create a better and more positive feeling in students towards the system of school processes. As it was stated, the sense of belonging is the foundation of the individual's decisions about regulating his relationship with the



environment or specific matters and creates a comprehensive and all-round attitude in cognitive, emotional and behavioral dimensions. It will be more committed and indicative of the person's belonging to the school environment.

#### Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

#### Acknowledgment and Ethics statement

This article is extracted from the doctoral dissertation of Allameh Tabatabai University of Tehran with the ethics code IR.ATU.REC.1402.002. All the people who cooperated in this research are appreciated and thanked.

#### Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. The author contributed to the article and approved the submitted version.

#### Funding

The authors did (not) receive support from any organization for the submitted work.

#### Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## References

- Abbasi, M., Moslemi, Z., & Ghomi, M. (2018). The Relationship between the Quality of Learning Experience and self-regulation with Academic Burnout. *Journal of Education Strategies in Medical Sciences*, 12(3), 32-43.
- Ahmadi, S., Hassani, M., & Ahmadi, F. (2020). Student-and school-level factors related to school belongingness among high school students. *International Journal of Adolescence and Youth*, 25(1), 741-752.
- Ahn, M. Y., & Davis, H. H. (2023). Students' sense of belonging and their socio-economic status in higher education: a quantitative approach. *Teaching in Higher Education*, 28(1), 136-149.
- Allen, K.-A., Kern, M. L., Rozek, C. S., McInerney, D. M., & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, 73(1), 87-102.

- Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2018). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review*, 30, 1-34.
- Amarloo, P., & Shareh, H. (2018). Social support, responsibility, and organizational procrastination: A mediator role for basic psychological needs satisfaction. *Iranian Journal of Psychiatry and Clinical Psychology*, 24(2), 176-189.
- Anderman, E. M. (2002). School effects on psychological outcomes during adolescence. *Journal of educational psychology*, 94(4), 795.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American psychologist*, 37(2), 122.
- Berryman, M., & Eley, E. (2019). Student belonging: Critical relationships and responsibilities. *International Journal of Inclusive Education*, 23(9), 985-1001.
- Billett, S. (2023). Learning across working life: educative experiences and individuals' participation. *Studies in Continuing Education*, 1-17.
- Bradley, E. L. (2014). Choice theory and reality therapy: an overview. *International Journal of Choice Theory and Reality Therapy*, 5(1), 6-14.
- Brew, C., Beatty, B., & Watt, A. (2004). Measuring students' sense of connectedness with school. Australian Association for Research in Education Annual Conference, Melbourne,
- Chen, C., & Liu, A. J. (2024). Understanding partnerships in teacher and student feedback literacy: Shared responsibility. *Innovations in Education and Teaching International*, 61(1), 31-44.
- Chiu, M. M., Chow, B. W.-Y., McBride, C., & Mol, S. T. (2016). Students' sense of belonging at school in 41 countries: Cross-cultural variability. *Journal of cross-cultural psychology*, 47(2), 175-196.
- Durand, T. M., & Blackwell, R. (2022). Dimensions of Belonging and "Othering" in Middle School: Voices of Immigrant and Island-Born Puerto Rican Adolescents. *Journal of Education for Students Placed at Risk (JESPAR)*, 1-21.
- Dyrbye, L. N., Satele, D., & West, C. P. (2021). Association of characteristics of the learning environment and US medical student burnout, empathy, and career regret. *JAMA Network Open*, 4(8), e2119110-e2119110.

- Eccles, J. S., Wigfield, A., Midgley, C., Reuman, D., Iver, D. M., & Feldlaufer, H. (1993). Negative effects of traditional middle schools on students' motivation. *The elementary school journal*, 93(5), 553-574.
- Freeman, J. G., Samdal, O., Klinger, D. A., Dur, W., Griebler, R., Currie, D., & Rasmussen, M. (2009). The relationship of schools to emotional health and bullying. *International journal of public health*, 54, 251-259.
- Gillen-O'Neel, C. (2021). Sense of belonging and student engagement: A daily study of first-and continuing-generation college students. *Research in higher education*, 62(1), 45-71.
- Glasser, W. (1999). *Choice theory: A new psychology of personal freedom*. HarperPerennial.
- Glasser, W. (2013). *Take charge of your life: How to get what you need with choice-theory psychology*. IUniverse.
- Hamre, B. K., & Pianta, R. C. (2006). Student-Teacher Relationships. In *Children's needs III: Development, prevention, and intervention*. (pp. 59-71). National Association of School Psychologists.
- Han, Y., & Wang, Y. (2021). Investigating the correlation among Chinese EFL teachers' self-efficacy, work engagement, and reflection. *Frontiers in Psychology*, 12, 763234.
- Högberg, B., Petersen, S., Strandh, M., & Johansson, K. (2021). Determinants of declining school belonging 2000–2018: The case of Sweden. *Social Indicators Research*, 157(2), 783-802.
- Hughes, J. N., Chen, Q., Thoemmes, F., & Kwok, O.-m. (2010). An investigation of the relationship between retention in first grade and performance on high stakes tests in third grade. *Educational evaluation and policy analysis*, 32(2), 166-182.
- Kathuria, T., & kumar Pandya, A. (2020). Listen, I am too responsible! Effect of schooling on sense of trust, responsibility and belongingness to the community of children working on the street in Chandigarh City, India. *Children and Youth Services Review*, 119, 105527.
- Lari, N., Hejazi, E., Jowkar, B., & Ezhei, J. (2022). The Quality of Teacher-Student Relationship in the School Context: An Ethnographic Survey. *Educational Psychology*, 18(64), 129-156.
- Legette, K. B., Rogers, L. O., & Warren, C. A. (2022). Humanizing student–teacher relationships for black children: Implications for teachers' social–emotional training. *Urban Education*, 57(2), 278-288.

