

The Impact of Online Training in Positive Thinking Skills on Social Adjustment and Alexithymia in Trans-sexual Students

Elnaz Nezhadiyan¹, MSc Student;  Hossein Keshavarz Afshar^{*}, PhD;  Masoud Gholamali Lavasani¹, PhD

¹Department of Counselling and Educational Psychology, Faculty of Psychology and Education, University of Tehran, Tehran, Iran

ABSTRACT

Background: Alexithymia and social adjustment are among the problems to which trans-sexual students are encountered. Teaching positive thinking skills has been considered as a therapeutic technique for social adjustment and behavioral issues in children and adolescents. Therefore, this study was aimed to determine whether online teaching of positive thinking skills would contribute to improve social adjustment and alexithymia in trans-sexual students.

Methods: The present study was semi-experimental in terms of research methods, and an applied one in terms of the research objective. It was performed as a pre-test, post-test study on two experimental and control groups from May to July 2021. The research population consisted of all trans-sexual secondary high school students who referred to counseling offices in schools and educational departments in Tehran. Out of the research overall population, a total of 60 students were selected as the research sample. They were randomly divided into two experimental and control groups, each with 30 students. The former received teaching in positivity as an intervention through online teaching, whereas the latter received no intervention. The data collection tools for this study were Sinha & Singh's Adjustment Inventory for School Students (AISS) (1993), Toronto Alexithymia Scale (TAS-20) (1994), and positive thinking skills framework by Seligman, Steen, Park, and Peterson (2005). Statistical analysis was performed using SPSS software, version 23. A P value less than 0.05 was considered to be statistically significant.

Results: The mean±SD in the pre- and post-test in the control group for adjustment were 11.30±4.11 and 11.76±3.28, respectively, and those of the experiment group for social adjustment were 11.94±3.03, and 14.49±3.61, respectively. The mean±SD in the pre- and post-test in the control group for Alexithymia were 16.50±2.90, 16.10±5.61, and those of the experiment group for Alexithymia were 16.20±3.71, 20.60±2.42. The results showed that teaching positive thinking skill was effective in social adjustment in trans-sexual students (P=0.002). Teaching positive thinking skills was also found to have a significant effect on alexithymia in students (P=0.007). The Mean±SD for the two variables of social adjustment and alexithymia were equal to 3.236±0.700 and 3.296±0.723, respectively.

Conclusion: Online teaching of positive thinking skills was shown to make a great contribution to trans-sexual students' social adjustment and alexithymia.

Keywords: Positive thinking, Social adjustment, Alexithymia, Online learning, Transgender persons, Student

**Corresponding author:*

Hossein Keshavarz Afshar, PhD;
Department of Counselling
and Educational Psychology,
Faculty of Psychology and
Education, University of
Tehran, Tehran, Iran

Tel: +98 9125249880

Email: keshavarz1979@ut.ac.ir

Please cite this paper as:

Nezhadiyan E, Keshavarz
Afshar H, Gholamali Lavasani
M. The Impact of Online
Training in Positive Thinking
Skills on Social Adjustment
and Alexithymia in Trans-
sexual Students. Interdiscip
J Virtual Learn Med Sci.
2022;13(4):247-255.doi:10.30476/
IJVLM.2022.96666.1180.

Received: 13-10-2022

Revised: 23-10-2022

Accepted: 16-11-2020

Introduction

Children and adolescents in all societies are allocated an expansive spectrum of health and education policies as their health and well-being are jeopardized by various factors. There is indisputably no doubt that the health and better performance of students, especially those with disorders, should be taken into full consideration (1). One of these is transsexual (i.e. *transgender*) disorder, i.e., *transsexualism*, a desire to live and be accepted as a member of the opposite sex, commonly characterized by a sense of discomfort with or inappropriateness of one's anatomic sex, and a desire to undergo surgery and hormonal treatment to make one's body as congruent as possible with one's preferred sex (2). With the release of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the term *gender identity disorder* (GID) has been changed to *Gender dysphoria* (GD) to clear the stigma linked with the word disorder (3). Individuals suffering from GID/GD see a definitive mismatch between their anatomical assigned sex at birth and their psychological sense of their gender, thereby having a great desire to identify with the opposite sex. They also expect that the society recognizes their strong desire to be treated as a gender other than their assigned gender (4). People with GID often experience a wide variety of psychological and social difficulties (5). Alexithymia is a challenge to which trans-sexual individuals are faced as it is caused by individual differences variables. Alexithymia is represented by a damaged ability to be aware of, explicitly process, and describe one's feelings, and is actually impaired emotional self-regulation (6). When emotional information is not perceived and evaluated during cognitive processing, it will lead to emotional and cognitive confusion and helplessness. Consequently, this disability interrupts an individual's structure of emotions and cognitions (7). On the other hand, as trans-sexual people are the sexual minorities in society, it seems that they encounter social adjustment issues. The social adjustment refers to the degree

