THE ROLE OF HOPE AND STUDY SKILLS IN PREDICTING TEST ANXIETY LEVELS OF UNIVERSITY STUDENTS

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ABSTRACT

THE ROLE OF HOPE AND STUDY SKILLS IN PREDICTING TEST ANXIETY LEVELS OF UNIVERSITY STUDENTS

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This study aimed at investigating the role of hope and study skills in predicting test anxiety levels of female and male university students. The sample consisted of 442 students from four different undergraduate programs of Faculty of Education at Ege University. Turkish version of State Hope Scale (SHS, Snyder, 1996), Turkish form of Dispositional Hope Scale (DHS, Akman & Korkut, 1993), Study Skills Scale (SSI, Yıldırım, Doğanay & Türkoğlu, 2000) and Turkish form of Test Anxiety Inventory (TAI, Albayrak-Kaymak,1985; Öner, 1986; 1990; Öner & Albayrak Kaymak, 1986) were used for data collection. Adaptation study of the SHS and validity and reliability studies of the SSI were also conducted as part of the study.

For the purpose of investigating the role of hope and study skills in predicting worry and emotionality dimensions of test anxiety, four stepwise multiple regression analyses were conducted separately for the worry and emotionality subscales scores of females and males.

SHS scores, DHS scores, Course Participation subscale scores and Effective Reading subscale scores appeared as significant predictors for the emotionality scores, whereas SHS scores, Course Participation subscale scores and Effective Reading subscale scores emerged as significant predictors of the worry scores for the female group.

The State Hope Scale (SHS) scores, Preparation for Exams subscale score, the Dispositional Hope Scale Scores (DHS), and Listening Subscale scores predicted the emotionality scores of the male students, and the State Hope Scale (SHS) scores, Preparation for Exams subscale, the Dispositional Hope, Motivation subscale, Health and Nutrition subscale and Writing Subscale scores predicted the worry scores of the male students.

Keywords: Hope, study skills, worry, emotionality, test anxiety

ÖZ

UMUT VE ÇALIŞMA BECERİLERİNİN ÜNİVERSİTE ÖĞRENCİLERİNİN SINAV KAYGISINI YORDAMADAKİ ROLÜ

Denizli, Serkan

Yüksek Lisans, Eğitim Bilimleri Bölümü

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Bu çalışma, umut ve çalışma becerilerinin kız ve erkek üniversite öğrencilerinin sınav kaygısını yordamadaki rolünü incelemeyi amaçlamaktadır. Ege Üniversitesi Eğitim Fakültesi'nin 4 farklı lisans programında öğrenim görmekte olan 442 öğrenci araştırmaya katılmıştır. Veriler Durumluk Umut Ölçeği'nin Türkçe formu (Snyder, 1996), Umut Ölçeği'nin Türkçe formu (Akman & Korkut, 1993), Çalışma Becerileri Ölçeği (Yıldırım, Doğanay & Türkoğlu, 2000) ve Sınav Kaygısı Envanteri'nin Türkçe Formu (Albayrak-Kaymak,1985; Öner, 1986; 1990; Öner & Albayrak Kaymak, 1986) kullanılarak toplanmıştır. Durumluk Umut Ölçeği'nin uyarlama çalışması ve Çalışma Becerileri Ölçeği'nin geçerlik ve güvenirlik çalışmaları da bu araştırmanın bir parçası olarak yapılmıştır.

Umut ve çalışma becerilerinin kız ve erkek üniversite öğrencilerinin sınav kaygısını yordamadaki rolünü araştırmak için, kız ve erkek öğrencilerin duyuşsallık ve kuruntu alt ölçek puanlarına dört ayrı aşamalı regresyon analizi uygulanmıştır.

Bulgular, kız öğrencilerin sınav kaygılarının duyuşsallık boyutunu durumluk umut, sürekli umut, derse katılma ve etkili okuma puanları yordamaktayken, kuruntu boyutunu durumluk umut, derse katılma ve etkili okuma puanlarının yordadığını göstermiştir.

Erkek öğrencilerin duyuşsallık boyutunu ise durumluk umut, sınava hazırlanma, sürekli umut ve dinleme becerileri puanları; kuruntu boyutunu ise durumluk umut, sınava hazırlanma, sürekli umut, motivasyon, sağlık ve beslenme ve yazma puanlarının yordadığı görülmüştür.

Anahtar Kelimeler: Umut, çalışma becerileri, duyuşşallık, kuruntu (endişe), sınav kaygısı.

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Date: Signature:

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CHAPTER I

INTRODUCTION

One of the main and the natural concerns for an educational scientist is to establish a good learning environment, hence, to make students attain academic success. Test anxiety is one of the main barriers to reach this goal. Feelings of anxiety toward examination have existed ever since examinations have been used in the educational settings and are frequently expressed in today's competitive academic environment. The topic of test anxiety, as a specific form of anxiety, has attracted the attention of many researchers. Research was carried out investigating the relationship of test anxiety with different variables such as attributional styles, learning strategies, study skills, evaluative threat, test and academic performance (i.e. Culler & Hollahan, 1980; Gadzella, Masten & Stacks, 1998, Galassi, Frierson & Sharer, 1981; Gaudry & Spielberger, 1971; Hancock, 2001; Wittmaier, 1972).

Research findings suggested that test anxiety decreases academic performance of the students (Daniels & Hewitt, 1978; Hunsley 1985; Hancock, 2001) and that leads them performing poorly and experiencing obstacles during test situations (i.e. Walsh, Engbretson & O'Brien, 1968; Daniels & Hewitt, 1978; Sarason, 1984).

Reviewing the literature, positive correlation was also found between test anxiety and a variety of variables in the literature such as; test performance (Deffenbacher, 1978); coping strategies (Aysan, Thompson & Hamarat, 2001); helplessness (Fincham, Hokoda & Sanders, 1989; Gündoğdu, 1994); self-esteem (Çankaya, 1997), ;parenting styles (Chapell & Overton, 1998; Nijhawan, 1972) and hope (Snyder,Feldman & Shorey, 2002). Snyder et. al. (2002) conceptualized hope as a goal-directed cognitive process which is found to be associated with a number of areas including physical and mental health, academic performance, sport achievement (i.e. Irving, Snyder & Crowson, 1998; Curry, Snyder, Cook, Ruby & Rehm, 1997) and statistics test anxiety (Onwuegbuzie, 1998).

Regarding the relationship between hope and anxiety, Lazarus and Averill (1972) claim that hope and anxiety had similarities.That is both a) are cognitive and symbolic emotions, b) both involve anticipation for future and c) both have the element of subjective uncertainty. Further, research showed an inverse relationship between hope and statistics anxiety (Onwuegbuzie, 1998). However, no other study was carried out to investigate the relationship between hope and general test anxiety of students.

Meanwhile, some researchers specifically focused on study skills and study habits and claimed that test anxiety may be a natural reaction resulting from students' poor study skills (Desiderato & Koskinen, 1969).

As this brief summary of the literature suggests there seems to be no consensus over the correlates and the predictors of test anxiety. Stating differently, researchers did not agree upon whether personality variables such as

self esteem (Çankaya, 1997) and helplessness (Gündoğdu,1994; Pekrun, 1984), or cognitive processes like cognitive interference (Sarason, 1984) or coping strategies (Aysan et.al., 2001), or study skills of the students (Wittmaier, 1972) should be stressed while explaining test anxiety. Aiming at to bring a resolution to the existing controversy, the present research is designed to investigate the role of hope and study skills in predicting the test anxiety of university students.

In the following section, definition, causes, correlates and effects of the criterion variable of the present research, explicitly test anxiety are discussed in details. In addition, two popular models, to be precise, cognitive interference model and study skills deficit model that explain test anxiety will be presented. Later, literature regarding the possible predictors of test anxiety, specifically hope and study skills will be presented.

1.1.Nature of Test Anxiety

Generally, anxiety has been defined as a complex state that is elicited by psychological stress which includes cognitive, emotional, behavioral and physiological dimensions (Emmelkamp, Bouman & Scholing, 1992; Philips, Martin & Meyers 1969; Sarason, 1984). Test anxiety, on the other hand, refers to an individual difference in the disposition to experience feelings of apprehension and worry cognitions in academic environments where performance of students is under evaluation (Schwarzer, Van Der Ploeg & Spielberger, 1987). Sarason, Davidson, Lighthall, Waite and Ruebush (1960) reported that test anxious individuals have self-depreciatory attitudes, anticipate failure in the test situation and experience the situation as unpleasant.

The most expected and most natural result of the test anxiety would be poor test performance, hence, a decrease in scholastic success. Many researchers conducted studies to provide evidence about this relationship (e.g. Daniels & Hewitt, 1978; Hancock, 2001; Hunsley;1985).

For example, Daniels and Hewitt (1978) examined the effects of anxiety on examination performance throughout all exams of a course rather than a single exam. Participants were classified into three groups (high, middle and low) on the basis of their test anxiety scores. The performance of the students was recorded for each student on each question on four regular classroom examinations excluding the final. Each exam consisted of 50 multiple-choice questions. The results of the study indicated a strong relationship between test anxiety and academic achievement. At the end of the semester, most of the low anxious group (87%) received either A or B, and none of the students in high-anxious group received an A and 19% received B.

Hunsley (1985) found consistent results for the relationship of academic achievement and test anxiety. Participants completed test anxiety measure two weeks prior the first exam. The relationship between the test anxiety and examination performance on four midterm exams was investigated. Results showed that test-anxious students obtained lower examination grades than their non-test-anxious counterparts.