- Longobardi, C., Settanni, M., Lin, S., & Fabris, M. A. (2021). Student–teacher relationship quality and prosocial behaviour: The mediating role of academic achievement and a positive attitude towards school. *British Journal of Educational Psychology*, 91(2), 547-562.
- Makian, R., & Kalantar Kousheh, M. (2015). Normalizing Sense of Belonging to School Questionnaire and its relationship with Academic Burnout and Achievement Motivation among Persian students. *Quarterly of Educational Measurement*, 5(20), 119-138. <https://doi.org/10.22054/jem.2015.1790>
- Mansoori Nezhad, R., Behroozy, N., & Shehni Yeylagh, M. (2016). The Relationship Between Personality Characteristics with Teacher-Student Relationship Quality in Students of High School.
- Martela, F., Lehmus-Sun, A., Parker, P. D., Pessi, A. B., & Ryan, R. M. (2023). Needs and well-being across Europe: Basic psychological needs are closely connected with well-being, meaning, and symptoms of depression in 27 European countries. *Social Psychological and Personality Science*, 14(5), 501-514.
- Matsko, K. K., Ko, E. K., Bressman, S., Mozer, L., & Winter, J. S. (2023). Two sides of a coin: Examining mentor and student teacher relationships during student teaching. *Teaching and Teacher Education*, 130, 104139.
- Midgley, C., Feldlaufer, H., & Eccles, J. S. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of educational psychology*, 81(2), 247.
- Murphy, M. C., & Zirkel, S. (2015). Race and belonging in school: How anticipated and experienced belonging affect choice, persistence, and performance. *Teachers College Record*, 117(12), 1-40.
- Naami, A. (2009). Relationship between quality of learning experiences and academic burnout in graduate students of Shahid Chamran University. *PSYCHOLOGICAL STUDIES*, 5(3), 117-134.
- Neuman, Y. (1990). Quality of learning experience and students college outcomes. *International Journal of Educational Management*, 7, 1-16.
- Nickerson, C. (2021). Rational choice theory. Simply Psychology. *Rational Choice*.

- O'Keeffe, P. (2013). A sense of belonging: Improving student retention. *College student journal*, 47(4), 605-613.
- Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of educational psychology*, 99(1), 83.
- Pianta, R. C. (2006). Teacher-child relationships and early literacy. *Handbook of early literacy research*, 2, 149-162.
- Rainey, K., Dancy, M., Mickelson, R., Stearns, E., & Moller, S. (2018). Race and gender differences in how sense of belonging influences decisions to major in STEM. *International journal of STEM education*, 5, 1-14.
- Rudin, M., & Jusoh, A. J. (2020). The basic needs of adolescent rape victims according to Choice Theory Reality Therapy. *European Journal of Molecular & Clinical Medicine*, 7(2), 899-911.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, 25(1), 54-67.
- Sahebi, A., Zalizadeh, M., & Zalizadeh, M. (2015). Choice theory: An approach to accountability and. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, 4(2), 113-134.
- Shams, Z. (2022). Teaching social responsibility and investigating its effectiveness on the sense of belonging to school and academic motivation of students. *Quarterly Journal of Excellence in Education and Training*, 1(1), 41-55.
- Strayhorn, T. L. (2018). *College students' sense of belonging: A key to educational success for all students*. Routledge.
- Wubbolding, R. E. (2013). Choice theory/reality therapy: Issues to ponder. *International Journal of Choice Theory & Reality Therapy*, 32(2).
- Zheng, F. (2022). Fostering students' well-being: The mediating role of teacher interpersonal behavior and student-teacher relationships. *Frontiers in Psychology*, 12, 796728.
- Zimmer-Gembeck, M. J., Chipuer, H. M., Hanisch, M., Creed, P. A., & McGregor, L. (2006). Relationships at school and stage-environment fit as resources for adolescent engagement and achievement. *Journal of Adolescence*, 29(6), 911-933.