

THE RELATIONSHIP BETWEEN TEST ANXIETY AND LEARNED HELPLESSNESS

FIGEN AKCA

Aksaray University, Aksaray, Turkey

The purpose in this study was to investigate the relationship between the test anxiety and learned helplessness levels of students preparing for the Turkish High Schools Placement Test (HSPT) and University Entrance Examination (UEE). The study was conducted with the participation of 708 students from Aksaray Province in Turkey, of whom 319 were preparing for HSPT and 389 were preparing for UEE. The Learned Helplessness Scale (Aydın, 1985; Seligman et al., 1984) and the Test Anxiety Scale (Baltaş, 1993) were used to collect data. Although HSPT students scored higher than UEE students for levels of anxiety and learned helplessness, there was no significant difference between level of test anxiety and learned helplessness ($r = 0.048$).

Keywords: test anxiety, learned helplessness, achievement tests, students, Turkey.

A life without anxiety would rate as utopian in today's world. *Anxiety is an abnormal sense of fear, nervousness, and apprehension about something bad which might happen in the future.* Anxiety affects somatic processes causing tachycardia, sweating, muscle tension, and affecting respiration, and also slows the mind by inhibiting clear thinking and complicating the problem-solving process (Baltaş, 1986; Kutlu, 2001).

Test anxiety is an intense emotional reaction that a person experiences before and during an examination. Beidel, Turner, and Trager (1994) asserted that approximately 40% of children suffer from test anxiety. Test anxiety has three

Figen Akca, Department of Primary Education, Faculty of Education, Merkez Campus, Aksaray University, Aksaray, Turkey.

Appreciation is due to reviewers including: Djilali Bouhmama, Department of Foundation Education, College of Education, Kuwait University, Keifan, Kuwait, Email: bouhmama72@hotmail.com

Please address correspondence and reprint requests to: Figen Akca, Aksaray University, Faculty of Education, Department of Primary Education, Adana Yolu Üzeri 7.km., Merkez Kampüs, 68100 Aksaray, Türkiye. Phone: 0382 2801152; Fax: 0382 2801180; Email: figen_akca@hotmail.com

basic elements: cognitive, somatic, and behavioral. In their investigation to determine the properties that affect test anxiety, Galassi, Frierson, and Sharer (1981) found that test anxiety levels are affected by positive thoughts (7.9%), negative thoughts (35.25%), somatic excitement (29.3%), subjective discomfort (28.34%), and prediction of marks (1.4%). Soric (1999), who investigated the importance of trait and state anxiety in test anxiety coping strategies, and emphasized social evaluations, problem-focused coping, and negative association in her study.

Weiner (1972) asserted that attribution theory influences an individual's judgment about the reason for an event and the reason that he/she perceives. This judgment, which is about a behavior, affects subsequent behaviors. Weiner examined the attributions of students relative to their successes and failures in three dimensions: controllability, determination, and causality (Wittrock, 1986, p. 305). According to this theory, to attribute the reason of success or failure to effort increases effort and motivation. To blame failure on uncontrollable factors is demoralizing and causes learned helplessness; to credit success to these factors provides feelings of gratitude but does not increase motivation (Wittrock, p. 306).

Although it is known that test anxiety has various causes, cognitive elements are considered significant factors within the framework of attribution theory (Gregor, 2005). In recent years rational emotional behavioral therapy and behaviorist approaches have been used as effective methods to cope with test anxiety. However, it has been found that learning behavior-result independence and causal charging on this independence develop during children's time at primary school and affect their academic achievement. Dweck (as described in Seligman, 2007) conducted research in 1975 with children who did not exhibit helplessness and who were categorized as being success oriented. She found that these children did not get discouraged, even with significant failure, but instead made more effort to succeed. Although students' internal attribution against failure caused learned helplessness, their external attribution against failure did not result in learned helplessness (Erdoğdu, 2006).

In his study, conducted with 1,575 students in grades 4, 7, and 9, Valås (2001) investigated the relationships between learned helplessness, self-esteem, and depression, academic achievement, age, gender, and expectations. A meaningful relationship was found between academic achievement and the variables of attribution, expectations, learned helplessness, self-esteem, and depression. Males were found to show more learned helplessness than did females but females demonstrated a tendency to develop maladaptive skills. In his study, El-Anzi (2005) found a positive relationship between academic achievement and the variables of anxiety, optimism, pessimism, and self-esteem.

