

## The Effect of Assertiveness Training on Student's Academic Anxiety

S. Mohebi,<sup>1</sup> G.H.R. Sharifirad,<sup>2</sup> M. Shahsiah,<sup>3</sup> S. Botlani,<sup>4</sup> M. Matlabi,<sup>5</sup> M. Rezaeian<sup>6</sup>

Qom University of Medical Sciences, Qom, Iran, Student in Health Education of Isfahan University of Medical Sciences,<sup>1</sup> Isfahan University of Medical Sciences, Isfahan,<sup>2</sup> Qom University of Medical Sciences, Qom,<sup>3</sup> M.A. Family Counseling, Isfahan,<sup>4</sup> Gonabad University of Medical Sciences, Gonabad, Student in Health Education of Isfahan University of Medical Sciences,<sup>5</sup> Rafsanjan University of Medical Sciences, Rafsanjan,<sup>6</sup> Iran.

**Corresponding Author:** G.H.R. Sharifirad. (sharifirad@hlth.mui.ac.ir).

### Abstract

**Introduction and purpose:** Academic anxiety is an important educational problem that affects millions of students in colleges and schools over the world each year. Although a low level of anxiety can cause positive motivation for improvement of educational functioning, high levels of it can cause a disturbance in concentration, attention, storage of knowledge, recall and educational reduction. It has also been recently determined that there is a relationship between anxiety and assertiveness. Therefore, this study is an attempt to determine the effect of assertiveness training on reducing anxiety levels in pre-college academic students in Gonabad city in 2008.

**Methods:** In this clinical trial study, all the pre-college students of Gonabad city were invited to participate and 89 students were divided into experimental and control groups. There were 3 questionnaires, namely demographic, academic anxiety and assertiveness Rathus questionnaires in which the validity and reliability were calculated and approved. The intervention for the experimental group was 5 sessions of assertiveness training using the PRECEDE model and 1 session for parents and teachers to help and support the intervention program. We had a post-test 8 weeks after the last training session for each group was conducted. The data was analyzed by SPSS.

**Results:** The results showed that anxiety levels and decisiveness in the target group were moderate to high and it is seen as a significant reverse relationship between these two factors ( $r=-0.69$  and  $p<0.001$ ). The results also showed that there was a significant anxiety decrease in the experimental group after the intervention. On the one hand, there was a significant increase in decisiveness for both groups, but there was not a significant difference between academic anxiety and assertiveness in the control group before and after the intervention.

**Conclusion:** Due to a significant decrease in anxiety and increased decisiveness in the experimental group, it can be claimed that assertiveness training is an effective non-pharmacological method for reducing academic anxiety and it can improve academic performance.

**Keywords:** Academic anxiety, Assertiveness training, Students, PRECEDE model (JPMA 62: S-37; 2012).

### Introduction

The twenty-first century with rapid changes in environmental structure has been called a stressful, anxious and pressured century. Therefore, psychological disorders have been increasing among people.<sup>1</sup> Anxiety is the most prevalent psychiatric disorder; in the United States more than 23 million people are affected every year and one in four has anxiety.<sup>2</sup> Although a comprehensive and epidemiological study has not been done, available evidence implies that the prevalent amount of anxiety disorder in Iran, is not less than other countries. It is pervasive, and unpleasant, causing physical symptoms such as sweating, palpitation, chest muscle spasm, gastrointestinal diseases and agitation,<sup>3</sup> which are created as a response to internal and external stimulation and it tends toward cognitive, emotional, physical and behavioral symptoms.<sup>4</sup> Although anxiety is not so serious and people experience it everywhere and constantly within all cultures,<sup>5</sup> today the educational system is worried about students' anxiety

which can be intolerable for some.<sup>6</sup> Reportedly a few of the students with academic anxiety have committed suicide.<sup>7</sup>

Academic anxiety during education is the most important kind of anxiety in teen years. It threatens students' psychological health and affects their efficiency, aptitude, personality formation and social identity.<sup>8</sup> Academic anxiety is a general expression which refers to a social phobia or social anxiety in which the person falters in their function and cannot confront situations assessing themselves, such as examinations.<sup>9</sup> This anxiety is functional and different studies show that 10%-30% of students are involved.<sup>10</sup> In fact, academic anxiety is a self-obsession which is characterized by feelings of self-inferiority, regarding their abilities and students often tend toward negative cognitive assessment, lack of concentration, undesirable physiological reactions, such as increase of heart rate, cold fingers, drop in blood pressure and lower educational performance.<sup>11</sup>

