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## Relationship Between Test Anxiety and Academic Achievement

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### ABSTRACT

The aim of this study was to investigate the relationship between test anxiety and academic achievement of the 9th grade students at Private Fatih High School. This study was conducted with 70 male 9th grade students of Private Fatih High School in Beylikdüzü, Istanbul, during the 2013-2014 academic year. Data were collected by using The Westside Test Anxiety Scale developed by Richard Driscoll ([www.amtaa.org/scalewest.html](http://www.amtaa.org/scalewest.html)). High School Placement Score (OYP) (the score which combines students' SBS [Level Determination Examination in Turkey for eighth graders] results and end of the eighth grade year results) and English language proficiency (as measured by the English language placement test the 9th grade students took at the beginning of the term at Private Fatih High School) were used for measuring students' academic achievement. Correlation analysis was used in order to determine the relationship between students' test anxiety and academic achievement. The correlation revealed that students' test anxiety have a negative relation with academic achievement. In light of this finding it is possible to put forward that test anxiety has a negative effect on the academic achievement of students.

**Keywords:** Test Anxiety, Academic Achievement, School Achievement, OYP Score, High School Students, Turkey.

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# Lise Öğrencilerinde Sınav Kaygısı ve Akademik Başarı İlişkisi

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## ÖZET

Bu çalışmanın amacı, Özel Fatih Lisesi 9. Sınıf öğrencilerinin akademik başarıları ile sınav kaygıları arasındaki ilişkiyi incelemektir. Bu araştırma, Beylikdüzü İstanbul'daki Özel Fatih Lisesi 9.sınıfta 70 erkek öğrencinin katılımıyla gerçekleştirilmiştir. Sınav kaygısı verileri Richard Driscoll tarafından geliştirilen Westside sınav kaygısı ölçeği ([www.amtaa.org/scalewest.html](http://www.amtaa.org/scalewest.html)) ile toplanmıştır. Öğrencilerin akademik başarılarının tespiti için, Ortaöğretim Yerleştirme Puan'ları (OYP) (Öğrencinin OYP puanı, öğrencinin SBS [8. Sınıf öğrencilerinin girdiği Seviye Belirleme Sınavı] puanı ile 8. sınıf yıl sonu ders başarı ortalanasının birleştirilmesi ile hesaplanır) ve İngilizce dil yeterlilikleri (9. Sınıf dönem başında uygulanmış seviye belirleme sınavı ile ölçülmüştür) kullanılmıştır. Akademik başarı ile sınav kaygısı arasındaki ilişki korelasyon analizi ile incelenmiştir. Analiz sonuçları, öğrencilerin akademik başarıları ile sınav kaygıları arasında negatif anlamlı bir ilişkiyi göstermiştir. Bu sonuçların ışığı altında, öğrencilerin sahip olduğu sınav kaygısı akademik başarıları üzerinde negatif etkiye sahip olduğu savunulabilir.

**Anahtar Kelimeler:** Sınav Kaygısı, Akademik Başarı, Okul Başarısı, Ortaöğretim Yerleşme Puanı, Lise Öğrencileri, Türkiye.

## 1. Introduction

We all know that education is crucial for Turkey, like every country in the world. If we want Turkey to be a developed country, strong and effective education is a necessity. Of course, there are a number of factors that determine the efficacy of education. First and foremost is the student, and his or her achievement is a major end product to assess (Berberoğlu & Kalender, 2005).

### 1.1. Academic Achievement

Academic achievement is depicted as the outcome of education. It is generally thought that academic achievement refers to how well a student is accomplishing his or her tasks and studies. Academic achievement is commonly measured by examinations or continuous assessment (Ward et al. 1996). Good (1959) defines academic achievement as, "The knowledge obtained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher." Trow (1956) refers to academic achievement as "knowledge attaining ability or degree of competence in school tasks usually measured by standardized tests and expressed in a grade or units based on pupils' performance." According to Greenwood Dictionary of Education, "Academic achievement is the attainment of knowledge, competencies, and higher-level status, as reflected in grades, degrees, and other forms of certification or public acknowledgement" (Collins, & O'Brien, 2011).