to which an individual adapts to his/her social environment, normally achieved by changing oneself or the environment (8). Not only does lack of social adjustment affect the type of interactions that students have with their classmates and teachers, particularly at school, but it also results in family tensions. Moreover, lack of social adjustment leads to anxiety, diminished self-esteem, academic failure, and school dropout (9). One of the therapeutic techniques in treating adjustment and behavioral issues in children and adolescents is teaching positive thinking skills. It can prove highly effective in reinforcing and enhancing positive relationships with others, boosting positive emotions, behaviors, positive cognition and perception, and high levels of well-being (10).

The relationship between the reduction of perceived social interactions and self-regulation problems experienced during the online study, with the mediation of the role of students' adaptation to learning, shows that adaptation to online environments plays a mediating role in the relationship between the reduction of social interactions and self-regulation in students (11). Online learning is a comprehensive term that includes a number of instructional environments and approaches. Online learning—learning that involves interactions that are mediated through using digital, typically Internet-based, technology—is pervasive, multi-faceted, and evolving, creating opportunities and challenges for educational research. Online learning can reduce anxiety and stress in trans-sexual students because this method can keep the information of these students confidential (12). Online teaching of positive thinking skills contributes to a person's recognition of his/her fair and positive experiences, as well as potential abilities. It also helps them shape their life personally through active engagement in life (12). There has been considerable research conducted on this subject, but no study has been carried out on online training of trans-sexual people in Iran. The aim of this study was to reduce the research gap in the statistical population of

transgender students and determine whether teaching positive thinking skills (like Online learning) is effective in the emotional distress and social adjustment of transgender students.

Methods

The present research is applied and semi-experimental in terms of research objective and procedure. It was conducted in the form of a pre-test, post-test with a control group and a three-month follow-up. It included people who referred to the centers and clinics of two regions of Tehran education department. The samples were randomly allocated. All students was given a code. The study lasted 6 months.

Participants

The inclusion criteria were all the transsexual students at the high school secondary level between the age of 13 and 18 who were referred to the counseling offices of their schools and education departments in Tehran, willingness to participate in the study, and agreement to sign an informed consent form. Also, voluntary self-expression of being trans-

sexual, no parents who abused drugs, and no use of drugs that affect their mind were the other inclusion criteria. The exclusion criteria included absence of more than two sessions and lack of response to more than 20 percent of the questions in the questionnaire.

Sample Size

Based on the study of Dehghannezhad et al. (9) and Alpha error, the power of the test was calculated to be 80% of the sample size of 50; taking into account a drop of 20%, we selected 60 samples. The mean±SD of Social incompatibility were 11.02±1.75 in the control group and 4.25±1.39 in the intervention group.

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta} \right)^2 (\delta_1^2 + \delta_2^2)}{(\mu_1 - \mu_2)^2}$$

The research sample consisted of 60 students selected through the convenient sampling method. They were divided into two groups of 30 each using simple random method (Figure 1); the experimental group received the intervention in the form of positive