This anxiety is related to students' competition with

their classmates and reduction in standards of educational performance, assignments, examinations and high rigidity, ability to study and worry about the future.<sup>12</sup> It seems that in our country fear of low marks, and associated blame from families, classmates' and friends' ridicule, fear of inability to continue education, especially on entry to university, bothers high school students psychologically.<sup>9</sup> In this regard, there are different methods of therapy for decreasing anxiety and increasing educational and professional performance. One of these methods is behavioral therapy, such as assertiveness training.<sup>13</sup> This method was used in 1991 by Salter.<sup>14</sup>

Assertiveness training is a structural intervention which is used for social relationship improvement, anxiety disorder therapy, and phobias in children, teenagers and adults.<sup>15</sup> This training is a multi-content method which includes guidance, role playing, feedback, modeling, practice and the review of trained behaviors.<sup>16</sup> Assertiveness or disclosure is one of the most important and fundamental social skills which are part of behavioral and interpersonal skills. It seems that low assertiveness and high anxiety in students simultaneously creates educational dysfunction, cessation of learning, ability weakness and decrease in aptitude. It not only endangers students' psychological health but also deprives them of a healthy life.<sup>17</sup>

Up to now, different research has studied the effect of assertiveness on educational anxiety but with different results. The research of Qahreman Mahmoodi in students<sup>18,19</sup> Mahnaz Mehrabizadeh<sup>15</sup> and Kipper<sup>20</sup> show the positive effect of assertiveness training on decrease of educational anxiety but the research of Rosenberg<sup>21</sup> and Stephens shows that assertiveness training has no effect on anxiety. This research aims to study the effect of assertiveness training on educational anxiety of pre-university students in Gonabad, because students, especially pre-university students, are a national investment, and the stressful time of teen years and their special conditions in education, as well as different views about the influence of assertiveness training, and lack of complete programs to strengthen this groups? social skill in educational schedules, contribute to this problem.

## Material and Method

This research is a semi-experimental, randomized, controlled study (RCT), with a control group. The populations were all pre-university students who had anxiety, and who resided in Gonabad in 2008. Therefore all anxious students (of low, moderate, and high anxiety) who were recognized by the educational counseling center in the last year of high school, in Gonabad (127 among 846 students) were invited to participate. Only 89 (70.08%) accepted the invitation to attend and the rest declined or had the exclusion criteria, such as physical and psychological diseases except anxiety, and who used sedative drugs.

The research samples were selected from who were willing to participate randomly (based on their gender) in the experimental group (44) and control group (45) after being informed of the research process. The first group (the same gender) was selected randomly in the experimental group and the second group (the same gender) as the first one) and in the control group and thus it continued until the end.

The method of gathering data was a self-reported questionnaire in 3 parts. The first part contained 6 questions of demographic characteristics and the second part was the educational anxiety questionnaire for students. A standard questionnaire of school anxiety scale was used, which was developed by Sarason in 1960 and it was approved and used by Iran Medical Science University with correlation coefficient of 92% and conformity coefficient of 95%.<sup>18</sup> This questionnaire has 30 questions with yes/no answers. The maximum score is 30, minimum is zero and the grade divisions are low (0-10), moderate (11-20) and high (21-30). The third scale was Rathus' standard assertiveness scale with 30 questions. It is a Likert scale in 6 degrees: "they completely agree with my characteristics" to "they completely disagree with my characteristics". The minimum score is 30 and the maximum is 180, Rathus (1973), Foch (1982). Quilan (1977) found the questions correlation coefficient of  $r=0.78$  (23). Also, reliability and validity was approved by a retest two weeks later. The first test showed a high correlation coefficient of 0.83.