National and international assessment studies can reflect student achievement. One of the most important studies is The Programme for International Student Assessment (PISA). PISA is a worldwide study by the Organisation for Economic Co-operation and Development (OECD) in member and non-member nations of 15-year-old school pupils' scholastic performance in mathematics, science, and reading ([www.oecd.org/pisa/aboutpisa/](http://www.oecd.org/pisa/aboutpisa/)).

On the other hand, Students take exams of various kinds and are placed into educational institutions according to the result of such exams (MEB, 2014; ÖSYM, 2011). One important factor considered in the placement of the students in university departments, and by extension their future, is the type of high school from which they graduated. Success achieved by Anatolian and Science high schools in the placement of the students to universities make such schools attractive and increases the importance of exams made for secondary school transition tests (Bal, 2011). To study at Turkey's top high schools is a key to get better education and study at Turkey's top universities. It is implied in this paragraph that students need good academic achievement to achieve this goal. In our education system and all over the

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world, exams or tests, as mentioned before, are used to determine students' academic achievement. It is easily assumed that students' academic achievement is measured by classroom-based tests at school or some high-stake exams nationwide. Tests or exams are referenced to determine the academic achievement of students.

There are a number of factors which effect students' academic achievements, such as attitude, socioeconomic status, parents, peers, teachers, self-efficacy, motivation, ability, learning environment, test anxiety etc. (Wright, 1997; Farooq et al., 2011; Pascarella, & Terenzin, 1991; Hanushek et al., 2003; Ames, 1992; Noguera, 2003; Bandura, 1993; Culler, & Holahan, 1980; Sapp, 1999; Hill, & Wigfield, 1984). Last but not least, test anxiety has a significant effect on students' achievement which will be considered in the following lines.

### *1.2. Test Anxiety*

According to Kennedy T. Hill and Allan Wigfield (2014), test anxiety is one of the most important aspects of negative motivation and has direct debilitating effects on school performance. Dusek (1980, p. 88) defines test anxiety as "an unpleasant feeling or emotional state that has physiological and behavioural concomitants, and that is experienced in formal testing or other evaluative situations." As a teacher, it can easily be observed that test anxiety is a relatively stable predisposition in evaluative situations (Hill, 1980). Yerkes and Dodson (1908) showed in their study that "moderate levels of anxiety can lead to optimal performance on certain tasks; nevertheless, performance can deteriorate when anxiety is too high or low." Test-anxious children tend to receive low grades, poorer scores, and perform more poorly on tests (Ergene, 2011). Test anxiety affects performance in tests, therefore it affects academic achievements of students because tests are seen as an indicator of academic achievement. Test anxiety is defined as "the type of performance anxiety resulting from fear of failure in an academic evaluation setting" (Horwitz et.al, 1986). Christine Coombe and Nancy Hubley depict test anxiety in their study named *Fundamentals of Language Assessment* as "a feeling or nervousness or fear surrounding an assessment. It can occur before, during or after a test; has the potential to effect test performance" (Coombe, & Hubley, 2011).

### *1.3. Aim of the study*

For plenty of years, test anxiety attracted the attention of many researchers and many studies were made to find any relation between test anxiety and students' academic achievement.

The aim of this study was to investigate the relationship between test anxiety and academic achievement of the 9th grade students at Private Fatih High School.

### *1.4. Research Questions*

The following research questions were on the basis of the study:

- Does test anxiety have a significant impact on the overall academic success of students?
- What is the relationship between test anxiety and students' achievement?
- What is the level of test anxiety of 9th grade students at Private Fatih High School?

### *1.5. Literature Review*

#### *1.5.1. Test Anxiety and Academic Achievement*

Test anxiety is a major factor which influences students' academic achievement. According to Marty Sapp (1999), test anxiety in children is negatively correlated with achievement.

Similarly, Hill and Wigfield (1984) conducted a 5-year longitudinal study with 700 elementary school children and found a negative correlation between test anxiety and achievement test scores.