Dewberry and Richardson (1990) showed that the level of learned helplessness is related to anxiety level. They found that test anxiety has a negative effect on optimism levels. Milgram and Naaman (1996) conducted a study focusing on the relationship between dispositional pessimism and measures of procrastination. Israeli college students completed the Life Orientation Test (LOT; Scheier & Carver, 1985), a measure of daily procrastination (e.g., with finances and self-care), and a measure of academic procrastination (e.g., with studying for examinations and writing papers). They found that individuals who scored higher on academic and daily procrastination were significantly more pessimistic than individuals who scored low in procrastination. Ruthig, Perry, Hall, and Hladkyj (2004) found that optimism levels of test-anxious students increased after a retraining process.

In the Turkish education system two examinations, one upon completion of primary school and another at the end of the secondary school career, are very important for students and parents (Ministry of National Education, 2009; Student Selection and Placement Center, 2009). The High Schools Placement Test (HSPT) is a centrally administered examination arranged by the Turkish National Education Ministry to measure the achievements of 6th, 7th, and 8th grade students (12 to 14 years old) in June every year. HSPT is not an compulsory examination. However, it is recommended that students sit this examination because it affects the assessment that is used for determining placement in science high schools, Anatolian high schools, social sciences high schools, and teacher high schools. Examinations for the HSPT are taken for the subjects of Turkish, mathematics, social sciences, foreign language, religious culture, and moral knowledge. Every year, the Ministry of Education determines how many vacancies there are in the schools and this is announced on a website: <http://oges.meb.gov.tr> (Ministry of National Education, General Directorate of Educational Technologies, 2009).

The University Entrance Examination (UEE) is a centrally administered examination which is arranged by Turkey's Higher Education Council Student Selection and Replacement Center (2009) to place students in universities that accept students into degree and associate degree programs after high school graduation. Students can repeat this examination several times, but it is a high-anxiety examination because it is considered crucial for determining the young person's profession, social status, job opportunities, and income level. Students from high-income families can apply to foreign universities, but otherwise the necessity of earning admission to national Turkish universities can increase the individual's anxiety. The examination, therefore, becomes a veritable do-or-die fight. The students who prepare for the examination frequently say, "I will die if I cannot pass the exam", "I should die if I cannot pass the exam", or "I will never be happy if I cannot enter the program I want." Results of research

indicate that in the relationship between test anxiety and academic achievement, or anxiety and performance, moderate anxiety increases achievement and performance. However, performance is affected adversely when anxiety is very high (Alyaprak, 2006).

The findings gained in several studies conducted in Turkey reveal that young people experience high-level anxiety when they fail the UEE (Yavuzer, 1992). According to Baltaş (1993), who surveyed 5,212 students, the anxiety level of students who prepare for the UEE is considerably higher than the anxiety level of general surgery patients. These students complained that “I cannot sleep”, “I will die”, “I cannot eat”, and “I cannot get pleasure from life.” According to Kutlu (2001), test anxiety does not arise from within the students but it arises because they believe their entire future depends on the grade that they get in the examination.

In another study, Spielberger (1966) investigated the relationship between reading-learning (academic ability) and anxiety level in universities in the United States. In individuals with a very low and very high level of academic achievement, there was no significant relationship between anxiety level and academic success. However, in medium-level individuals, high anxiety decreased academic achievement. Students who experienced lower anxiety levels were more successful.

In Turkey, an adolescent’s own expectations, family demands, the students’ mental proficiency, and a limited number of qualified schools can mean intensely anxious examination preparation for the student. In fact, most people experience anxiety before an important upcoming event (Morris, 2002). However, in Turkey the examination system is more problematic than progressive for children who have just reached puberty (Erözkan, 2009). Certainly there is a considerable difference between an adult’s coping mechanisms and those of an adolescent. Because of personality and mental development, there are inevitable differences between the beginning and end of adolescence (Morris, 2002).

With these considerations in mind, our research was guided by the following questions:

- Is there any relationship between learned helplessness and children’s gender?
- Is there any relationship between test anxiety levels and children’s gender?
- Is there any difference between the students preparing for the HSPT and those preparing for UEE in terms of test anxiety?
- Is there any difference between the students preparing for the HSPT and those preparing for UEE in terms of learned helplessness?
- Is there any relationship between learned helplessness levels and test anxiety level in children?

METHOD

PARTICIPANTS

Of 708 participants in this study, 358 were male and 350 were female. Their ages ranged between 12 and 18. There were 319 (45.1%) students (12 to 14 years old) preparing for HSPT (6th and 8th grade), and 389 (54.9%) students (16 to 19 years old) who were preparing for UEE. All the students lived in Aksaray, Turkey, and their families were from the medium socioeconomic levels. We preferred participants whose parents had finished their education either at the end of primary school or after middle school and who did not have too high an income. Participants completed the Learned Helplessness Scale for Children (Aydın, 1985) and the Test Anxiety Scale (Baltaş, 1993) in a group session during class time, taking between 30 and 40 minutes.