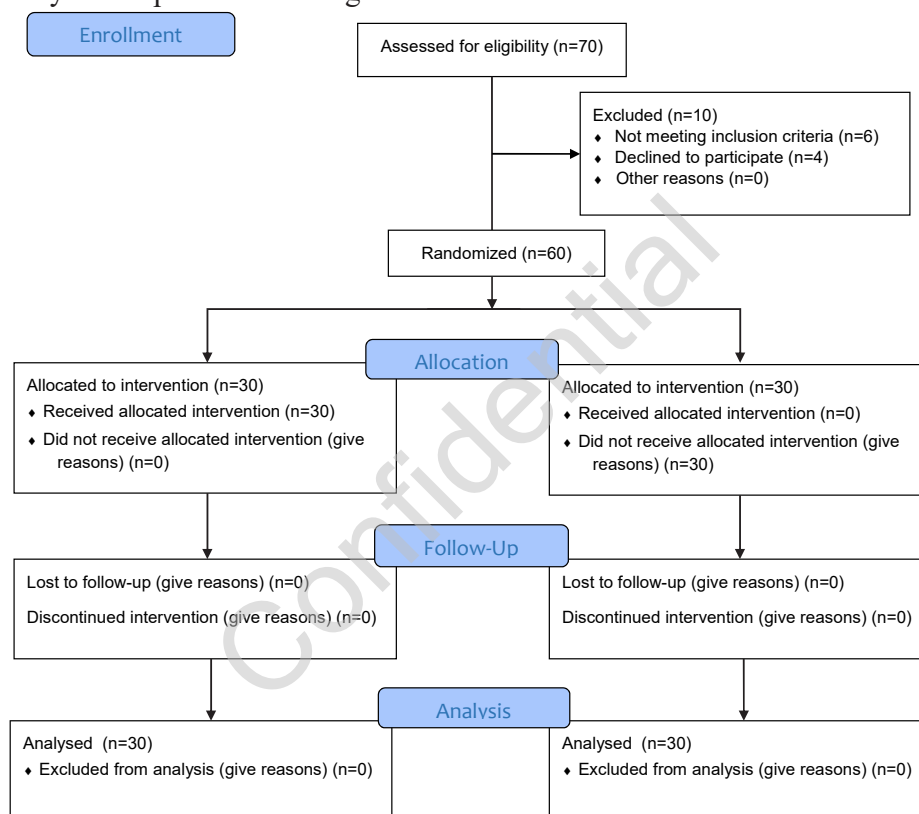


Figure 1: CONSORT Flow Diagram

thinking skills, and the control group received no intervention during the research. After the post-test was administered, the control group students were taught positive thinking skills.

Intervention

First, the purpose and importance of conducting this research were explained to the subjects and they were assured that their information would remain completely confidential and would not be used except for research purposes. Then, the research sample, composed of 60 subjects, was randomly divided into two experimental and control groups. The study subjects were all trans-sexual secondary school students who were referred to school and education counseling offices in Tehran. The experiment group underwent online training of positive thinking skills through Google Meet for five weeks and two 75-minute sessions each week. The experiment groups were subjected to the intervention and received teaching on positive thinking skills, whereas the control groups received no special treatment. Google Meet is a service for secure, high-quality video meetings and is available for everyone on any device. The intervention program of positive thinking skills was extracted based on the view of Seligman, Austin, Park, and Patterson (2005); the contents of the sessions included Registering a positive self-introduction on a page by clients, Recording the capability of each person by herself/ himself, Mentioning blessings or remembering three good (positive) things in daily life, Repeating the task done in the session, Using the Thanksgiving worksheet, and Talking about positive abilities and the way a person can express their abilities. To administer the post-test, we distributed the questionnaires among both experiment and control groups once again in the last session of the intervention.

Data Collection Instruments

The data collection tools were the Sinha & Singh's Adjustment Inventory for School Students (AISS) (1989), Toronto Alexithymia Scale (TAS-20) (1994), and positive thinking

skills framework by Seligman, Steen, Park, and Peterson (2005). Before and immediately after the intervention, the questionnaires were provided to the participants online. The participants had to complete the questionnaires during 1 week. If no response was received after one week, a reminder SMS was sent to the participants. It is worth noting that just one follow-up effort was made for each participant.

Sinha & Singh's Adjustment Inventory for School Students (AISS) (1993)

This scale was developed in 1993 by Sinha and Singh in order to determine the social, emotional, and academic adjustment in students. It includes three components social adjustment (1 to 19), emotional adjustment (20 to 35), and academic adjustment (36 to 55). The scores range from zero to one; after the items are analyzed, the obtained scores are added up with the minimum possible score being 18 and the maximum 90. Moreover, scores between 0 and 18 denotes low social adjustment, scores of 18 to 27 medium social adjustment, and those of 27 and higher high social adjustment among students. The authors who devised this scale reported reliability coefficients of 0.95, 0.93, and 0.94, respectively, through split-half, test-retest, and Kuder Richardson (13). Furthermore, 20 psychological experts also confirmed the content validity of this scale. Khanjanizadeh and Bagheri (2012) maintained that the reliability of the social adjustment subscale obtained via Cronbach's alpha method was 0.75 (14). The reliability of the questionnaires was calculated using Cronbach's alpha, and a score of 0.72 was obtained for the social adjustment scale.