Turgay Ergene (2011) conducted a study which investigated the relationships among study habits, test anxiety, achievement, motivation, and academic success with 510 Turkish tenth grade high school students. He states in his study that the worry dimension of test anxiety was negatively associated with academic success.

Another study was conducted in Iran by Fayegh Yousefi, Mansor Abu Talib, Mariani Bte Mansor, Rumaya Bte Juhari and Marof Redzuan (2010). The purpose of this study was to determine the relationship between test anxiety and academic achievement among adolescents in Sanandaj, Iran. In this article, a self administered questionnaire was used for data collection which includes a Test-Anxiety Inventory (TAI), Grade Point Average (GPA) score and personal information. The results showed that there was a significant correlation ( $r = -0.23$ ,  $p = .000$ ) between test anxiety and academic achievement among 400 adolescents.

In a study which consisted of 114 students in the English Language Department of Necatibey Education Faculty of Balikesir University, Turkey, Selami Aydın, Fatih Yavuz and Savaş Yeşilyurt (2011) examined test anxiety in foreign language learning. In the study, the following result was found: "Test anxiety causes physical and psychological problems, affects motivation, concentration and achievement negatively."

In another study, Rizwan Akram Rana and Nasir Mahmood (2010) tried to find the relationship between test anxiety and academic achievement. Their study showed that there is a significant negative relationship between test anxiety scores and students' achievement scores.

As a result, these research studies depict that test anxiety is always negatively correlated with students' academic achievement.

## 2. Methodology

### 2.1. Participants

The study was conducted with all of the 9th grade students (70 male students) at Private Fatih High School in Beylikdüzü, Istanbul, during the 2013-2014 academic year. These students who are from different social backgrounds were newly enrolled to Private Fatih High School. Because the school is private, most of the students pay for school fee, but some of students have academic achievement scholarship from the school according to their OYP scores, so they do not to pay a school fee for their education.

### 2.2. Instruments

#### 2.2.1. Test Anxiety Scale

In order to measure students' test anxiety, The Westside Test Anxiety Scale developed by Richard Driscoll ([www.amtaa.org/scalewest.html](http://www.amtaa.org/scalewest.html)) was used (see appendix A). The Westside Test Anxiety Scale was chosen because it is a brief, ten item instrument which is designed to identify students with anxiety impairments and also the scale is a valid and reliable instrument of measure for text anxiety levels (Driscoll, 2007; Totan, & Yavuz, 2009).

#### 2.2.2. Semi-structured Interviews

Semi-structured interviews were used to identify incidents that create test anxiety in students. Most of the questions were derived from the Westside Test Anxiety Scale. The responses of the subjects led to further questions, that is, some of the interview questions were driven from the participants' responses (For semi-structured questions, see appendix B). Participants were selected randomly from the students of 9th grade students of at Private Fatih High School in Beylikdüzü, Istanbul, after the The Westside Test Anxiety Scale was applied and results were gathered. Interviews were done individually. The following is an example of a conversation during an interview:

Researcher: "How do you feel before and during a major exam?"

Participant: "I get nervous a lot. My hands shake. Sometimes I forget the things I know and I can't concentrate on tests."

Researcher: "Can you explain why you feel so?"

Participant: "Because of getting low mark."

Researcher: "Do you think these feelings affect your academic achievement?"

Participant: "Yes, I think so."

Researcher: "Have you ever tried to find out how to fix this problem?"

Participant: "No, I have not."

Researcher: "What reduces your test anxiety?"

Participant: "I don't know. Maybe, I should study hard before a major exam."

### 2.2.3. Academic Achievement

High School Placement Score (OYP) (the score which combines students' SBS [Level Determination Examination in Turkey for eighth graders] results and end of the eighth grade year results) was used to measure students' academic achievement.