Some researchers have primarily focused on effects of test anxiety on test performance (i.e. Hancock, 2001; Walsh, Engbretson & O'Brien, 1968). For example, Walsh et.al. (1968) designed a study to explore further validity of

Alpert-Haber Achievement Anxiety Test. Results of the study indicated that test anxiety scores were significantly related to test performance, and high-test-anxious students performed poorly on the test than did the low-anxious students.

In a more recent research, Hancock (2001) evaluated the effects of test anxiety and evaluative threat on academic achievement and motivation. He grouped the students as high test-anxious and low test-anxious and assigned them into high evaluative threat condition and low evaluative threat conditions. High evaluative threat condition group included sixteen high test-anxious students and 15 low test-anxious students. Remaining thirty students were assigned to the low evaluative threat condition. Results of the study showed that, although all students, regardless of their tendencies toward test anxiety, achieved under conditions of high evaluative threat, test-anxious students particularly performed badly and were less motivated when exposed to evaluative classrooms.

Having known that test anxiety has deleterious effects on academic performance, some researchers investigated its relationships with different concepts. For example, Nijhawan (1972) examined the test anxiety in relation to age, sex, socioeconomic status and parental attitudes toward child rearing. Except the age variable, all variables were found to be significantly related to test anxiety levels of students.

In a similar vein, regarding the effect of parenting style on test anxiety of adolescents, Chapell and Overton (1998) found that authoritative parenting was related with low test anxiety level in adolescents while non-authoritative parenting was related with high test anxiety level. This result was consistent with the with

previous findings and indicated that authoritative parenting was related with less stress than was non-authoritative parenting.

1.2. Models of Test Anxiety

Investigating causes of test anxiety has attracted the interests of researchers and led to the development of several models that aim at understanding the nature of test anxiety. In order to present these studies systematically, they were presented in two sections. First, cognitive interference model, then study skills deficit model were outlined below.

1.2.1. Cognitive Interference Model

Tryon (1980) proposed that test anxiety studies have first started with Sarason and Mandler's (1952; as cited in Tryon, 1980) classical study. According to their model of test anxiety, anxiety provoking evaluative situations lead high-test-anxious individuals to task-irrelevant thoughts whereas these types of situations lead low-test-anxious individuals toward task relevant thoughts (Sarason, 1980). Liebert and Morris (1967) conducted a factor analyses on Sarason and Mandler's Test Anxiety Questionnaire, and concluded that test anxiety is a bidimensional construct that consists of the worry and emotionality components.

Test anxiety literature also pointed out that emotionality dimension of the test anxiety was less important than worry, regarding its effect on academic and test performance (e.g. Schwarzer et. al., 1987; Deffenbacher, 1977, Doctor & Altman, 1969; Hagtvet, 1978). In addition, emotionality was found to be unrelated to performance expectations (Liebert & Morris, 1967; Morris & Liebert, 1970;

Spiegler, Morris & Liebert, 1968) and unrelated or negatively related to actual performance (Morris & Liebert, 1970; Morris & Perez, 1972). Further, worry dimension of test anxiety was found more important than emotionality since it directly affected academic performance and performance expectations of students (Doctor & Altman, 1969; Morris & Liebert, 1970; Morris & Perez, 1972; Spiegler et.al., 1968). Naturally, worry dimension had great attention from researchers who investigated the dynamics of test anxiety (e.g. Deffenbacher, 1978; Lee, 1999; Sarason, 1980; 1984; Wine, 1971).

Based on his seminal research, Wine (1971) developed an attentional theory to explain how test anxiety affects the performance. He proposed that test anxious people get interfered during test taking by being preoccupied with worry, self-criticism and somatic concerns whereas low test anxious people attend only task-relevant thoughts. In other words, test anxious person who worries during test taking divide their attention between worry and the task; they perform poorly since a difficult task requires full attention. This study was one of the milestones for the development of cognitive interference model.

Later, Sarason (1980, 1984) conceptualized the test anxiety situation as a cognitive interference situation. Sarason (1980) defined worry as “the cognitive side of the anxiety” while emotionality as “awareness of bodily arousal and tension” (p.931). The interference model assumes that anxiety during tests interferes the student’s ability to retrieve and use the knowledge one has. Thus the model emphasized the worry component of test anxiety.

According to the cognitive interference model, test anxiety parallels with a stress situation. Sarason (1984) proposed that a stress situation could be understood in terms of a call for action. He defines the term "call for action" as "a person's awareness of the need to do something about a given state of affairs" (p.929). Sarason says that call for action occurs as a response to the challenging or threatening situations and leads a person to task-relevant or task irrelevant cognitions. Task-relevant cognitions are likely to occur when a situation or task has been self-selected and desired whereas task-irrelevant cognition occurs when the call for action is imposed on the individual (Sarason, 1984). From this point of view, tests can be seen as imposed challenges for students in educational settings. Taking a test is not a self-selected challenge, rather, an imposed threat evaluating the students' performance. Therefore, task-irrelevant cognitions are more likely to occur when test taking was perceived as an imposed and uncontrollable event, hence, lead students to perform poorly on a test although they know the subject well. This may be particularly valid for the Turkish culture since the educational system is almost totally based on a series of examinations that are imposed onto the students. If this is the case, it is no wonder that the prevalence of test anxiety was as high as 60% even among the elementary school students (Aydın, 1993). In a similar vein, Lee (1999) examined the relationship between working memory and test anxiety. Lee proposed that performance deficits caused by test anxiety could be explained to the extent that individuals use their working memory. According to Lee, the working memory system has a finite capacity, and in an evaluative situation high test anxious people have less available working memory needed for task solution. Since some portion of the high test anxious people's

working memory is taken up by the worrisome thoughts they perform poorly on tests. Results of the Lee's study also indicated that because the students had a high load on their working memory with worrisome thoughts about evaluative situations, they performed poorly on both time-limited visual and verbal tasks.

Consistently, Chapell and Overton (1998) investigated the relationship between test anxiety and logical reasoning performance of adolescents. Results indicated that low test anxiety is related to more advanced reasoning performance than high test anxiety.

In another study, Deffenbacher (1978) examined the reactions of test anxious students during test taking. Results of the Deffenbacher's (1978) study showed that high anxiety individuals spent less time on test, experienced greater interference from anxiety, reported greater attention to worrisome thoughts, heightened physiological arousal and task generated interference. However, he did not found significant differences among high and low anxious groups regarding academic performance.

Since the researchers provided strong evidence for the debilitating effects of test anxiety on the academic performance of students, many anxiety reduction methods that aimed at reduce worry component of test anxiety were developed. For example, cognitive behavior modification (Meichenbaum, 1972), attention-focusing procedures (Wine, 1971) found to be effective in reducing test anxiety. Moreover, systematic desensitization (Crighton & Jehu, 1969; Dawley & Wenrich, 1973), self-controlled relaxation and desensitization (Deffenbacher & Shelton, 1978; Kondas, 1967), covert reinforcement (Kostka & Galassi, 1974) and

observational learning (Jaffe & Carlson, 1972; Mann, 1972) were the methods aimed primarily reduce the emotionality symptoms of test anxiety and also found effective in reducing test anxiety.

In summary, cognitive interference model was based on the bidimensional explanation of test anxiety which includes emotionality and worry dimensions. Cognitive interference model primarily emphasized the worry component since it had more deleterious effects on test performance and academic achievement (i.e. Deffenbacher, 1978). Additionally, many cognitive and behavioral treatment methods were developed to reduce the negative effects of worrisome thoughts on test performance (i.e. Meichenbaum, 1972).

1.2.2. Study Skills Deficit Model

Rather than cognitive explanations to test anxiety, some researchers specifically focused on study skills and study habits since test anxiety may be a natural reaction resulting from students' poor study skills (Desiderato & Koskinen, 1969). Desiderato and Koskinen sought for whether study habits were related to test anxiety and academic achievement. Results of the study showed that, test anxiety was negatively related with college women's grades. In addition, test anxiety scores were associated with study habits. That is, high-test-anxious students presented poorer study habits than low-test-anxious students or vice versa.

Wittmaier (1972) proposed that in addition to investigating test anxiety in relation to diverse variables, pre-test behavior of test-anxious and non-test-anxious students should also be examined. He stated that many students began to

feel anxious days before an examination. According to Wittmaier, test anxiety is both the cause and the result of ineffective study skills to some extent. In his correlational study, results indicated that test anxious students were likely to have less effective study habits and were more likely to delay academic tasks than were the low-anxious students. According to results of the study, Wittmaier concluded that test anxious students' poor performance is partially attributable to ineffective or unsatisfactory pre-examination behavior. Wittmaier also suggested that although test anxiety is modifiable through counseling, students' development of effective study skills should be stressed rather than assuming that their academic performance would be improved by reducing their anxiety toward examinations.

Culler and Holahan (1980) conducted another study investigating the effects of study skills on test anxiety and academic performance. They found a negative significant relationship between the mean GPA and test anxiety scores. According to Culler and Holahan these findings indicated that high-test-anxious students attempted to make up for their lack of study skills by increasing the amount of the study time. This finding was consistent with that of Wittmaier's study (1972) regarding study skills. High-test-anxious students presented lack of study skills; on the contrary, high-test-anxious students reported more study time than low-anxious students. Moreover, Culler and Holahan found a significant positive correlation between GPA and study skills scores of the students. High-test-anxious students who had developed and exercised appropriate study skills performed academically better than did those with poor study skills. This finding was contradictory to the common stereotype view of test anxious student, having adequate knowledge of the subject but freezing up during test situation.