MEASURES

Learned Helplessness Scale For Children Aydın (1985) adapted Seligman's Learned Helplessness Scale (Seligman et al., 1984) and standardized it for Turkey. The scale consists of 48 items designed to measure internal, general, and unchangeable attribution styles that are specific to learned helplessness. With items related to an internal/external causal attribution dimension, we examined whether an individual attributes the causes of events to himself/herself or to external factors. With items dedicated to probing the special/general causal attribution dimension, we assessed whether individuals consider the cause of events to originate from a particular environment or from general causes. With items related to evaluating the changeable/unchangeable causal attribution dimension, we identified whether the individual believed the causes of events to be changeable or unchangeable.

The scale's reliability for use in Turkey was established by Aydın (1985). The test-retest method was applied four months apart; the reliability coefficient was calculated as $r = 0.83$. Aydın established the content validity through analysis by experts who confirmed that scale items measured three causal attribution dimensions with a validity level of 96.1%.

The Test Anxiety Scale This scale (Baltaş, 1993), is published on the Turkish Ministry of National Education website (n. d.) and is used in private teaching institutions. The scale was used in this research to measure test anxiety by evaluating psychometric properties. The scale consists of a 50-question survey form with an answer key. The questions are formulated for true/false responses.

On the survey form, 13 (items 1, 5, 12, 19, 20, 22, 28, 29, 33, 37, 40, 43, 50) of the 50 items deal with general anxiety, 10 items were about anxiety of negative evaluation (items 9, 17, 25, 31, 32, 38, 41, 46, 47, 49), 7 items were about anxiety related to insufficient preparation (items 11, 13, 14, 15, 18, 23, 42), five items

form future-related anxiety (items 1, 16, 30, 44, 45), four items form somatic reactions (items 26, 27, 34, 39), six items form anxiety related to oneself (items 2, 6, 8, 10, 21, 24), and five items form mental reactions subscales (3, 4, 6, 36, 48). An example of an item in the general anxiety subscale was “I wish it were possible to be successful without taking an examination”, and one item in the somatic reactions subscale was “While in an examination, some of my muscles are tense”. The alpha coefficients of subscales, calculated by the researcher, are presented in Table 1.

TABLE 1
THE MEANS OF THE TEST ANXIETY SCALE AND CRONBACH ALPHA COEFFICIENTS

Subscales	Item number	α	M	SD
General anxiety	13	.81	7.48	3.46
Anxiety of negative evaluation	10	.71	5.53	2.58
Anxiety related to insufficient preparation	7	.54	5.22	1.64
Future-related anxiety	5	.46	2.53	1.14
Somatic reactions	4	.46	1.63	1.15
Anxiety related to self	6	.29	1.06	.82
Mental reactions	5	.27	3.27	1.13
Total score for test anxiety	50	.81	28.96	7.87

The findings related to the subscales' reliability parallel results in Alyaprak's (2006) factor analysis ($\alpha = .88$). The reliability of the test anxiety total score was found to be high ($\alpha = .81$).

PROCEDURE

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 13.0 for Windows. Analysis of variance (ANOVA) and t test were used in analyses and the Pearson product moment correlation technique coefficient was estimated.

RESULTS

The results obtained from the study are presented in the Tables below.

TABLE 2
LEARNED HELPLESSNESS LEVEL OF STUDENTS ACCORDING TO GENDER

Gender	n	M	SD	t	p
Male	358	22.17	4.04	2.45	0.015*
Female	350	21.46	3.65		

* $p < 0.05$

Results in Table 2 show that gender was influential in learned helplessness.

TABLE 3
COMPARISON OF TEST ANXIETY LEVELS OF STUDENTS ACCORDING TO GENDER

Gender	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Male	358	27.99	7.89	-3.343	0.001*
Female	350	29.96	7.74		

* $p < 0.05$

TABLE 4
LEARNED HELPLESSNESS LEVELS OF STUDENTS ACCORDING TO TEST TYPE

Test	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
UEE	389	20.93	3.76	-6.95	0.00*
HSPT	319	22.90	3.72		

* $p < 0.05$

TABLE 5
TEST ANXIETY LEVELS OF STUDENTS ACCORDING TO TEST TYPE

Test	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
UEE	389	28.40	7.87	-20093	0.037*
HSPT	319	29.64	7.83		

* $p < 0.05$

TABLE 6
RELATIONSHIP BETWEEN LEARNED HELPLESSNESS AND TEST ANXIETY

Scale	Learned helplessness	Test anxiety
Learned helplessness	1.00	.048
Test anxiety		1.00

In Table 3 it can be seen that gender influenced test anxiety.

Results in Table 4 show that test type influenced learned helplessness.