The Toronto Alexithymia Scale (TAS-20)

Developed by Micheal Bagnay (1994), the Toronto Alexithymia Scale (TAS-20) is a 20-item, self-administered questionnaire that measures difficulty in identifying and describing emotions, which is a big part of alexithymia. Its subscales include difficulty identifying feelings (DIF)(1-3-6-7-9-13-

14), difficulty describing feelings (DDF) (2-4-11-12-17), and externally-oriented thinking (EOT)(5-8-10-15-16-18-19-20). The Toronto Alexithymia Scale is scored on a 5-point Likert scale, ranging from Strongly Disagree to Strongly Agree. A total score is also calculated from the sum of the scores of the three subscales for overall Alexithymia. The psychometric properties of the Toronto Alexithymia Scale (TAS-20) were investigated and confirmed in several studies, such as Parker et al. (2003), and Gignac, Manocha and Syough (2004). In the Persian version of the Toronto Alexithymia Scale (TAS-20), Cronbach's alpha coefficients for total alexithymia and its three subscales, i.e., difficulty identifying feelings (DIF), difficulty describing feelings (DDF), and externally oriented thinking, were 0.85, 0.82, 0.75, and 0.72, respectively. These values were a sign of acceptable internal consistency of this scale. The reliability of the Toronto Alexithymia Scale (TAS-20) was reported to range from 0.70 to 0.77 for the overall scale and its subscales in a sample of 67 people on two occasions, with an interval of four weeks. Furthermore, the construct validity values for difficulty identifying feelings (DIF), difficulty describing feelings (DDF), and externally

oriented thinking (EOT) were 0.70, 0.63, and 0.53 (15), respectively. The reliability of this questionnaire was calculated using Cronbach's alpha method, which was 0.79 for the Toronto Alexithymia Scale (TAS-20).

Data Analysis

The mean, standard deviation, skewness-kurtosis, and minimum and maximum were used in SPSS version 23 software to describe the research variables employed in this study. Statistical method used to compare the groups for primary and secondary outcomes was ANCOVA test. A p-value less than 0.05 was considered to be statistically significant.

Results

Demographic features are displayed in Table 1.

The mean and standard deviation of the pre-test and post-test scores of Social Adjustment and Alexithymia in the experimental and control groups are presented in Tables 2 and 3, respectively.

The results showed that there is a statistically significant difference between the two groups in terms of research variables. Likewise, according to the calculated effect size, 92% of the changes in social adjustment

Table 1: Demographic features of the participants

Variables	Grouping	Control		Intervention		P value
		Frequency	%	Frequency	%	
Age of participants (Years)	13-15	14	46.6	15	50	0.923
	16-18	16	53.4	15	50	
Gender of participants	Male	15	50	18	60	0.851
	Female	15	50	12	40	
Marital status of parents	Married	22	73.3	25	83.3	0.550
	Single	8	26.7	5	16.7	
Parents' age (Years)	Less than 30	0	0	2	3.33	0.455
	30-40	11	36.7	17	25	
	>40	19	63.3	11	71.67	
Father's education	Diploma	13	43.3	15	50	0.654
	Bachelor	12	40	10	33.3	
	Masters	5	16.6	5	16.6	
	PHD	0	0	0	0	
Mother's education	Diploma	21	70	20	66.6	0.878
	Bachelor	7	23.3	6	20	
	Masters	2	6.66	4	13.3	
	PHD	0	0	0	0	

Table 2: Comparison of Adjustment dimension scores across the experimental and control groups