Benjamin, McKeachie, Lin and Holinger (1981) designed a study to investigate the effects of test anxiety and study skills on academic performance. Results indicated that high test anxious students reported spending more time on studying in all phases of the course. In other words, Benjamin et.al.'s result replicated the results of Culler and Holahan (1980).

Research investigating test anxiety and study skills was particularly interested in how these variables predicted academic performance. These studies showed that test anxiety and poor academic achievement is also related and thus, it was not the only cognitive interference or worry component of the test anxiety that caused poor performance, but also study skills did play an important role together with test anxiety (Benjamin et.al., 1981; Culler & Holahan, 1980; Dendato & Diener, 1986).

Smith, Arnkoff and Wright (1990) compared different theoretical models of test anxiety; the cognitive attentional model, cognitive-skills model and social learning model. Cognitive-skills model included study skills variable nearby the cognitive processes. They investigated the role of three theoretical models, in predicting academic achievement. The researchers used multiple regression analyses and found that when cognitive-attentional variables were in the equation, study skills did not predict GPA. Results indicated that study skills and cognitive-attentional variables overlapped in their prediction of GPA. It could be interpreted as, although cause cannot be determined from the results, poor study skills might have produced negative thoughts during an exam and these negative thoughts together with the poor study skills reduced the performance.

The skill deficit model was also tested in terms of reducing test anxiety. In 1980, Tyron conducted a meta-analysis and reviewed the outcomes of the treatment methods of test anxiety. Among the various studies reviewed, regarding the effect of study skills training in reducing test anxiety, she reported that while study skills alone was sometimes effective in reducing self-reported test anxiety, study skills in combination with desensitization or cue-controlled relaxation also seemed to result in anxiety reduction. Only three of the studies (Allen, 1971, 1973; Horne & Matson, 1977; as cited in Tyron,1980) which used study skills training alone led to an increase in academic performance, and in one of these studies combined desensitization and study skills program was more effective in increasing grades then study skills training alone (Allen, 1971 ; as cited in Tyron, 1980). Moreover, studies combining study skills with other treatments had reported significant increases in grades over no treatment. In conclusion, study skills training combined with other treatment procedures seemed to be more effective in reducing test anxiety than study skills alone. Hembree (1988) conducting a meta-analysis to explore the effectiveness of treatment methods of test anxiety also indicated that study skills training was not effective in reducing test anxiety unless another treatment procedure was also present.

Recently, Ergene (2003) conducted a meta analysis to investigate the effective interventions on test anxiety reduction. He reported consistent results with Tyron (1980) and Hembree (1988). In the study, combined therapies with study skills training were found to have highest effectiveness in test anxiety reduction. Other approaches were the various cognitive and behavioral therapies and study skills training alone.

In conclusion, literature clearly indicates that lack of study skills is strongly related with test anxiety (Benjamin et. al.,1981; Culler & Holahan, 1980; Desiderato & Koskinen,1969; Wittmaier, 1972). However, although the test anxious students gained adequate study skills, the worry and emotionality symptoms block them to use these skills effectively during test taking (Ergene, 2003; Hembree, 1988; Tyron, 1980). These results also supported the cognitive interference model's proposition that although the students know the subject well, they fall in task-irrelevant thoughts and distracted from the main task (Deffenbacher, 1978 ; Lee, 1999; Sarason, 1984). Hence, study skills seem to be one of the important variables preventing students from becoming test-anxious. In addition, if students cultivate test anxiety, study skills training combined with other treatment methods would decrease their anxiety and help them to increase their grades (Ergene, 2003; Hembree, 1988; Tyron, 1980).

1.3. Test Anxiety Studies Conducted in Turkey

Test anxiety has been a popular research field in Turkey, and many researchers investigated test anxiety from different viewpoints (e.g. Aydın, 1993; Bozak, 1982; Erkan, 1991; Gündoğdu, 1994).

For instance, Bozak (1982) investigated general anxiety and academic achievement among children. He found a negative significant relationship between academic achievement and general anxiety scores of children. This finding was inconsistent with Spielberger's (1962) findings that general anxiety scores were not related to academic achievement among college women.

Later, Öner has started the adaptation studies of Spielberger Test Anxiety Inventory (TAI) and these studies were completed by Albayrak-Kaymak (1985 ; 1987) and Öner (1986 ; as cited in 1997).

For example, Erkan (1991) investigated the relationship between test anxiety scores, students' study habits, achievement motivation and their achievement in the university entrance exam. Results of the study supported the previous studies and pointed at a negative significant relationship between test anxiety scores and examination performance. Besides, results revealed that high-test-anxious students had ineffective study habits.

Later, Aydın (1993) investigated the prevalence of test anxiety among reported that elementary school students frequently experienced test anxiety and found that 60 % of students were test anxious and girls were more test-anxious than were the boys.

Yerin (1993) conducted a study that aimed at reducing the elementary school children's test-anxiety level. Yerin used story based cognitive behavior modification technique and found that it was effective in reducing test anxiety levels of pupils.

Studying also with elementary school children, Gündoğdu (1994) sought for the relationship between helpless explanatory style, test anxiety and academic achievement. The results indicated that students who had helpless explanatory style experienced more test anxiety in evaluative situations, and also results indicated a negative significant relationship between academic achievement and test anxiety.

Another study was conducted by Çankaya (1997) who investigated relationships among self-esteem, test anxiety and academic achievement. Results of the study indicated that self-esteem was negatively correlated with test anxiety levels of the students. However, results did not show a significant relationship between academic achievement and test anxiety level of students.

In a recent article,Aysan et.al. (2001) examined the relationships among coping strategies, test anxiety, and health status in high school students. Results showed that students using ineffective coping mechanisms tended to have poor perceptions of their health and displayed higher levels of test anxiety. Moreover, girls worried more and presented higher levels of test anxiety over problems than did the boys. This result was consistent with Aydın's (1993) study.

Working with elementary, junior high school and high school students, Yerin (2003) investigated the effect of school level and gender on the total test anxiety, worry and emotionality subscale scores of students. Regarding the gender differences, Yerin replicated the results of Aydın's (1993) and Aysan et.al.'s (2001) study, and reported that female students had higher degrees of test anxiety than did the boys. Furthermore, results revealed that female students found to be experiencing higher emotionality than male students but they did not worry more than males. Another interesting finding was the relationship between test anxiety and grade level of students. As the grade level increased, test anxiety level of studens also increased.

In the following section, literature related with hope that is one of the predicting variables of the present study was discussed.

1.4. Hope Theory

Generally, hope is perceived as an emotional process based on the expectations about desired things to happen in the future. However, Snyder et. al. (2002) conceptualized the hope as a goal-directed cognitive process. According to Snyder, hopeful thinking starts with a goal which can be anything that one desires to get, do, be, experience and create. Goals can be extremely large and attained in the long run, or can be extremely small and achieved only in minutes. After the person establishes a goal, he or she starts to nurture hope for that goal.

According to Snyder, Harris & Anderson et. al. (1991) hope has two components, pathways and agency. Snyder (1995) defines pathways component as a perceived capacity to generate routes to arrive a desired goal. In other words, hopeful people are the ones who can find and construct routes to reach their goals. However, pathways thinking do not lead to goal attainment alone without an agency (Snyder et.al., 2002).

Snyder et.al. (1991) defines agency as one's perceived cognitive willpower or energy to move along one's chosen pathways toward a goal. Stating differently, agency is the energy and motivation for one to walk through the pathways to reach his or her goal.

Thus, hope can be defined as a cognitive set that is based on reciprocally derived sense of agency and pathways (Snyder et. al, 1991, p. 571). Snyder et. al. indicated that these two components of hope are reciprocal, additive and positively related but not synonymous. It means that one can be in a position in which the goal directed agency is present but the pathways to goals may not be

clearly perceived, whereas others can perceive pathways without an agency (Snyder et. al., 1991). Additionally, change in one component directly affects the other.

Snyder et.al. (2002) also stated that hope is not only a goal directed cognitive process but also a hierarchically organized system of beliefs. He proposed that hope can be organized into three specific levels, (a) Global or trait hope, (b) Domain-specific hope, and (d) Goal-specific hope.

According to Snyder et. al. (2002), individuals' overall evaluation of their ability to construct adequate pathways and generate the agency thoughts that are necessary to achieve goals is known as global or trait hope (p. 299). Global hope is not directed toward a specific goal, rather it is a general sense that the effective pathways can be routed and sufficient agency could be generated if desired. The Hope Scale developed by Snyder et. al. (1991) was aimed to assess the global hope of an individual. The Hope Scale has also a child version (Snyder, Hoza et. al., 1997).

Snyder et.al. (2002) stated that it is possible to be high in global hope and simultaneously have low hope for some specific domains or vice versa. To assess domain specific hope Sympson (1999; as cited in Snyder et. al.) developed Domain-Specific Hope Scale including six life arena; social relationships, romantic relationships, family life, academics, work, and leisure.

The last level is the goal-specific goal level (Snyder et.al., 2002). Snyder et.al. proposed that even individuals have high global hope and domain specific hope, it is possible that they have low hope for a specific goal. Recently, Snyder,

Sympson et.al. (1996) developed a State Hope Scale to assess the hope levels of the individuals in the “here and now” frame.

In the literature, hope concept is examined in a variety of areas including physical and mental health, academic performance, and sport achievement (i.e. Curry et.al. 1997; Irving, Snyder & Crowson, 1998).