### 2.3. Data analysis

The Pearson correlation ( $r$ ) analysis was used to analyze the data to describe the relationship between test anxiety and academic achievement. The data was processed using SPSS software. The Pearson correlation coefficient is the most commonly used measure of correlation. The numerical value of a correlation coefficient always ranges between -1.00 and +1.00. The sign of a correlation coefficient (+or -) shows the direction of the relationship between the two variables. Variables may be either positively or negatively correlated. A positive correlation indicates a direct, positive relationship between the two variables. A negative correlation indicates an absent or weak relationship between the two variables. If the correlation is positive, scores on one variable tend to increase as scores on the other variable increase. If the correlation is negative, scores on one variable tend to increase as scores on the other variable decrease. If the coefficient is close to one, it indicates the perfection of the relationship, while if it is close to zero it indicates the weakness or absence of relationship (Leary, 2001).

## 3. Findings and Discussions

### 3.1. Relationship between Test Anxiety and Academic Achievement

The relationship between test anxiety and students' academic achievement determined by High School Placement Score (OYP) of students was investigated by using The Pearson correlation ( $r$ ) analysis.

Table 1 and graph 1 reveal that there is a weak negative relationship between OYP scores and test anxiety of students ( $r = -.315$ ;  $P < .01$ ). The results show that there is a negative relationship between these two variables. The negative relationship implies that as test-anxiety scores decrease, academic achievement improves (and vice versa). Thus, these findings support the view that there is a relationship between test anxiety and academic achievement. Students' test anxieties are correlated with their OYP scores which mean academic achievement.

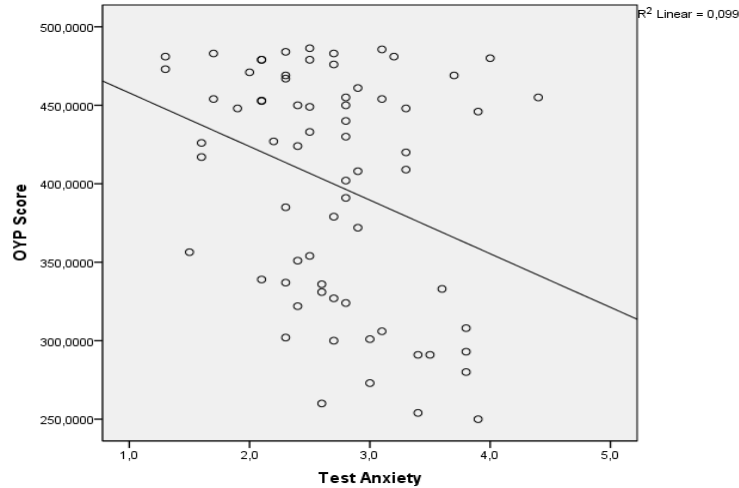
The results show that 30% of 9th grade students at Private Fatih Collage suffer from high test anxiety and 12% of them suffer from low test anxiety. High and low test anxieties debilitate students' academic achievement, but moderate test anxiety facilitates it (Hill, & Wigfield, 1984). Researchers suggest that between 25 to 40 percent of students experience test anxiety (Cassady, 2010). Hill and Wigfield (1984) examined literature and figured out that about 25% of American primary and secondary school students (about 10 million) suffered lower academic performance because of test anxiety.

**Tablo 1.**

Test anxiety and OYP scores of students

		OYP Score	Test Anxiety
OYP Score	Pearson Correlation	1	-.315**
	Sig. (2-tailed)		.008
	N	70	70
Test Anxiety	Pearson Correlation	-.315**	1
	Sig. (2-tailed)	.008	
	N	70	70

The results of this study concur the same with other researchers. Also, Seipp's (1991) meta-analyses of 126 American and European studies gave nearly the same negative correlation of  $r = -.21$  between test anxiety and academic performance as  $r = -.315$  in this study. This negative correlation increases throughout the elementary school period. By the fifth and sixth grades, the correlation between test anxiety and achievement reaches  $-.45$  (Sapp, 1999).