Components	Groups	Average		P value
		Pre-test	Post-test	
Total score of Adjustment	Control	11.30±4.11	11.36±3.28	0.17
	Online training	11.94±3.03	14.49±3.61	0.031
	Between-group comparison	P=0.06	P=0.028	---
Social Adjustment	Control	11.40±3.09	11.48±3.19	0.54
	Online training	11.66±3.00	15.09±2.63	0.001
	Between-group comparison	P=0.68	P=0.034	---
Emotional adjustment	Control	10.47±2.90	10.60±2.54	0.78
	Online training	10.61±3.37	13.49±4.31	0.032
	Between-group comparison	P=0.78	P=0.042	---
Academic adjustment	Control	12.43±3.45	12.52±2.81	0.63
	Online training	12.78±4.32	14.16±4.00	0.021
	Between-group comparison	P=0.07	P=0.043	---

Table 3: Comparison of Alexithymia dimension scores in the experimental and control groups

Components	Groups	df	T	Average		P value
				Pre-test	Post-test	
Total score of Adjustment	Control	12	10.56	16.50±2.90	16.10±5.61	0.14
	Online training	14	11.56	16.20±3.71	20.60±2.42	0.024
	Between-group comparison	---	---	P=0.23	P=0.021	---
Comparison of sub-categories of Alexithymia						
Difficulty identifying feelings	Control	14	12.23	20.46±6.63	20.30±6.10	0.29
	Online training	15	14.23	20.38±4.90	23.33±2.19	0.010
	Between-group comparison	---	---	P=0.58	P=0.010	---
Difficulty describing feelings	Control	13	14.34	14.50±3.90	14.40±3.61	0.16
	Online training	16	15.66	14.39±4.71	17.60±4.42	0.031
	Between-group comparison	---	---	P=0.17	P=0.035	---
Externally oriented thinking	Control	13	14.60	19.34±9.54	19.25±8.60	0.80
	Online training	15	15.50	19.23±6.13	23.59±8.31	0.024
	Between-group comparison	---	---	P=0.76	P=0.020	---

and 80% of the changes in alexithymia were explained by the influence of teaching positive thinking skills or the independent variable. As a result, it can be stated that teaching positive thinking skills has a significant effect on social adjustment and alexithymia in transsexual students. The results showed that there was a significant difference between the groups in these variables. Also, according to the calculated effect size, 70% of changes in difficulty in identifying emotions, 91% of difficulty in describing emotions and 64% of changes in objective thinking were caused by the influence of the independent variable. As a result, it can be stated that teaching positive thinking skills has a significant effect on emotional dyslexia in trans-sexual students.

Discussion

The results of the present study showed that online teaching of positive thinking skills was effective in social adjustment among trans-sexual students. This finding agrees with those of previous research, including Qeysari Gudarzi et al. (8), Javanmard et al. (10), Dehqannezhad et al. (2017) (16), Pourazavi and Hafezian (17), and Miles-Pallister et al. (2014) (18). One of the main objectives of teaching positive thinking is to help individuals discover a realistic picture of themselves and their lives as well as consider their real problems accurately (19). On the other hand, since trans-sexual students encounter enormous personal and social problems, they tend to hold pessimistic

attitudes towards their lives, therefore, they are less engaged in social situations and have less interaction with their peers. Thus, positive thinking can probably be effective in improving their social adjustment. Teaching positivity would help strengthen and improve positive relationships with oneself, others, and life, as well as increase self-respect. Meanwhile, the reduction of perceived social interactions through adaptation to online learning environments has an indirect effect on the students' self-regulation (11). Positivity training inspires individuals to identify their positive and good experiences and recognize their role in increasing and promoting self-respect and respect for others. Ultimately, such teaching will lead to an increased social adjustment and decreased alexithymia (10). Online teaching of positive thinking skills can be considered as a therapeutic technique for social adaptation and behavioral issues in children and adolescents.