Hope concept has been reported to be associated with psychological and physical well-being (Farran, Herth, & Popovich, 1995 ; Snyder, 1994 ; as cited in Irving et.al, 1998). Irving et.al. (1998) investigated the relationship between hope and cancer-related coping activities of college women. Results indicated that high-hope women were more knowledgeable about cancer, reported more hope-related coping responses in four separate imagined phases of cancer; prevention\risk, detection, temporal course, and impact. Irving et.al. concluded that hope was discussed as a means of maintaining power for coping with cancer.

Snyder et. al. (1991), as part of the development and validation study of dispositional hope scale, investigated the relationship between hope and academic achievement of college students. Results clearly showed that academic achievement appeared to be related with higher hope. College students with higher hope showed better academic performance when compared with the lower hope students.

Similarly, Curry et.al. (1997) investigated the role of dispositional hope and state hope in academic and sport achievement in a university student sample. As expected, dispositional hope predicted the semester GPA among athlete university students. Higher hope levels of students were related to higher semester

GPAs. Moreover, dispositional hope and state hope significantly predicted the sports achievement of the students.

In a similar vein, Snyder, Shorey et.al. (2002) examined the relationship between dispositional hope and academic success in college students. Results indicated that individual differences in dispositional hope predicted overall GPA of college students, and high hope students were more likely to have graduated and not to have been dismissed over six years period during their undergraduate education.

In a recent article, Snyder, Feldman, Taylor, Schroeder and Adams (2000) discussed the role of hopeful thinking in preventing problems and enhancing strengths. Regarding preventative role of hope, they concluded that hope plays beneficial roles before the problem occurs (primary prevention) and after a problem has appeared (secondary prevention). They proposed that high hope yielded more successful goal pursuits and caused superior well being and self-esteem. Past experiences of high-hope people lead them to think more hopefully about the future since hope helped them in the past and might help them in the future as well. Therefore, they do not cathastrophize about the future and know that problems can and will appear again. If a problem occurs, secondary preventive role of hope emerges (Snyder et.al., 2000). Since the people with high-hope coped with previous difficulties well, they have learned from them so as to be more effective in the future. When a person encountered with a difficulty, finding a way out using past experiences reflects the pathways.

Parallel with the positive nature of the hope concept, Snyder et.al. (2000) also proposed that hopeful thinking plays an important role in enhancing strengths. Education was emphasized as a primary hope enhancement arena. According to Snyder et. al., students may be able to enhance their capabilities of finding various pathways to reach their educational goals along with the motivation to reach those goals (agency). The authors also indicated that students with high-hope may be able to stay on task and not be blocked by the interference of self-deprecatory thoughts or negative emotions and have lower test anxiety (Snyder, 1999).

In the literature, hope and anxiety positioned very close to each other (Lazarus and Averill, 1972). According to Descartes hope is "..a disposition of the soul to persuade itself what it desires will come to pass" and anxiety " ..is another disposition of the soul which persuades it that the thing hoped for will not come to pass", and he indicated that hope and anxiety cannot exist together at the same time. (as cited in Lazarus & Averill, 1972, p. 246). Lazarus and Averill (1972) claimed that hope and anxiety were similar in several respects. First, both hope and anxiety are cognitive, symbolic emotions. Second, hope involves anticipation, one cannot hope for what is present. Anxiety, too, involves future possibilities. Finally, hope involves an element of subjective uncertainty, which sometimes can be reached by denying reality; similarly, an anxious person might not be aware of the source of threat and what might be done about it.

Likewise, Lazarus (1999) viewed hope as a coping source for all stressful situations. Hope can foster efforts to seek improvement of an unpleasant situation,

without hope people are unlikely to act for themselves, thus, experience despair that is a dysfunctional state of mind.

In conclusion, hope and anxiety were viewed as incongruous concepts (Lazarus;1999; Lazarus and Averill, 1972).

Based on this knowledge Onwuegbuzie (1998) examined whether hope predicted anxiety about statistics in college students. Students, who had lower scores on agency and pathways subscales of DHS, had higher scores on the Statistical Anxiety Rating Scales which confirmed that hope and statistics anxiety was negatively related.

Research indicated that hope and test anxiety had an inverse relationship (Onwuegbuzie, 1998; Snyder, 1999). Stating differently, hope and test anxiety should reciprocally inhibit each other.

Further, Onwuegbuzie and Snyder (2000) conducted another research in which they investigated relationship between hope and graduate students' coping strategies for studying and examination taking. They reported that students who had scored low on hope scale tended to score low on the study scale and the examination taking scale. They concluded that students scoring low on hope scale might experience blockage of their goals for receiving and encoding information. That is to say, low-hope students may lack of coping strategies for studying, or have ineffective study skills.

Although not directly related with the topic of the present research and there was not any research in the literature that examine the relationship between helplessness and hope, the nature of hope theoretically contradicts learned

helplessness (Snyder, 1995; Snyder et.al., 2002). One might not expect that a person who knows how to route pathways to reach his or her goals, and feel the energy to go through those pathways, experiencing helplessness or vice versa. Thus, hope and helplessness are also opposing constructs. Indeed, some researchers examined the relationship between test anxiety and learned helplessness and consistently reported an inverse relationship (e.g. Dweck,1975; Dweck and Licht, 1980; Schwazer, Jerusalem and Schwazer, 1983; as cited in Mealey & Host, 1992; Fincham, et.al, 1989; Gündoğdu, 1994). Considering the inverse relationship between these two concepts a review of some of these studies might be worthwhile. For example, Gündoğdu (1994) reported that Turkish elementary school students who had helpless explanatory style experienced more test anxiety.

In a similar vein, Pekrun (1984) conducted a study examining the relationship between expectancy values and test anxiety of 5th and 6th grade students in Germany, with ages ranged from 11 to 13. Results indicated that students who had lowest grades and presented low test anxiety had the highest helplessness scores over the entire sample. That is to say, poor performers with low anxiety scores tended to give up trying to pass the exams and probably had lower hope and positive expectations toward achievement. Another group who had second highest means for the helplessness was the poor performers who had high test anxiety. In other words, those students continually performed poorly and probably had an inability to route pathways to increase their performance, hence, had less hope and experience higher helplessness. This group shows some

similarities with low hope students with high test anxiety (Onwuegbuzie, 1998; Onwuegbuzie & Snyder, 2000; Snyder, 1999).

In terms of the hope studies in Turkey, only Akman and Korkut's (1993) study can be cited. They adapted Snyder et. al.'s (1991) Dispositional Hope Scale to Turkish. Turkish form of the Dispositional Hope Scale presented satisfactory evidence of validity and reliability; however, it did not represent the same factor structure with the original form.

In conclusion, hope theory is based on goal directed behaviors and thoughts (Snyder et. al., 1991). Obviously, students have some specific goals in every examination procedure. Some of these goals may be passing the exam, getting a good grade and, in the long run, being academically successful. In such a goal directed situation, one should consider the role of hope to reach those goals.

There exists a paucity of research into investigating the relationship between hope and test anxiety of students in both western and Turkish literature. The present research is designed to fill this gap and expected to contribute to further understanding of both test anxiety and hope constructs.

1.5. Purpose of the Study

Based on the aforementioned reasons the aim of the present research is to investigate the role of hope and study skills in predicting the worry and emotionality dimensions of test anxiety among university students.

1.6. Research Questions

Research questions of present research are as follows:

(a) To what extent state hope, dispositional hope and study skills predict the worry scores of female university students?

(b) To what extent state hope, dispositional hope and study skills predict the emotionality scores of female university students?

(c) To what extent state hope, dispositional hope and study skills predict the worry scores of male university students?

(d) To what extent state hope, dispositional hope, and study skills predict the emotionality scores of male university students?

1.7. Definition of the Terms

The terms that were used in this study can be defined as follows:

Dispositional Hope: A cognitive set that is based on reciprocally derived sense of agency and pathways (Snyder et. al, 1991, p. 571).

State Hope : Hope of an individual, in the "here and now" frame, for a specific goal situation (Snyder et. al., 1996).

Study Skills : The ability to effectively use the specific skills (learning and planning study, library use, note taking, course participation, preparation for exams, motivation, preparation for courses, effective reading, writing, health and nutrition, and listening skills) for learning (Türkoğlu et.al., 2000).

Worry: The cognitive dimension of test anxiety accompanied with worrisome thoughts toward the test taking situation (Sarason, 1984).

Emotionality: The awareness of bodily arousal and tension one experiences during exam taking (Sarason, 1984).

Test Anxiety: An individual difference in the disposition to experience feelings of apprehension and worry cognitions in academic environments where performance of students is under evaluation (Schwarzer et. al., 1987).

1.8. Significance of the Study

As mentioned previously, the relationship between hope and anxiety was not investigated except the aforementioned research on statistics anxiety (i.e. Onwuegbuzie, 1998). It is believed that there is a need for additional research in this area, especially with Turkish students, since no study have been conducted so far on this subject in Turkey. It is hoped that the present research will be a pioneer in this field that will facilitate further research. The findings of the present

research may be utilized in designing future test anxiety intervention programs in the counseling centers of the universities. If hope, regardless of trait or state, predicts test anxiety it will indicate that installation of hope will be the basic concerns of counselors dealing with test anxiety.

Additionally, there is a lack of literature that examined the predictive power of study skills on Turkish students' test anxiety levels except the study carried out by Erkan (1991) that examined test anxiety in relation to high school students' study habits. Therefore, this study may bring an understanding to the relationship of the study skills to test anxiety for the Turkish samples and contribute to the development of a specific study skills program for our culture.