The intervention was 5 sessions (each of 90 minutes) of assertiveness training in a month in the experimental group. For educational program modeling, the PRECEDE model (one of the new models of health education planning) was used. The use of the model was effective on health problems<sup>25-27</sup> and relaxation impact on anxiety decrease, and was also approved.<sup>28,29</sup> Green compiled the PRECEDE model to find behavioral problems and for designing, planning and assessment of health education programs.<sup>30</sup> This model contains prepared and efficient factors and an educational intervention program was conducted via group discussion, role playing, practical demonstrations, question and answer (in separate genders) by trained trainers (counselors) also, due to PRECEDE model characteristics an educational session was held for students' parents and teachers in the parents and teachers association. Therefore, educational issues of awareness, attitude improvement, skills creation, and positive behavior reinforcement by parents of student's faced with anxiety, were planned.

Content and reliability, and educational concepts were approved by educational counselors, family counselors and scientific groups of the medical science university, previously. After 8 weeks the post test was taken for both the experimental and control group. Of course, to consider moral issues, control groups also received the same program. All the data was analyzed by the central indices, paired T test, T independent,

the correlation coefficient and Chi-square with 95% confidence, in SPSS.

### Results

The findings showed that from 89 participating students, 55 were girls (61.8%), 34 were boys (38.2%), 28.09% were studying humanities, 41.57% physics and mathematics and 30.34% experimental science. 39.33% were the first child, 33.71% were the second child and 26.96% were the third or subsequent child. Students' demographic characteristics are in Table-1.

The findings showed that before intervention,

educational anxiety mean and standard deviation in the two groups was  $18.14 \pm 3.94$  and assertiveness score mean and standard deviation was  $108 \pm 5.36$  shown by gender in Table-2. It shows that there is no significant difference between educational anxiety and assertiveness by gender before intervention. Of course independent T test did not show any significant difference between educational anxiety score mean and assertiveness among boys in the two groups and girls in the two groups before intervention.

The research findings on the relationship between assertiveness and academic anxiety in the two groups showed that there is a meaningful but reversed relationship between

**Table-1: Demographic characteristics of experimental and control groups.**

Demographic characteristics		Experimental		Control		Chi-square test results
		Number	Percent	Number	Percent	
Sex	Boy	17	38.64	17	37.78	P= 0.19
	Girl	27	61.36	28	62.22	
Major	Humanities	12	27.27	13	28.89	P= 0.14
	Mathematical Physics	19	43.18	18	40	
	Experimental Sciences	13	29.55	14	31.11	
Birth order	First	18	40.91	17	37.78	P= 0.17
	Second	14	31.82	16	35.56	
	Third and subsequent	12	27.27	12	26.66	

**Table-2: Comparison of mean anxiety and assertiveness by gender before intervention.**

Variables independent	Group	Mean	SD	T
Academic anxiety	Boy	17.02	3.61	P= 0.21
	Girl	19.27	4.92	
Assertiveness	Boy	113	6.62	P= 0.084
	Girl	103	8.32	

academic anxiety and assertiveness ( $r = -0.69, P < 0.001$ ).

In this study, academic anxiety mean and standard deviation before the intervention for experimental and control groups was  $18.87 \pm 4.75$ , and  $17.42 \pm 4.32$  in order and independent T test did not show any significant difference ( $P = 0.23$ ). Also, this test did not show a significant difference in assertiveness mean and standard deviation before intervention so that assertiveness mean in the experimental group was 107

**Table-3: The Comparison of academic anxiety and assertiveness mean of experimental and control groups before and after intervention.**

Variables	Group	Before intervention		After intervention		Paired T-test
		Mean	SD	Mean	SD	
Academic anxiety	Experimental	18.87	4.75	8.12	3.25	P<0.001
	Control	17.42	4.32	16.23	4.51	
T independent			P= 0.23		P<0.001	
Assertiveness	Experimental	107	7.81	159	4.51	P<0.001
	Control	109	6.28	113	5.17	
T independent			P= 0.12		P<0.001	

**Table-4: Frequency range of academic anxiety and control groups before and after the educational intervention.**

Academic anxiety	Before intervention				After intervention			
	Experimental		Control		Experimental		Control	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Mild	0	0	0	0	34	27.77	3	6.67
Moderate	29	65.91	28	62.22	7	15.91	26	57.78
Severe	15	30.1	17	37.78	3	6.82	16	35.55
Total	44	100	45	100	44	100	45	100

$\pm 7.81$  and in the control group was  $109 \pm 6.28$  ( $P=0.12$ ). They have been shown in Table-3.