This study revealed the effectiveness of teaching positive thinking skills on alexithymia in trans-sexual students. This finding coincides with the results obtained by previous studies such as Sekhavati et al (20), Berimani et al. (6), Anvari et al. (21), Naemi (15), and Beiranvand et al. (2020) (22). To explain this research finding, it can be enunciated that as negative emotions such as anxiety, loneliness, etc. increase in an individual, the person's optimism would decrease, leading to some other psychological problems such as alexithymia and depression. This issue applies particularly to those with difficulty identifying and describing their feelings. Teaching positive thinking skills emphasizes increased abilities and advantages that will empower individuals to interact more effectively with others in society with the aim of achieving strong feelings. This type of teaching, along with recognition and enhancement of individual capabilities, enables people to control and manage negative feelings and weaknesses. Consequently, it increases positive emotions such as hope and optimism (6). The higher the positive emotions in a person, the greater

the level of possibilities and options he/she will have, leading to higher feelings of empowerment and lower negative emotions. Accordingly, people will be able to expand their thought-action resources, face their negative emotions, express them, and actually overcome their alexithymia. Overall, teaching positive thinking skills increases the level of optimism, improves the identification of emotions, and prevents alexithymia and its related problems (20).

Limitation and Suggestion

This study had limitations; (1) the level of honesty of the subjects in answering the questions is one of the factors that is almost out of the researcher's will and control. It is also possible that some respondents did not answer the questions properly due to self-censorship caused by the non-acceptance of being trans-sexual in society. (2) Variables such as schemas, personality traits, family history, etc. can be considered as the disturbing variables in this research, the impact of which on the research results has not been evaluated. (3) In this research, the only tool used was a questionnaire, which can be subjected to carelessness, lack of enthusiasm or personal perceptions of the subjects. (4) Given that the statistical population of this research is a small part of the society and trans-sexual students who refer to the counseling offices of schools and education department in Tehran, the generalization of the findings to other members of the society should be done with caution.

Given the importance of mental health in trans-sexual people, whose number is increasing in today's society, teaching positive thinking skills has been effective in improving their social adaptation and emotional ataxia. Therefore, parents being familiar with their duties and the role and importance of positive thinking in different areas of life can have the necessary awareness and knowledge and play a role in increasing the adaptability of their children. Online education can increase positive thinking skills in the families of trans-sexual students.

Conclusion

The results obtained in the present study revealed that online teaching of positive thinking skills had a significant impact on social adjustment and its subscales in trans-sexual students. It was also found that changes in social adjustment, emotional adjustment, and academic adjustment in trans-sexual students were explained by the effect of teaching positive thinking skills. The results of this study also revealed that teaching positive thinking skills made a great contribution to social adjustment in trans-sexual students. Furthermore, it was found that positive thinking skills were effective on alexithymia and its components in trans-sexual students. In other words, teaching positive thinking skills explained changes in difficulty identifying feelings (DIF), changes in difficulty describing feelings (DDF) and changes in externally oriented thinking (EOT) in trans-sexual student

Authors' Contribution

H.K, M.GL: conceptualization and study design, M.GL: experimentation and data acquisition, E.N, H.K, M.GL: statistical analysis, H.K, M.GL, E.N: study design and preparing the manuscript

Conflict of Interest: None declared.

Ethical Considerations

This study was authorized by the University of Tehran' ethics committee, with the Ethical Approval Code: IR.UT.PSYEDU.REC.1401.055. Each individual provided written informed consent to the researchers. Before the research, the researchers were adequately presented, and the participants understood the research objectives. Informed consent was not obtained by compulsion, and participants had the option to withdraw at any time during the research. Finally, it should be mentioned that the participants were ensured of the confidentiality of the information supplied.

Funding/Support: No funding

References

- 1 Behravan, Barjali, & Hatami. Investigating the relationship between dyslexia and cognitive impairment with the general health of secondary school students with attention deficit/hyperactivity disorder. *Journal of Disability Studies*, 11(1400), 16-16.
- 2 Thomas R, Pega F, Khosla R, Verster A, Hana T, Say L. Ensuring an inclusive global health agenda for transgender people. *Bulletin of the World Health Organization*. 2017;95(2):154. doi: 10.2471/BLT.16.183913.
- 3 Kaviani, Kolayi Kh. Examining the psychological challenges of mothers with transgender children: a phenomenological study. *Journal of rehabilitation research in nursing*. 2019;6(2):11-22. doi: 10.1371/journal.pone.0271484.
- 4 Naseri, Kolayi Kh. Comparison of body hope and self-concept in transgender individuals with and without gender reassignment surgery. *Journal of rehabilitation research in nursing*. 2018;4(4):18-26.
- 5 Schwarz K, Fontanari AMV, Mueller A, Costa AB, Soll B, da Silva DC, et al. Transsexual voice questionnaire for male-to-female Brazilian transsexual people. *Journal of Voice*. 2017;31(1):120. e15-. e20. doi: 10.1016/j.jvoice.2016.02.012.
- 6 Brimani, Dinavi, Taghizadeh. The effectiveness of positive psychotherapy on optimism and emotional dyslexia of anxious retired female teachers. *Positive psychology research paper*. 2020;6(2):49-64.
- 7 Basharat M. The mediating role of defense mechanisms in the relationship between attachment styles and ataxia. *Applied Psychology Quarterly*. 2012; 6(2). doi: 10.1016/j.ajp.2013.09.003.
- 8 Gudarzi Q, Pour Q, Ghorbani, Padron, Hafez. The effectiveness of group-based positive thinking training on social adjustment and reducing interpersonal sensitivity of students with math disorders. *Empowering exceptional children*.