Moreover, this study investigates the role of study skills in predicting worry and emotionality scores of students comprehensively by dividing study skills into eleven specific skills (learning and planned study, library use, note taking etc.). Previous research solely showed that overall study skills scale scores were related with test anxiety scores (e.g. Benjamin et.al., 1981), however, there were no empirical study in the literature that investigated the role of the type of a specific study skill in predicting worry or emotionality of students. Such a comprehensive explanation may be useful while developing interventions with the purpose of helping students to reduce worry and emotionality symptoms through study skills training. Findings of the present study would also be useful in understanding gender differences in predictive power of study skills. Yerin (2002) reported that female students experienced higher emotionality than male students but they did not worry more than males. As Turkish female and male students

presented different patterns regarding worry and emotionality levels, understanding which specific study skill predicts their worry and emotionality may shed a light to explaining the dynamics of test anxiety of a Turkish university student sample.

Additionally, in the present study, two new measures were introduced; Study Skills Inventory (Türkoğlu et. al, 2000) and State Hope Scale (Snyder, 1996). It is expected that SSI (Türkoğlu et. al, 2000) would contribute the future research in study skills area as well. Likewise, it is hoped that State Hope Scale (Snyder, 1996) would encourage new studies about hope in Turkey.

CHAPTER II

METHOD

In this chapter, methodological details of the study are presented. The first section addresses the characteristics of the students who participated in the study. The second section introduces the data collection instruments. The procedure followed in the study is explained in the third section. Finally, the fourth section deals with the data analyses employed to the data.

2.1. Participants

Convenient sampling method was used in the present study and four hundred and ninety one volunteered students from four different undergraduate programs (Counseling and Guidance, Computer Education and Instructional Technologies, Elementary School Teaching, Preschool Teaching) of the Faculty of Education of Ege University participated in the study. Students who did not attend the classes or did not volunteered to participate in the study during the application of instruments naturally decreased the expected number of the participants. Forty-nine cases that have missing values over 5 percent were excluded from the study. Final analyses were carried out with the 442 remaining participants.

Out of four hundred and fourty two, 242 of the participants were females (55%) and 200 of the participants were males (45%).

2.2. Instruments

Turkish version of State Hope Scale (See Appendix A), Turkish form of Dispositional Hope Scale (Akman & Korkut, 1993) (See Appendix B), Study Skills Scale (Yıldırım, Doğanay & Türkoğlu, 2000) (See Appendix C) and Turkish form of Test Anxiety Inventory (Albayrak-Kaymak,1985; Öner, 1986; 1990; Öner & Albayrak Kaymak, 1986) (See Appendix D) were used to collect data in the present study.

2.2.1. State Hope Scale (SHS)

State hope levels of the students were assessed with the State Hope Scale (Snyder et. al., 1996), which was adapted to Turkish by the researcher. State Hope Scale (SHS) measures one's hope toward specific, present goal-related situations. SHS is an eight-point-likert type scale that consists of three pathways thinking items (e.g. I" can think of many ways to reach my current goals") and three agentic thinking items (e.g. "At the present time, I am energetically pursuing my goals"). The possible maximum score can be obtained from the scale is 48 and the minimum is 6. The possible maximum score that can be obtained for each subscale is 24 and minimum is 3. Pathways thinking subscale items are 1, 3 and 5, whereas agentic thinking items are 2, 4 and 6. The overall Cronbach alpha coefficient for the original form of the SHS was .88, and the Cronbach alpha coefficients for subscales ranged from .52 to .59 (Snyder et.al., 1996).

2.2.1.1. Adaptation Study of SHS

First, translation study of the SHS was carried out. Original form of the SHS was given to 3 judges working as academicians in the Faculty of Education, Middle East Technical University, who have an adequate knowledge in the area of counseling and psychology along with a good command in both English and Turkish. Back translation of the instrument was purposefully avoided as the adequacy of the translation could be threatened and create both concept and item bias (Van de Vijver & Hambleton, 1996). Thus, the researcher and his supervisor evaluated the Turkish translations of the SHS, and then the final form of the Turkish version of the SHS was formed.

The aforementioned original SHS is an eight point likert type scale. However, the judges who translated the instrument and, a Measurement and Evaluation specialist who were consulted by the researcher agreed that the eight-point-likert type format was not suitable for the Turkish version. Therefore, the researcher contacted the author who developed the original form of SHS and asked for his permission to change the response format to four-point-likert type. After having the permission a four point likert type version of the scale was prepared to be in use as the Turkish form.

2.2.1.2. Factor Analysis of SHS

Prior to factor analysis, a missing value analysis was conducted with the data set consisting of 77 cases. No missing value was detected in the analysis. Eight cases exceeded a z score of +2.50 and -2.50 were detected as univariate outliers and excluded from the analysis. Mahalanobis Distance Test was used to detect multivariate outliers. Two cases that had p values greater than .001 was

detected and excluded from the analysis as potential multivariate outliers. Multicollinearity of the data set was also investigated, since there were no VIF values greater than 5-10 and tolerance levels of variables have not approached to 0, the absence of the multicollinearity was secured for the SHS.

Factor analysis was conducted using SPSS 11.0 with the principal component analysis with varimax rotation on a sample size of 67 for the 6 items of the SHS. Results of the analysis clearly yielded two factors with Eigenvalues over 1. Items 2, 4, 6 which constituted pathways thinking subscale of the original scale had factor loadings of .70, .63 and .53 respectively for factor 1 and items 1, 3, 5 which constituted agentic thinking in the original scale had factor loadings of .60, .55 and .48 for factor 2 respectively. The two-factor solution has explained the 57 % of the total variance. These two factors were named as the original subscales. Factor loadings of the items are given in Table 2.1.

Table 2.1 Factor Loadings of SHS Items

Item	Factor 1 Pathways Thinking	Factor 2 Agentic Thinking
2	**.70**	-.03
4	**.63**	.24
6	**.53**	.23
5	-.25	**.61**
1	-.11	**.55**
3	-.08	**.48**

These results showed that the Turkish form of SHS represented the same factor structure with the original form developed by Snyder et.al, (1996). These findings were interpreted as an indicator of the construct validity evidence for the Turkish version of SHS.

2.2.1.3. Internal Consistency of SHS

Internal consistency of the SHS was calculated through the cronbach alpha estimation that was applied to the same sample. The result showed that the Cronbach alpha coefficient was .48 for overall scale, .58 for pathways thinking and .66 for agentic thinking subscales of the SHS. This result indicated that, although modest, the SHS had satisfactory support for internal consistency.

2.2.2. Dispositional Hope Scale (DHS)

The Dispositional Hope Scale (DHS) (Snyder et. al., 1991) measured dispositional Hope. DHS is a 4-point-likert-type scale and consists of four agency items (e.g. “I meet the goals that I set for my self” and four pathways items (e.g. “There are lots of ways around any problem”). The possible maximum score that can be obtained from the scale is 32 and the minimum is 8. Pathways subscale items are 1, 4, 7 and 8, while agency subscale items are 2, 9, 10, 12. Items 3, 5, 6, and 11 are the filler items. For the total scale, Cronbach alpha coefficients ranged from .71 to .76, for the agency scale Cronbach’s alpha ranged from .71 to .76, for the pathways subscale, Cronbach’s alpha ranged from.63 to .80 (Snyder et. al., 1991).

Adaptation study of DHS was carried out by Akman and Korkut (1993). First, the DHS was given to 6 judges who have at least a master’s degree in the psychology or counseling area at Hacettepe University. All the judges participated in the translation study were reported to have a good command of English. After deciding on a final Turkish form of the DHS, researchers had the scale back translated into Turkish and examined the efficiency of the translation. Second, reliability of Turkish form of the DHS was investigated and an internal consistency coefficient of .65 for the scale was obtained.. Test-retest correlation coefficient was also calculated and a correlation coefficient of 66 was found in four-week interval. Finally, Akman and Korkut conducted a series of factor analyses for the Turkish form of the DHS. Their results revealed that Turkish form of the DHS had a single factor structure that explained 26.23, 17.43 and 16.47 percent of the total variance in three separate factor analytic studies

conducted with separate Turkish university student samples. The factor structure of the Turkish version of DHS was different from the original form.

Considering the inconsistency revealed by Akman and Korkut's (1993) findings a separate factor analytic study was carried out for the present study to obtain further evidence whether the factor structure differs from the original form in the present sample. The factor analysis was conducted with SPSS 11.0, using the maximum likelihood model with varimax rotation, on a sample size of 442 for the 8 items of the Turkish form of DHS. Results of the factor analysis yielded a one-factor solution, with an eigenvalue of 2.474 that explained the 31% of the total variance. This finding was consistent with the findings of Akman and Korkut (1993). Except item 4, all the items loaded on factor 1, ranging from factor loadings of .51 to .61. The factor loadings of the items of DHS are presented in Table 2.2.

Table 2.2 Factor Loadings of DHS Items

Item	Factor 1	Factor 2
1	.56	.46
10	.55	.44
7	.52	.19
9	.50	.13
2	.49	.04
8	.49	.09
12	.46	.29
4	.03	.17

2.2.3. Study Skills Inventory (SSI)

Study Skills Inventory (SSI) was used to measure the study skills level of students. SSI is a five-point-likert type scale that consists of 85 items. The scale was developed by Türkoğlu et. al. (2000) and consisted of 11 theoretically derived subscales based on the literature. As it has first appeared on a self-help book for the students SSI has had no evidence for statistical validity and reliability. Both the validity and the reliability studies were conducted by the researcher as documented below. For obtaining the construct validity evidence for the SSI, maximum likelihood analysis with varimax rotation was employed to the data.