**Resim 1.** Test anxiety and OYP scores of students

#### 4. Conclusion

Previously emphasized in this study and many other studies cited here is the fact that test anxiety has an impact on students' academic achievement. It decreases students' learning capabilities and hinders excellent academic performance. It also decreases motivation towards the ability for attention and concentration, and worse, it leads to academic failure. That test anxiety negatively affects academic performance is consistent with the literature (Burns, 2004). For that reason, teachers should have a facilitator role rather than the fountain of all knowledge (AMEP, 2006), and should deal with students who have high or low test anxiety to foster their academic achievements. Teachers have a number of roles (Havighurst, 2014). However, their primary aims must be to facilitate the learning, provide a safe learning environment, deal with students' problems, and also ease test anxiety of students. Teachers can reduce the test anxiety's negative impact on children's performance (Wigfield, & Eccles, 1989). There are many triggers of test anxiety (Spencer, 2011), but those are not the issue of this study. Nevertheless, they should definitely be addressed in another study. As mentioned a few lines before, children with higher test anxiety should be assessed and treated in order to increase their academic performance (İlden et al. 2002) if we want students to be successful and have good academic achievement.

On the other hand, this is not a case for an individual student. Low academic achievement, depicted by PISA studies, is one of the major problems which Turkey faces. According to the PISA study in 2012, Turkey's overall ranking is 43rd among 65 countries. Also in the same study, Turkey is ranked 42nd for reading, 44th for maths and 43rd for science (MEB, 2013). It can obviously be seen that this ranking is far below the OECD average and the result is not brilliant for Turkey. Dealing with test anxiety may help to fix this impairment in our education.

According to the semi-structured interviews which were done for this study, students generally explain their feelings before and during a major exam. All of them say that these feelings make them unsuccessful. However, they don't know that these feelings are made by test anxiety and also what to do to solve this problem. Students need help not only from teachers but also their parents in order to overcome this problem which causes low academic achievement.

The findings of this study could be valuable for teachers, educators, parents, in sum, all of the parties of education who want to foster students' academic achievement. It may be possible to better understand students experiencing test anxiety, and thus having low academic achievement. Furthermore, if students

recognise and fix this impairment, it will be a big step taken towards improving the academic achievement of students.