Results in Table 5 show that HSPT students' test anxiety mean was significantly higher than that of UEE students.

The results of the correlation analysis for relationship between learned helplessness and test anxiety are presented in Table 6. It was found that the Pearson product-moment correlation estimate ($r = 0.048$) was not significant at $p < 0.05$. This indicates that there was not a significant relationship between test anxiety and learned helplessness.

DISCUSSION

According to these results, HSPT students' learned helplessness levels were considerably higher than those of UEE students. Consequently, it can be said that students aged between 12 and 14 years do not cope with negative events as well as do 17- and 18-year olds. Seligman (2007) also states that, change in learned helplessness occurs less frequently from the beginning of adolescence, and suggests that the change should be studied before that period. It can be predicted that HSPT students begin to feel learned helplessness because of an examination when it is considered that those students are just at the beginning of adolescence and have not completed their mental and psychosocial development (Morris, 2002). Using an explanatory style against negative events (such as a difficult examination) is connected with the mental development process (Baker, 2003, Gregor, 2005). Seligman (2007) stated that making internal ("I am stupid"), permanent ("I am spoiled"), and universal ("all the teachers are cruel") explanations for negative events (such as getting low marks) can trigger learned helplessness.

Gündoğdu (1994) found during his study of the relationships among learned helplessness, test anxiety, and academic achievement of primary school sixth-grade students that students whose level of learned helplessness is high, have much more test anxiety. In parallel with this finding, in their study, Ruthig et al. (2004) found that it becomes difficult for learned helplessness to emerge as children get older. It has been found that learned helplessness is a matter of mental development and there can be a quick change even between the beginning and end of adolescence.

Another finding gained in the current research is that female students' level of test anxiety was significantly higher than that of the male students. When Dödar, Yapıcı, and Topçu (2007) examined the relationship between students' personality traits and test anxiety levels, they also found that female students suffer from test anxiety more than do male students. Uluğ (2007) also found that female students' test anxiety level was higher than that of male students' and that their test anxiety was not related with their age. In Turkey, the traditional approach that female students do not need to receive education could be shown as a reason for their high test anxiety level. It is a widespread custom in Turkey that girls are forced into marriage after finishing the compulsory eight years of education or that they have no second chance if they fail (Sevim, 2006). This can cause anxiety for a female student who may be able to take the HSPT examination only once compared with a male student who is able to take the UEE exam unlimited times. On the other hand, since a new testing system of three examinations was implemented two years ago, both students and parents

have had difficulties in adapting to this new system, and this increases anxiety for everybody, regardless of gender.

Male students scored significantly higher than female students in the comparison between genders for learned helplessness levels in the current study. This finding is different from the result of Seligman's (2007) study. Seligman found that, contrary to in adulthood, boys were more optimistic than girls. The difference between men's and women's expected traditional role in Turkey could be suggested as a reason for this difference in results in my study. The role of being successful is given to male children in Turkey (Sevim, 2006). Considering the age group (12-18) and socioeconomic conditions of the sample chosen for this study, it is an age group that has yet to embark on their expected adult roles. On the one hand, parents' expectations of their children such as marrying early, going out to work, taking responsibility for family; and on the other hand, the examinations that must be passed to be able to get a good job, can be the cause of learned helplessness for the children at this age. Erdođdu (2006) also found in his study that male students suffered from learned helplessness more intensely than female students did and he found significant relationships between families' socioeconomic conditions and learned helplessness.

No relationship between learned helplessness and test anxiety was found in my study. A reason for this may be that the two situations may not be cause and effect for each other since both situations have cognitive aspects. However, in the light of the discussion above, the possibility of having a statistically significant relationship between two cognitive aspects seems to be reduced because the range of the sample in my study was too wide. If the academic achievement variable were taken into consideration in my study, it could provide information about the direction of the relationship between test anxiety and learned helplessness. For further studies on the topic of learned helplessness, the age range should be narrow and other variable (academic achievement, personality, cultural effects), that can determine the anxiety, should be taken into account to keep up with the development stage of the participants.

Radical changes that have repeatedly been made to the UEE and HSPT examinations create uncertainty for students, parents, and teachers and as a result anxiety and learned helplessness can occur. For this reason, firstly the testing system should be stabilized. On the other hand, important tasks fall to school counseling services and other experts in that field in regard to UEE and HSPT examinations. In Turkey, studies about test anxiety should be undertaken and the breadth of the research should be increased. Awareness of teachers and parents about learned helplessness and test anxiety should be raised and there should be a focus on general strategy of prevention aimed especially at female students.

Ultimately, the most important implication of this study is that more studies should be conducted about the effect of learned helplessness on students who

are preparing for an examination and these studies should be focused on children who are at the beginning of puberty or even on younger children.

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