2.2.3.1. Factor Analysis of Study Skills Inventory (SSI)

Validity and reliability studies of SSI were carried out with a sample of 360 students enrolled in 4 different undergraduate programs of Ege University,

Faculty of Education. Exploratory factor analysis was performed through SPSS 11.0 statistics program on 85 items of the Study Skills Inventory. Prior to principal factor extraction, missing value analysis was conducted with the data set consisting of 360 cases. Twelve cases so as to had missing values greater than the 5 % of the total cases were deleted. Since missing values in other cases distributed randomly, expectation-maximization (EM) values were assigned to the cases instead of the missing values. Thirteen cases exceeding the z score of 3.29, $p < .001$, in two tailed test were detected as univariate outliers and excluded from the analysis. Mahalanobis Distance Test was used to detect multivariate outliers. Twenty cases, which had p values greater than .001 were detected and excluded from the analysis as multivariate outliers. Multicollinearity of the data set was also investigated. Since there were no VIF values greater than 5-10 and tolerances of variables did not approached to 0, the absence of the multicollinearity was ensured. Thus, the sample size reduced from 360 to 315 prior to factor analysis.

It is important to note that a sample size of 300 was considered as "good" to conduct factor analysis (Tabachnick & Fidell, 1996). Regarding the distribution of variables, normality assumption was not satisfied. However, as Tabachnick & Fidell (1996, p.640) propose, to the extent that normality fails, the solution is degraded but still may be worthwhile. Since the sample size was satisfactory enough, it was decided that conducting a factor analysis would be legitimate.

The dimensionality of the 85 items of the SSI was analyzed using the maximum likelihood factor analysis with varimax rotation. Two criteria were used to determine the number of factors to rotate: the a priori hypothesis that the measure has 11 dimensions, and interpretability of results. Moreover, scree plot

indicated that SSI is a multidimensional scale. Consequently, 11 factors were rotated using a varimax rotation procedure. The rotated solution yielded 11 statistically and hypothetically meaningful factors with Eigenvalues of 18.05, 4.12, 3.80, 3.09, 2.73, 2.46, 2.06, 2,02, 1,72, 1,53, 1,44 respectively. Factor 1 accounted for the 22%, factor 2 5%, factor 3 4%, factor 3 4%, factor 4 4%, factor 5 3%, factor 6 3%, factor 7 2%, factor 8 2%, factor 9 2%, factor 10 2%, factor 11 2% of the item variance. These 11 factors accounted for the 52% of the total variance.

Item 1, 6, 15 and 51 have not loaded on any factors and were removed from the scale. Additionally, item 16 and 28 have loaded on factor 5, item 72 and 73 have factor loadings on factor 6 but did not theoretically fit the factors they originally appeared. These items have also been removed from the scale.

Factor loadings of the items were given in Table 2.3.

Table 2.3 Factor Loadings of SSI

Factor 1 Learning and Planning Study		Factor 2 Library Use		Factor 3 Note Taking	
Item	Factor Loadings	Item	Factor Loadings	Item	Factor Loadings
Item 8	.706	Item 61	.782	Item 36	.691
Item 11	.695	Item 60	.749	Item 37	.683
Item 10	.680	Item 59	.716	Item 33	.651
Item 9	.604	Item 63	.672	Item 42	.597
Item 14	.575	Item 62	.672	Item 39	.579
Item 12	.549	Item 65	.635	Item 40	.531
Item 13	.497	Item 64	.634	Item 38	.496
Item 19	.488	Item 55	.601		
Item 3	.480				
Item 18	.476				
Item 4	.425				
Item 17	.387				
Item 7	.386				
Item 5	.364				
Item 2	.327				

(Table 2.3. Contin.)

Factor 4		Factor 5		Factor 6	
Course Participation		Preparation for Exams		Motivation	
Item	Factor Loadings	Item	Factor Loadings	Item	Factor Loadings
Item 47	.753	Item 67	.635	Item 75	.642
Item 48	.740	Item 69	.627	Item 76	.536
Item 46	.709	Item 70	.476	Item 77	.479
Item 41	.584	Item 68	.413	Item 73	.465
Item 50	.519	Item 66	.403	Item 80	.457
Item 49	.443	Item 71	.366	Item 79	.440
Item 25	.370	Item 74	.362	Item 85	.412
		Item 23	.356	Item 78	.374
		Item 16	.332	Item 72	.359
		Item 28	.321	Item 44	.642

(Table 2.3. Contin.)

Factor 7 Preparation for Courses		Factor 8 Effective Reading		Factor 9 Writing	
Item	Factor Loading	Item	Factor Loading	Item	Factor Loading
Item 44	.575	Item 22	.497	Item 56	.675
Item 45	.517	Item 20	.447	Item 57	.589
Item 43	.489	Item 26	.401	Item 54	.510
Item 34	.470	Item 27	.388	Item 58	.499
Item 52	.468	Item 21	.382	Item 53	.337
Item 35	.383	Item 24	.361		
Item 51	.575	Item 56	.497		

(Table 2.3. Contin.)

Factor 10 Health and Nutrition		Factor 11 Listening	
Item	Factor Loading	Item	Factor Loading
Item 82	.804	Item 31	.682
Item 83	.770	Item 29	.661
Item 81	.593	Item 30	.615
Item 84	.452	Item 32	.392

2.2.3.2. Internal Consistency of SSI

Internal consistency of the SSI was calculated through cronbach alpha estimation. The Cronbach alpha coefficient was .95 for the overall scale, and cronbach alpha coefficients were .87 for the Learning and Scheduled Studying Subscale, .90 for the Using the Library Subscale, .85 for Note Taking Subscale, .85 for Participating the Course Subscale, 77 for Preparing for and Taking Exams Subscale, .83 for Motivation Subscale, .83 for Preparation for the Courses Subscale, .69 for the Effective Reading Subscale, .85 for the Writing Subscale, .79 for the Health and Nutrition Subscale and .82 for the Listening Subscale. These results showed that the SSI had satisfactory internal consistency for the subscales as well as the overall scale.

2.2.4. Test Anxiety Inventory (TAI)

Turkish form of Spielberger's Test Anxiety Inventory (TAI) (Öner, 1990 ; Albayrak-Kaymak, 1985) was used the measure test anxiety level of university students. TAI consists of 20 items and has two subscales. Worry subscale has 8 items and emotionality subscale has 12 items. It is scored on a 4-point-likert scale. The possible maximum composite score that can be achieved from the scale is 80 and the possible minimum composite score is 20. Higher scores indicate higher levels of test anxiety.

The original form is reported as a valid and reliable instrument (as cited in Öner, 1997). Test-retest correlation was .80 for two weeks and .62 for six months interval. Cronbach's alpha coefficients ranged form .92 to .96 for the overall scale, and ranged from .58 to .72 for the subscales of the original version of TAI.

The Turkish form of TAI standardized for Turkish culture by Albayrak-Kaymak (1985) and Öner (1986; 1990). The Turkish form of TAI's test-retest correlation coefficients ranged from .70 to .90 and the internal consistency coefficient of the scale was .87 for the overall scale (Öner, 1997).

2.3. Procedure

A set of instruments including the four scales (SHS, DHS, SSI and TAI) was prepared to collect data. This set also included demographic questions. Permission for administering the tests was obtained from the Dean's office of Ege University, Faculty of Education. Later, a schedule for administrating tests was arranged for each undergraduate program and each grade. The researcher himself administered the set of tests in the classroom settings. An explanation about the study and instruction for filling the tests was given orally by the researcher.

2.4. Analysis of Data

To investigate the role of the state hope scores, dispositional hope scores and study skills inventory scores in predicting the worry and emotionality dimensions of test anxiety of the participants, stepwise multiple regression analyses were conducted separately for the male and female students' worry and emotionality scale scores. Thus, four separate regression analyses were run using the SPSS 11.0 statistics program.

CHAPTER III

RESULTS

The results of the statistical analyses were presented in this chapter. This chapter contains three main sections. In the first section, the means and standard deviations of the dependent and independent variables for the female and male groups were given. In the second section, the intercorrelations among the dependent and independent variables were presented. Finally, the results of the four stepwise multiple regression analyses separately applied to the worry and emotionality subscale scores of female and male students were reported.

3.1. Descriptive Statistics Regarding Female and Male Samples

Table 3.1 presents the means and standard deviations of the scores of independent and dependent variables for the female and male students.

Table 3.1 Means and Standard Deviations of the Scores of Independent and Dependent Variables for the Female and Male Students

Variables	Female (N=242)		Male (N=200)	
	$\overline{X}$	SD	$\overline{X}$	SD
Dependent variables				
Emotionality	26.94	7.73	22.62	6.69
Worry	16.43	4.58	15.14	4.12
Independent variables				
Learning and Planning Study *	40.89	9.27	38.32	38.32
Library Use*	25.94	16.04	24.61	7.85
Note Taking*	27.95	4.47	22.10	6.12
Course Participation*	20.93	6.68	19.80	6.02
Preparation for Exams *	24.49	3.54	22.17	4.23
Motivation*	24.42	5.86	22.72	5.24
Preparation for Courses *	18.44	4.82	14.80	7.07
Effective Reading *	19.63	4.05	17.91	4.63
Writing*	17.19	3.78	14.37	4.81
Health and Nutrition *	13.29	4.17	12.66	3.59
Listening*	12.19	4.00	11.21	3.52
Dispositional Hope	26.39	3.65	26.16	3.37
State Hope	18.68	2.88	18.76	2.76

Note: Asterisks reflect the subscales of the Study Skills Inventory.

3.2. Bivariate Correlation Matrices of the Variables

Intercorrelations among the scores of the dependent and independent variables for the female and male participants were given in the following subsections.