- 2020;11(2):37-47.
- 9 Dehghannezhad, S., Hajhosseini, M., & Ejei, J. (2017). The effectiveness of positive thinking skills training on social adjustment and psychological capital of insociable young females.
 - 10 Javanmard, Rajaei, Khosropur. The effectiveness of group-based positive psychotherapy on the social, emotional and educational adjustment of maladjusted male students of the first secondary school. *Applied Psychology Quarterly*. 2019;13(2):209-27. doi:10.22067/ijap.v9i1.75130.
 - 11 Maleki B. The Causal Model of Self-regulation in University Students based on Reducing Perceived Social Interactions during Covid-19: The Mediating Role of Adjustment to Online Learning. *International Journal of Behavioral Sciences*. 2022;16(2):111-7. doi: 10.30491/IJBS.2022.332071.1762.
 - 12 Greenhow C, Graham CR, Koehler MJ. Foundations of online learning: Challenges and opportunities. *Educational Psychologist*. 2022;57(3):131-47. doi: 10.1080/00461520.2022.2090364.
 - 13 Sinha A, Singh R. Adjustment inventory for college students. *Indian Psychological Review*. 1968.
 - 14 Khan Khanizadeh H, Bagheri S. The effectiveness of verbal self instruction on social adjustment in students with learning disabilities. *Journal of Learning Disabilities*. 2012;2(1):43-52.
 - 15 Naimi The effect of positive thinking training on emotional dyslexia and self-forgiveness of mothers of children with learning disabilities. *Psychology of exceptional people*. 2018;8(29):111-45.
 - 16 Nejad D, Hosseini H, Ajei. The effectiveness of teaching positive thinking skills on social adjustment and psychological capital of maladjusted adolescent girls. *School psychology*. 2017;6(1):48-65. doi:10.22098/JSP.2017.536.
 - 17 Pourrazavi, Soghari S, Hafezian. The effectiveness of teaching positive thinking skills on social, emotional and academic adjustment of students. *School psychology*. 2017;6(1):26-47. doi:10.22098/JSP.2017.536.
 - 18 Ortega G. Iconicity and sign lexical acquisition: A review. *Frontiers in Psychology*. 2017;8:1280. doi:10.3389/fpsyg.2017.01280.
 - 19 Pour Q, Guderzi Q, Far D, Padron, Hafez. The effectiveness of group-based positive thinking training on improving empathy and reducing social anxiety of male students with learning disabilities. *Learning disabilities*. 2021;10(3):366-79. doi:10.32598/JLD.10.3.6
 - 20 Sakhavi, Sohba, Khademi, Doleq Sh. Effectiveness of positive psychotherapy on eating disorder beliefs, emotional dyslexia and weight loss in overweight women. *Journal of the Faculty of Medicine, Mashhad University of Medical Sciences*. 2021;64(2). doi:10.22038/MJMS.2021.18558.
 - 21 Anuri, Jalal, Sardari, Bagher. The effectiveness of positive psychotherapy on improving cognitive emotion regulation strategies in students with anxiety symptoms. *Positive psychology research paper*. 2019;5(2):31-46.
 - 22 Beiranvand M, Moghadam MK, Sabounchi R, Delphan M, Ghafuori A, Keramati Moghadam R. The effectiveness of positive thinking training on self-efficacy and emotion regulation in men with hemophilia. *Trends Med*. 2019;19(4):1-5. doi: 10.15761/TiM.1000200.