## References

- AMEP. (2006). Teaching strategies 3, Different cultures of learning. Retrieved May 9, 2014 from <http://www.nceltr.mq.edu.au/pdamep>
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of educational psychology*, 84(3), 261.
- Aydın, Y., Yavuz, F., & Yeşilyurt, S. (2006). Test anxiety in foreign language learning. *Journal of Social Sciences Institute, Balıkesir University*, 145-160, Retrieved April 20, 2014 from <http://sbe.balikesir.edu.tr/dergi/edergi/c9s16/makale/c9s16m8.pdf>
- Bal, Ö. (2011). Seviye Belirleme Sınavı (SBS) Başarısında Etkili Olduğu Düşünülen Faktörlerin Sıralama Yargıları Kanunıyla Ölçeklenmesi [Success of placement exam (SBS) factors that were considered to be effective with the law of rank order judgement scaling model]. *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi, Kış 2011* [Journal of Measurement and Evaluation in Educational and Psychological, Winter 2011], 200-209.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational psychologist*, 28(2), 117-148.
- Berberoğlu, G. & Kalender İ. (2005). Öğrenci başarısının yıllara, okul türlerine, bölgelere göre incelenmesi: ÖSS ve PISA analizi [Investigation of student achievement across years, school types and regions: The SSE and PISA Analyses]. *Educational Sciences and Practice*, 4(7), 21-35.
- Burns, D. J. (2004). Anxiety at the time of the final exam: Relationships with expectations and performance. *Journal of Education for Business*, 80, 119-124.
- Cassady, J. C. (2010). Test anxiety: Contemporary theories and implications for learning. In J.C. Cassady (Ed.), *Anxiety in schools: The causes, consequences, and solutions for academic anxieties* (pp. 7-26). New York, NY: Peter Lang,
- Collins, J. W., & O'Brien, N. P. (Eds.) (2011). *The Greenwood Dictionary of Education* (2nd ed.). California: Greenwood.
- Coombe, C., & Hubley, N. (2011). Fundamentals of Language Assessment. Retrieved May 18, 2014, from [http://marvin.ibeu.org.br/ibeudigital/images/1/1a/Fundamentals\\_of\\_Language\\_Assessment\\_Manual\\_by\\_Coombe\\_and\\_Hubley.pdf](http://marvin.ibeu.org.br/ibeudigital/images/1/1a/Fundamentals_of_Language_Assessment_Manual_by_Coombe_and_Hubley.pdf)
- Culler, R. E., & Holahan, C. J. (1980). Test anxiety and academic performance: the effects of study-related behaviors. *Journal of educational psychology*, 72(1), 16.
- Driscoll, R. (2007). Westside Test Anxiety Scale Validation. Online Submission. Retrieved May 01, 2014 from <http://files.eric.ed.gov/fulltext/ED495968.pdf>
- Farooq, M.S., Chaudhry, A.H., Shafiq M., & Berhanu G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. *Journal of Quality and Technology Management*, Volume VII, Issue II, December, 01-14.
- Good, C & Markel, W. R. (1973). *Dictionary of Education* (3rd ed). New York: McGraw- Hill book Company.
- Hanushek, E. A., Kain, J. F., Markman, J. M., & Rivkin, S. G. (2003). Does peer ability affect student achievement?. *Journal of applied econometrics*, 18(5), 527-544.
- Havighurst, R. J. (2014). Functions and roles of teachers. Retrieved May 5, 2014, from <http://global.britannica.com/EBchecked/topic/585183/teaching/39100/Functions-and-roles-of-teachers>
- Hill, K. T. (1980). Motivation, evaluation and educational testing policy. In L. J. Fyans (Ed.), *Achievement motivation: recent trends in theory and research*. New York: Plenum.
- Hill, K. T.; & Wigfield A. (1984). Test anxiety: a major educational problem and what can be done about it. *The Elementary School Journal, Special Issue: Motivation*, 85(1), 105-126.
- Horwitz, E.K., Horwitz, M.B. and Cope, J. (1986) Foreign language classroom anxiety, *Modern Language Journal*, 70 (2).
- Koçkar, A. İ., Kılıç B. G., Şener Ş. (2002). İlköğretim öğrencilerinde sınav kaygısı ve akademik başarı [test anxiety and academic achievement in primary school students]. *Çocuk ve Gençlik Ruh Sağlığı Dergisi* [Turkish Journal of Child and Adolescent Mental Health], 9(2).
- Leary, M.R. (2001). *Introduction to behavioural research methods* (3rd ed.). Boston: Allyn & Bacon.
- MEB. (2013). PISA 2012 Ulusal Ön Raporu [PISA 2012 National Preliminary Report]. Retrieved April 27, 2014 from <http://pisa.meb.gov.tr/wp-content/uploads/2013/12/pisa2012-ulusal-on-raporu.pdf>
- MEB. (2014). Milli Eğitim Bakanlığı ortaöğretim kurumlarına geçiş yönergesi. [Ministry of Education, directive of transition to secondary education]. Retrieved April 18, 2014, from [http://mevzuat.meb.gov.tr/html/ogr\\_gecis\\_1/ogr\\_gec\\_0.html](http://mevzuat.meb.gov.tr/html/ogr_gecis_1/ogr_gec_0.html)
- Noguera, P. A. (2003). The trouble with Black boys: The role and influence of environmental and cultural factors on the academic performance of African American males. *Urban Education*, 38(4), 431-459.