3.2.1. Bivariate Correlation Matrix for the Females

The correlation coefficients of the scores of the independent variables and emotionality subscale as the dependent variable for the female sample were given in the Table 3.2. Since the bivariate correlation matrix was the same for the predictors of the worry variable for the female group, only the correlation matrix regarding the emotionality variable was given.

The correlations among variables changed from .003 to .537. Table 3.2 shows that most of the correlations among predictors were low that indicated no multicollinearity existed among the variables.

Table 3.2. Correlation Coefficients of the Scores of the Independent Variables and Emotionality Variable as the Dependent Variable for the Female Sample

	Emotion.	SSI 1	SSI 2	SSI 3	SSI 4	SSI 5	SSI 6	SSI 7	SSI 8	SSI 9	SSI 10	SSI 11	DHS	SHS
Emotion.	1													
SSI 1	-.022	1												
SSI 2	-.111	.088	1											
SSI 3	-.046	.282	.016	1										
SSI 4	-.216	.376	.170	.335	1									
SSI 5	.014	.417	.058	.381	.296	1								
SSI 6	-.101	.413	.190	.300	.316	.457	1							
SSI 7	-.086	.537	.003	.498	.377	.307	.261	1						
SSI 8	.047	.425	.034	.338	.316	.371	.285	.415	1					
SSI 9	-.029	.386	.068	.291	.370	.384	.284	.316	.296	1				
SSI 10	-.133	.154	.117	.122	.137	.212	.272	.158	-.024	.116	1			
SSI 11	-.095	.302	.103	.304	.266	.332	.332	.372	.312	.161	.181	1		
DHS	-.243	.184	.058	.115	.176	.140	.249	.123	.105	.096	.101	.204	1	
SHS	-.266	.310	.086	.173	.380	.182	.373	.275	.217	.190	.199	.183	.411	1

*Note: Test scores labeled by “SSI-1, 2, 3, 4…etc.” represent the subscales of the SSI in the same order as their names appeared in Table 3.1.

3.2.2. Bivariate Correlation Matrix for the Males

The correlation coefficients of the scores of the independent variables and emotionality variable as the dependent variable for the male sample were presented in Table 3.3. Since the same correlation matrix was provided for the predictors with the worry variable, only the correlation matrix regarding to emotionality variable for males was given.

The correlations among variables changed from -.038 to .572. Most of the correlations among the predictors were low and no extreme multicollinearity was observed. Table 3.3. presents the correlation coefficients among the predictors.

Table 3.3. Correlation coefficients of the scores of the independent variables and emotionality variable as the dependent variable for the male sample.

	Emotion.	SSI 1	SSI 2	SSI 3	SSI 4	SSI 5	SSI 6	SSI 7	SSI 8	SSI 9	SSI 10	SSI 11	DHS	SHS
Emotion.	1													
SSI 1	.049	1												
SSI 2	-.097	.349	1											
SSI 3	.099	.472	.208	1										
SSI 4	-.011	.486	.329	.348	1									
SSI 5	.118	.377	.225	.388	.342	1								
SSI 6	.051	.550	.371	.313	.435	.481	1							
SSI 7	.044	.447	.243	.425	.323	.304	.260	1						
SSI 8	-.011	.488	.265	.404	.426	.417	.564	.270	1					
SSI 9	-.038	.572	.513	.473	.496	.423	.559	.440	.458	1				
SSI 10	-.101	.308	.300	.142	.295	.320	.541	.178	.252	.323	1			
SSI 11	.096	.516	.234	.377	.452	.344	.616	.285	.482	.439	.252	1		
DHS	-.264	.374	.248	.140	.349	.328	.448	.157	.341	.376	.218	.318	1	
SHS	-.278	.266	.223	.177	.237	.339	.348	.124	.258	.284	.281	.250	.552	1

**Note: Test scores labeled by “SSI-1, 2, 3, 4…etc.” represent the subscales of the SSI in the same order as their names appeared inin Table 3.1.

3.3. The Results of the Stepwise Multiple Regression Analyses for the Female Sample

Two separate stepwise multiple regression analyses were conducted for the female sample. Results of the stepwise multiple regression analysis employed to the emotionality and worry subscale scores of TAI to predict the effect of the SHS scores, DHS scores, and the subscale scores of SSI on the TAI were presented in the following sections.

3.3.1. The Results of the Stepwise Multiple Regression Analysis Predicting the Emotionality Scores of Females

Stepwise multiple regression analysis for assessing the predictors of female students' emotionality scores of TAI was conducted with SHS score, DHS score, and the scores of 11 subscales of SSI as the predictors.

Table 3.4 presents the summary of the multiple regression analysis predicting the emotionality scores of the female sample.

Table. 3.4 R and R Square Change Predicting the Emotionality Subscale Scores of the Female Sample

Variable N=242	Multiple R	R Square	R Square Change	F Change	df1	df2	Sig. F Change
SHS	.266	.071	.071	18.255	1	240	.000
DHS	.304	.092	.022	5.684	1	239	.018
SSI 4*	.327	.107	.015	3.894	1	238	.050
SSI 8*	.358	.128	.021	5.774	1	237	.017

*Table 3.4.1 B, Beta's Correlations and Significance Level Predicting the Emotionality Subscale Scores of the Female Sample

Variables	B	Std Error	Beta	T	Significance
(Constant)	40.280	3.157		12.760	.000
SHS	-.713	.167	-.266	-4.273	.000
(Constant)	45.957	3.930		11.694	.000
SHS	-.536	.181	-.200	-2.953	.003
DHS	-.341	.143	-.161	-2.384	.018
(Constant)	46.525	3.917		11.878	.000
SHS	-.406	.192	-.151	-2.114	.036
DHS	-.334	.142	-.158	-2.352	.019
SSI 4*	-.151	.077	-.131	-1.973	.050
(Constant)	42.702	4.192		10.187	.000
SHS	-.450	.191	-.168	-2.358	.019
DHS	-.339	.141	-.160	-2.406	.017
SSI 4*	-.200	.079	-.173	-2.548	.011
SSI 8*	.295	.123	.155	2.403	.017

*Note: SSI 4 is the Course Participation Subscale, SSI 8 is the Effective Reading Subscale of the SSI.

As shown in Table 3.4, the State Hope Scale (SHS) scores, the Dispositional Hope Scale (DHS) Scores, Course Participation subscale scores and Effective Reading subscale scores appeared as significant predictors, explaining

approximately 13 % of the total variance of the Emotionality scores of the female students.

The first variable entered into the equation was the State Hope Scale score. The regression equation with the SHS score was significant, R^2= .07, adjusted R^2=. 06, F (1, 24) =18.25, p<.001. This variable alone accounted for the 7 % of the variance.

The second variable entered in to equation was Dispositional Hope scale score. The regression equation with the DHS score was also significant, R^2= .09, adjusted R^2=. 08, F (1, 24) = 5.68, p=.018. This variable alone accounted for an additional 2 % of the total variance.

Although 11 subscale scores of the Study Skills Inventory were the independent variables submitted to the regression equation, only Course Participation and Effective Reading Subscales have significantly predicted the emotionality score. The unique contribution of the Course Participation subscale scores to the total variance produced on the emotionality subscale scores was significant, R^2= .10, adjusted R^2=. 09, F (1, 24) = 3.89, p= .05. This variable alone accounted for an additional 1.5 % proportion of the total variance.

The regression equation with the Effective Reading subscale score was also significant, R^2= .12, adjusted R^2=. 11, F (1, 24) = 5.77, p=.01. This variable alone accounted for an additional 2% proportion of the variance.

3.3.2. The Results of the Stepwise Multiple Regression Analysis Predicting the Worry Scores of Females

Stepwise multiple regression analysis for assessing the predictors of female students' worry scores of TAI was conducted with SHS score, DHS score, and the scores of 11 subscales of SSI as the predictors.

Table 3.5 presents the summary of the stepwise multiple regression analysis predicting the worry scores of female sample.

Table. 3.5 R, and R Square Change Predicting the Worry Subscale Scores of the Female Sample

Variable N=242	Multiple R	R Square	R Square Change	F Change	df1	df2	Sig. F Change
SHS	.277	.077	.077	19.946	1	240	.000
SSI 8*	.309	.095	.019	4.894	1	239	.028
SSI 4*	.355	.126	.031	8.320	1	238	.004

*Note: SSI 4 is the Course Participation Subscale; SSI 8 is the Effective Reading Subscale of the SSI.

Table 3.5.1 B, Beta's Correlations and Significance Level Predicting the Worry Subscale Scores of the Female Sample.

Variables	B	Std Error	Beta	T	Significance
(Constant)	24.668	1.864		13.234	.000
SHS	-.440	.099	-.277	-4.466	.000
(Constant)	22.471	2.099		10.706	.000
SHS	-.488	.100	-.307	-4.875	.000
SSI 8*	.158	.071	.139	2.212	.028
(Constant)	22.312	2.068		10.788	.000
SHS	-.387	.105	-.243	-3.691	.000
SSI 8*	.212	.073	.188	2.917	.004
SSI 4*	-.134	.046	-.196	-2.884	.004

*Note: SSI 4 is the Course Participation Subscale; SSI 8 is the Effective Reading Subscale of the SSI.

When worry subscale scores were taken as the criterion variable, the State Hope Scale (SHS) scores, Course Participation subscale scores and Effective Reading subscale scores appeared as significant predictors, explaining approximately 12% of the total variance of the worry subscale scores for the female group.

