



## Effects of Teaching Problem Solving Skills on Students' Social Anxiety

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### Abstract

**Introduction:** Social anxiety which refers to obvious and persistent fear of social situations, and rises from the individual's beliefs, affects millions of people each year. This study aimed to examine the effectiveness of teaching the problem solving skills on reducing students' social anxiety.

**Materials and method:** This study was a quasi-experimental one. By employing multi-stage sampling, 200 female high school students of Tehran's public schools were selected and examined by Social Anxiety Scale. Then 40 students who had achieved the highest scores on the scale were randomly selected among them, and divided into two experimental and control group randomly. Based on D'zarilla & Goldfield's problem solving model, the problem solving skills were taught to the experimental group during 12 two-hour sessions.

**Results:** Results showed that Social anxiety among the students who received problem solving skills training was significantly lower than the students who didn't receive the teaching and also problem-solving skills had the appropriate stability over time.

**Conclusion:** Teaching problem solving training is proposed as an effective method to get rid of anxiety among students and preventing psychological and physical trauma and behavioral problems.

## 1. Introduction

"Social anxiety disorder"(SAD) refers to obvious and persistent fear of social situations, and rises from the individual's belief that he/she will act in a way that is embarrassing or humiliating (Rheingold et al., 2003). Persons with SAD usually avoid feared situations and rarely tend to suffer social situation, but if they are faced with such situations, they will feel intense anxiety. Social anxiety is associated with poor self-esteem and fear of criticism, focusing on negative events, ignoring their strengths, over generalizing problems and avoiding intimate relations, as well as somatic symptoms like heart palpitations, blushing, heartburn, nausea, hands shaking, and stutter (Dadsetan, 2003). In addition, SAD often occurs with different forms of psychological disorders (Kessler and Stang, 2008). Social anxiety among students is associated with skipping school, running away from home, avoiding playing games and doing social activities, as well as telling lies (Davidson et al., 2008).

Results of previous studies have shown that social anxiety disorder starts in adolescence and continues for years (Kaplan and Sadock, 2002). Onset of the disorder is about 15 years, which has reported to be before 25 years of age in 90% of patients (Casper, 1998). If untreated, the disorder continues on average for 20 years, and spontaneous recovery is unlikely. Moreover, epidemiological studies showed that only a quarter of patients with this disorder can be recovered (Lecrubier, 1998). Muris and Ostens's results (2002) showed that the patients usually consume alcohol or psychotropic drugs to reduce social anxiety and depression; so this may lead to the drug dependency and drug abuse.

Examining the causes of anxiety disorders and evaluating the treatment methods, Comer (2002) found that individual or group teaching of problem solving skills is effective in treating social anxiety. This method aims to change thought patterns and physical reactions of an individual in anxiety-producing situations. In fact, problem solving skills act as a shield against depression, anxiety and stress in different life situations (Larence and Almedia, 2000). Results of the study by King et al (2004) showed that problem solving skills are one of the mind's functions whose acquisition requires

teaching.

Problem solving includes a set of cognitive-behavioral components. There are many different models suggested for problem solving skills which increase the skill to confront stressful situations. Cassidy and Long (2003) define the problem solving skill as a cognitive-behavioral process in which people identify the effective strategies to deal with problem situations in life.

Walter (2000) suggests a five-stage process that makes the individual resistant to outer stress and invulnerable to depression and anxiety. The steps proposed by Walter include "recognizing the problem", "defining the problem", "providing social solutions", "decision making", and "implementing the solution and confirming it". In addition, in his study, Malcolm (2002) came to the conclusion that the problem solving skill is one of the counter problem-focused methods.

Planning can be considered as the most useful and effective counter-response. Early diagnosis of and intervention in this disorder may substantially contribute to the reduction of the symptoms; It can also slow down its progress and prevent further complications such as severe depression. Considering the evidence, the present study was an attempt to answer a series of important psychological and educational issues, through examining the effects of teaching the problem-solving skills on reducing social anxiety. Furthermore, the purpose of this study was to determine the lasting effects of teaching the problem solving skills on reducing students' social anxiety over time.

## 2. Method

### 2.1. Subjects

The statistical population of the study comprised female high school students in Tehran's state schools in 2010. Multi stage sampling method was employed to fulfill the aims of the study. In this regard, as a first step 3 educational zones (zone 6, 8 and 12) were selected randomly among all Tehran's educational zones. In the next step, 3 state high schools were randomly selected finally 2 classes from every zone was randomly selected and 7 volunteered students of 4 class and 6 students from the next two classes were

selected as the sample of the study.

2.2 Measurement

The instrumentation comprised La Greca and Lopez (1998) Social Anxiety Scale. This scale consists of 18 anxiety-related items and three subscales, i.e., “fear of negative evaluation”, “social avoidance”, and “distress specific to new situations”. The questionnaire was administered to 200 students, and 40 students who had achieved the highest scores were randomly selected and divided into two groups randomly.