Table-4 shows that moderate and severe anxiety decreased in the experimental group after intervention and it is not observed in the control group.

### Discussion

The present research was an attempt to study the effect of assertiveness training on academic anxiety of pre-university students in which anxiety was moderate to severe (18.14 mark) and assertiveness was moderate (108 mark). We can see similar results in the research of Taghavi Larijani and Karimi that assertiveness and anxiety were moderate.<sup>31,32</sup> It seems that students who do not have high assertiveness have an anxious personality so that they cannot expose their feelings or viewpoints because they do not have courage and are afraid of losing their friends and respect. Therefore they are frightened of being rejected or assessed negatively and become anxious. It is shown in the Pearson correlation coefficient that there is a significant but reversed relationship between academic anxiety and assertiveness ( $r=-0.69$ ). The more assertiveness decreases, the more anxiety increases and vice versa.

Naghavi studied the relationship between educational anxiety and assertiveness and found a meaningful and reversed relationship between the two factors.<sup>31</sup> Lesure-Lester in America,<sup>33</sup> and Kamile and Paterson found the same result in their research. It is obvious that since assertive people are less anxious, have a good chance to gain security in fearful situations, have decrease stress, self-confidence, and a positive relationship with others. This study showed that there is no significant difference in academic anxiety and assertiveness by gender but as we see in Table-2, girls' anxiety is higher than boys and boys' assertiveness is higher than girls. From the researchers' view, assertiveness in both sexes depends on cultural factors. In some cultures, it seems that males are more independent, realists, efficient and confident.<sup>36,37</sup>

This research finding showed that there is a significant difference in anxiety mean of the experimental group before and after intervention, but it is not observed in the control group. Also the assertiveness mean has increased significantly in the experimental group but again it is not observed in the control group. We can infer that it is due to the effect of assertiveness training. Debbie<sup>38</sup> showed that assertiveness training in high school students in Canada increased assertiveness and decreased academic anxiety. Mahmoodi's research on effectiveness training in students and nursing students resulted in anxiety decrease and assertiveness increase.<sup>18,19</sup> The researches of Paterson,<sup>35</sup> Sorsi and Wota,<sup>39</sup> Ashen<sup>40</sup> have the same results. In Ashen's study assertiveness training could decrease academic anxiety and increase assertiveness in 6 weeks. But we have other research which shows the ineffectiveness of assertiveness training on academic

anxiety. Shanon<sup>42</sup> and Stafenz showed that assertiveness training just increased assertiveness in students and did not affect anxiety. Regarding the reversed results, we can refer to training period, difference in training methods, training skills, and deletion of people with severe anxiety in some research and finally different research samples.

The results of the present study also showed that anxiety decrease in the experimental group compared to the control group in a way that assertiveness training has decreased severe anxiety from 3% to 6%. Research of Wise<sup>4</sup> and Larkin<sup>43</sup> had the same results. It seems that anxiety groups for educational planning and suitable methods (such as the PRECEDE model and group education methods) were very important.

Researchers in group education effectiveness for people involved in a problem have noticed some valuable issues: 1- It can show the individual that she/he is not alone and similar people may have this problem. 2- By similar methods and mechanism we can train him/her how to deal with problems. 3- She/He hopes to solve his/her problem. 4- It lets him/her expose him/her repressed, unconscious and subconscious feelings. 5- It lets him/her change themselves and also changes group pressure. 6- It lets him/her deal with his/her problem with group education and successful and unsuccessful mechanisms. The uses of self-report tools allow people generally to expose themselves better than reality and also does not necessitate clinical interview. We can say that assertiveness training as a behavioral and non medical method can decrease academic anxiety. Based on the PRECEDE model, after 5 sessions of assertiveness training and one session of the parents and teachers association, the researchers observed anxiety decrease and assertiveness increase in pre-university students. Assertiveness training helps people to have less anxiety without negative assessment and pathological impact.

### Conclusion

In conclusion, in regard to the topic special characteristics of high school students' conditions especially regarding pre-university students, more research about personality characteristics, and the type of parents' control with academic anxiety and individual or group interventional methods are suggested to decrease the negative effect of educational anxiety in a person and the educational system.

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