- ÖSYM. (2011). Ölçme, Seçme ve Yerleştirme Merkezi başkanlığının teşkilat ve görevleri hakkında kanun [The law about organization and duties of The Student Selection and Placement Center] Retrieved April 18, 2014 from <http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=1.5.6114&MevzuatIliski=0&sourceXmlSearch=OSB>
- Pascarella, E. T., & Terenzini, P. T. (1991). How college affects students. (pp. 3-7). K. A. Feldman (Ed.). San Francisco: Jossey-Bass.
- Rana, R. A., & Mahmood N. (2010). The Relationship between Test Anxiety and Academic Achievement. *Bulletin of Education and Research*, 32(2), 63- 74.
- Salend, S. J. (2011). Addressing Test Anxiety. *TEACHING Exceptional Children*, 44(2), 58-68.
- Sanders, W. L., Wright, S. P., & Horn, S. P. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of personnel evaluation in education*, 11(1), 57-67.
- Sapp, M. (1999). *Test anxiety : applied research, assessment, and treatment interventions* (2nd ed.). USA: University Press of America. p. 271
- Seipp, B. (1991). Anxiety and academic performance: A meta-analysis of findings. *Anxiety Research*, 4(1), 27-41.
- Totan, T. & Yavuz, Y. (2009).The Validity and Reliability Study of The Turkish Version of Westside Test Anxiety Scale. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*[Mehmet Akif University Journal of Education Faculty, 9(17), 95-109.
- Trow, W.C. (1956). *Psychology in Teaching and Learning*. Boston: Houghton Mifflin Company.
- Turgay, E. (2011) The Relationships among Test Anxiety, Study Habits, Achievement, Motivation, and Academic Performance among Turkish High School Students. *Education and Science*, 36(160).
- Ward, A. W., Stoker, H., Murray-Ward, M. (1996). *Educational Measurement: Origins, Theories, and Explications* (Volume 2). USA: University Press of America, pp. 2-5.
- Wigfield, A., & Eccles, J. S. (1989). Test anxiety in elementary and secondary school students. *Educational Psychologist*, 24(2), 159-183.
- Wright, S. P. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 11, 57-67.
- Yousefi, F., Talib, M. A., Mansor, M. B., Juhari, R. B., & Redzuan, M. (2010).The Relationship between Test-Anxiety and Academic Achievement among Iranian Adolescents. *Asian Social Science*, 6(5); 100-105.
- Zeidner, M., & Matthews, G. (2003). Test anxiety. In R. Fernández-Ballesteros (Ed.), *Encyclopedia of psychological assessment*. (pp. 965-970). London: SAGE Publications Ltd. doi: <http://dx.doi.org/10.4135/9780857025753.n202>.

## Appendices

### Appendix A: Westside Test Anxiety Scale

Rate how true each of the following is of you, from extremely or always true, to not at all or never true. Use the following 5 point scale.

5	4	3	2	1
extremely	highly	moderately	slightly	not at all
always	usually	sometimes	seldom	never
true	true	true	true	true

- 1) The closer I am to a major exam, the harder it is for me to concentrate on the material.
- 2) When I study, I worry that I will not remember the material on the exam.
- 3) During important exams, I think that I am doing awful or that I may fail.
- 4) I lose focus on important exams, and I cannot remember material that I knew before the exam.
- 5) I finally remember the answer to exam questions after the exam is already over.
- 6) I worry so much before a major exam that I am too worn out to do my best on the exam.
- 7) I feel out of sorts or not really myself when I take important exams.
- 8) I find that my mind sometimes wanders when I am taking important exams.
- 9) After an exam, I worry about whether I did well enough.
- 10) I struggle with writing assignments, or avoid them as long as I can. I feel that whatever I do will not be good enough.

\_\_\_ Sum of the 10 questions

\_\_\_ Divide the sum by 10. This is your Test Anxiety score.

What does your test anxiety score mean?

1.0—1.9 Comfortably low test anxiety

2.0—2.5 Normal or average test anxiety

2.5—2.9 High normal test anxiety



3.0—3.4 Moderately high (some items rated 4=high)

3.5—3.9 High test anxiety (half or more of the items rated 4=high)

4.0—5.0 Extremely high anxiety (items rated 4=high and 5=extreme)

© 2004 by Richard Driscoll, Ph.D. You have permission to copy this scale for personal use and for institutional uses (but not for resale). [www.amtaa.org/scaleWestside.html](http://www.amtaa.org/scaleWestside.html)

**Appendix B: Semi-structured interview questions**

1. How do you feel before and during a major exam?
2. Do you have such conditions like shaking hands, impaired concentration, an inability to remember what you studied, an inability to sleep before a major exam, etc?
3. Can you explain why you feel so?
4. Do you think these feelings affect your academic achievement?
5. Have you ever tried to find out how to fix these problems?
6. What reduces your test anxiety?