The questionnaire items were rated on a 5-point Likert scale in which higher scores were indicative of higher social anxiety. The Cronbach's  $\alpha$  coefficients for subscales of the social anxiety questionnaire, i.e., “fear of negative evaluation”, “social avoidance”, and “distress specific to new situations” were equal to .88, .90, and .86, respectively. Moreover, the reliability coefficient for the total scale was .88.

2.3 Procedure

In the first stage, students with social anxiety disorder were identified based on their scores on the

social anxiety questionnaire. Next, the students were randomly assigned to two experimental and control groups. In the following stage, a pretest was administered to the members of the sampled groups. Teaching problem solving skills, as the independent variable, was taught according to an organized schedule. The teaching of problem solving skills was done during 12 two-hour sessions. The control group received no treatment. Finally, a post-test was given to both control and experimental groups. It is worth mentioning that there was follow-up stage for the experimental group as well.

3. Results

Independent group's t-test was used to examine the educational effectiveness of problem solving skills on reducing the students' social anxiety. Differences in scores, before and after teaching problem solving skills, for each individual were measured and mean differences were calculated. Based on the obtained results, problem solving skills are effective in reducing student's social anxiety (Table 1).

**Table1.** Independent Group T-Test for the Effectiveness of Teaching of Problem Solving Skills on Students' Social Anxiety

Group	M	SD	Mean differences	Mean standard error differences	T	df	Sig.
Experiment	1.8	0.08	-0.23	0.11	-2.80	38	0.002
Control	1.99	0.06					

Comparison of mean scores indicated that social anxiety significantly reduced in the experimental group. In order to determine the stability level of the effect of teaching the problem solving skills on the

students' social anxiety over time, correlated t-test was utilized in the experimental group at posttest and follow-up stages (Table 2).

**Table2.** Paired samples T-Test used to Compare Mean Scores of Social Anxiety in the Experimental Group at Posttest and Follow-up Stages

Stage	Mean differences	Mean standard error differences	T	df	Sig.
posttest	0.027	0.3	0.26	19	0.79
follow-up					

As shown in Table 2, there was no significant difference between the students' social anxiety in the experimental group at posttest and follow-up stages.

The results confirm the fact that the effect of teaching the problem solving skills on reducing the students' social anxiety over time has good stability.

#### 4. Discussion

The study conducted by Amir et al (2003) showed that "social anxiety" is the inaccurate interpretation of social stimuli as threatening ones, which, after interacting with behavior and somatic symptoms, creates a vicious cyclical pattern that maintains fear and avoidance (Beck et al., 1985; Foa and Kozak, 1986; Clark and Wells, 1995). In fact, adolescents with SAD appear to overestimate the severity and likelihood that negative social situations will occur, which may trigger physiological symptoms of anxiety as well as behavior patterns that impact social interactions and further increase the likelihood of avoidance in the future. SAD often occurs with different forms of psychological disorders (Kessler and Stang, 2008). Because of possible increased avoidance, social anxiety may persist into adulthood.

Results of the present study showed that teaching the problem solving skills at posttest and follow-up stages can reduce the level of social anxiety symptoms and has good stability over time. The results are coordinated with the research findings of Rheingold et al (2003), Foa et al (1996) and Uren et al (2004). In addition, Twerski and Schwaetz (2005) concluded that teaching of the problem solving skills has more efficacies in the treatment of anxiety disorders than drug therapy and the lack of intervention. Results of the aforementioned study are consistent with the current research findings.

In his study, Kirkley (2003) concluded that teaching the problem solving skills is effective in reducing depression and anxiety disorders, and its effect is lasting over time, and that it prevents from recurrence of disorder after stopping the teaching. Results of the study are consistent with the findings of the present research. Furthermore, results of previous studies have shown that teaching of the problem solving skills is effective in reducing the destructive and negative behavior (Larence and Almedia, 2000), anxiety (Pourshahsavari, 1999), and depression (Sharifi, 1993). The results of these studies are consistent with the findings of the present study.

Sinclair's study (2002) showed that teaching the problem solving skills plays an effective role in controlling situations of risk and anxiety so that such skills lead people to control the anxiety symptoms

and to manage their situations of risk – the results which is consistent with the findings of the present study. In addition, results of Shure's research (2000) showed that teaching the problem solving skills plays an essential role in reducing interpersonal and internal conflicts and problems. The results of this research are consistent with the findings of the present study.

It can be concluded that teaching of the problem solving is as an effective method to get rid of the possible anxiety and prevent from psychological and physical trauma as well as behavioral problems of the disorder. In addition, teaching of the problem solving assists individuals suffering from SAD to correct false opinions which can induce anxiety. In fact, this method of teaching can directly or indirectly reduce the probability and intensity of the occurrence of negative social events.

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