In this analysis, the first variable entered into the equation was State Hope Scale score. The regression equation with the SHS score was significant, R^2= .08, adjusted R^2=. 07, $\underline{F}$ (1, 24) =19.94, $\underline{p}$<. 001. This variable alone accounted for the 8 % of the total variance.

Among the 11 subscales of SSI, only the Course Participation subscale and Effective Reading subscale have significantly predicted the emotionality score, which was similar to the result of the previous analysis. However, the order of the predictors has changed while predicting the worry scores. That is effective reading predicted the worry score before Course Participation in this equation. The regression equation with the Effective Reading subscale score was significant, R^2= .09, adjusted R^2=. 08, F (1, 24) = 4.89, p=.02. This variable alone accounted for an additional 2 % proportion of the variance.

The regression equation with the Course Participation subscale score was significant, R^2= .12, adjusted R^2=. 11, F (1, 24) = 8.32, p=.00. This variable alone accounted for an additional 3% proportion of the variance.

The dispositional hope scale scores did not predict worry scores of the female sample and excluded from the regression equation.

3.4. The Results of the Stepwise Multiple Regression Analysis for the Male Sample

Two separate stepwise multiple regression analyses were conducted for the male sample. Results of the stepwise multiple regression analysis employed to the emotionality and worry subscale scores of TAI to predict the effect of the SHS scores, DHS scores, and the subscale scores of SSI on the TAI were presented in the following sections.

3.4.1. The Results of the Stepwise Multiple Regression Analysis

Predicting the Emotionality Scores of Males

Stepwise multiple regression analysis for investigating the predictors of male students' emotionality scores of TAI was conducted using SHS score, DHS score, and the scores of 11 subscales of SSI as the predictors.

Table 3.6 presents the summary of the multiple regression analysis predicting the emotionality scores of the male sample.

Table 3.6 R, and R Square Change Predicting the Emotionality Subscale Scores of the Male Sample

Variable N=200	Multiple R	R Square	R Square Change	F Change	df1	df2	Sig. F Change
SHS	.278	.077	.077	16.633	1	198	.000
SSI 5*	.358	.128	.051	11.477	1	197	.001
DHS	.399	.159	.031	7.194	1	196	.008
SSI 11*	.425	.181	.021	5.092	1	195	.025

*Note: SSI 5 is the Preparation for Exams Subscale; SSI 11 is the Listening Subscale of the SSI.

Table 3.6.1 B, Beta's Correlations and Significance Level Predicting the Emotionality Subscale Scores for the Male Sample

Variables	B	Std Error	Beta	T	Significance
(Constant)	35.275	3.136		11.248	.000
SHS	-.674	.165	-.278	-4.078	.000
(Constant)	30.554	3.359		9.096	.000
SHS	-.871	.171	-.359	-5.085	.000
SSI 5*	.379	.112	.239	3.388	.001
(Constant)	35.616	3.808		9.353	.000
SHS	-.612	.194	-.253	-3.153	.002
SSI 5*	.433	.112	.274	3.866	.000
DHS	-.424	.158	-.214	-2.682	.008
(Constant)	35.737	3.769		9.481	.000
SHS	-.631	.192	-.261	-3.281	.001
SSI 5*	.367	.115	.232	3.201	.002
DHS	-.490	.159	-.247	-3.076	.002
SSI 11*	.304	.135	.160	2.257	.025

*Note: SSI 5 is the Preparation for Exams Subscale, SSI 11 is the Listening Subscale of the SSI.

As shown in Table 3.6, the State Hope Scale (SHS) scores, Preparation for Exams subscale score, the Dispositional Hope Scores (DHS), and Listening Subscale scores appeared as significant predictors, explaining approximately 18% of the total variance of the Emotionality scores of the male students.

The first variable entered into the equation was the State Hope Scale score. The regression equation with the SHS score was significant, R^2= .08, adjusted R^2=. 07, F (1, 198) =16.63, p<.001. This variable alone accounted for the 8% of the variance.

The second variable entered in to equation was Preparation for Exams subscale. The regression equation with the subscale score was significant, R^2= .13, adjusted R^2=. 12, F (1, 197) =11.47, p= .001. This variable alone accounted for an additional 5 % proportion of the variance.

Third variable that significantly predicted worry score was the Dispositional Hope Scale score, R^2= .16, adjusted R^2=. 15, F (1, 196) =7.19, p= .008. This variable alone accounted for an additional 3 % of the total variance.

Finally, the last variable entered into equation was Listening subscale score. The regression equation with the listening subscale score was significant, R^2= .18, adjusted R^2=. 16, F (1, 195) =5.09, p= .02. This variable alone accounted for an additional 2 % of the variance.

3.4.2. The Results of the Stepwise Multiple Regression Analysis Predicting the Worry Scores of Males

Stepwise multiple regression analysis was carried out to predict male students' worry scores on TAI. SHS score, DHS score, and the scores of the11 subscales of SSI were the predictors.

Table 3.7 presents the summary of the multiple regression analysis predicting the worry scores of male sample.

Table 3.7 R, and R Square Change Predicting the Worry Subscale Scores of the Male Sample

Variable N=200	Multiple R	R Square	R Square Change	F Change	df1	df2	Sig. F Change
SHS	.360	.130	.130	29.503	1	198	.000
SSI 5*	.421	.177	.048	11.448	1	197	.001
DHS	.474	.225	.047	11.914	1	196	.001
SSI 6*	.490	.240	.015	3.897	1	195	.050
SSI 10*	.520	.270	.031	8.161	1	194	.005
SSI 9*	.539	.290	.020	5.439	1	193	.021

*Note: SSI 5 is the Preparation for Exams, SSI 6 Motivation, SSI 9 Writing and SSI 10 are the Health and Nutrition subscales of the SSI.

Table 3.7.1 B, Beta's Correlations and Significance Level Predicting the Worry Subscale Scores for the Male Sample.

Variables	B	Std Error	Beta	T	Significance
(Constant)	25.229	1.877		13.444	.000
SHS	-.537	.099	-.360	-5.432	.000
(Constant)	22.407	2.010		11.148	.000
SHS	-.655	.102	-.439	-6.389	.000
SSI 5*	.227	.067	.232	3.383	.001
(Constant)	26.261	2.253		11.657	.000
SHS	-.458	.115	-.307	-3.987	.000
SSI 5*	.268	.066	.274	4.039	.000
DHS	-.323	.094	-.265	-3.452	.001
(Constant)	26.430	2.238		11.810	.000
SHS	-.472	.114	-.316	-4.131	.000
SSI 5*	.214	.071	.220	3.011	.003
DHS	-.377	.097	-.309	-3.893	.000
SSI 6*	.118	.060	.150	1.974	.050
(Constant)	27.186	2.214		12.280	.000
SHS	-.427	.113	-.286	-3.765	.000
SSI 5*	.227	.070	.233	3.242	.001
DHS	-.406	.096	-.332	-4.240	.000
SSI 6*	.203	.066	.258	3.081	.002
SSI 10*	-.243	.085	-.211	-2.857	.005

(Table.3.7.1. Contin.)

Variables	B	Std Error	Beta	T	Significance
(Constant)	26.596	2.203		12.070	.000
SHS	-.425	.112	-.285	-3.791	.000
SSI 5*	.258	.070	.264	3.657	.000
DHS	-.378	.095	-.309	-3.961	.000
SSI 6*	.259	.069	.329	3.729	.000
SSI 10*	-.239	.084	-.208	-2.845	.005
SSI 9*	-.151	.065	-.176	-2.332	.021

*Note: SSI 5 is the Preparation for exams subscale, SSI 6 is the Motivation subscale, SSI 9 is the Writing subscale, SSI 10 is the Health and Nutrition subscale of the SSI.

As shown in Table 3.7, the State Hope Scale (SHS) scores, Preparation for Exams subscale score, the Dispositional Hope Scores, Motivation subscale score, Health and Nutrition subscale score and Writing Subscale scores appeared as significant predictors, explaining approximately 29% of the total variance of the worry scores of the male students.

The first variable entered into the equation was state hope scale score. The regression equation with the SHS score was significant, R^2= .13, adjusted R^2=. 12, F (1, 19) =29.50, p<.001. This variable alone accounted for the 13% of the variance.

The second variable entered in to equation was Preparation for Exams subscale. The regression equation with the subscale score was significant, R^2=

.18, adjusted R^2=. 17, F (1, 19) =11.44, p= .001. This variable accounted for an additional 5% proportion of the variance.

Third variable that significantly predicted worry score was the dispositional hope scale score, R^2= .22, adjusted R^2=. 17, F (1, 19) =11,91, p= .001. This variable accounted for an additional 5 % proportion of the variance.

The fourth variable entered into equation was motivation subscale score. The regression equation with the motivation subscale score was significant, R^2= .24, adjusted R^2=. 22, F (1, 19) =3.89, p= .05. This variable accounted for an additional 2 % proportion of the variance.

The fifth variable entered into equation was health and nutrition subscale score. The regression equation with the health and nutrition subscale score was significant, R^2= .27, adjusted R^2=. 25, F (1, 19) =8.16, p= .00. This variable accounted for an additional 3% proportion of the variance.

The last variable entered into equation was writing subscale score. The regression equation with the health and nutrition subscale score was significant, R^2= .29, adjusted R^2=. 27, F (1, 19) =5.43, p= .02. This variable accounted for an additional 2% proportion of the variance.

Overall, the results showed that variables that predicted the test anxiety varied for males and females. These changes were observed in both emotionality and worry dimensions of test anxiety. For the emotionality dimension, while state hope, dispositional hope, course participation and effective reading subscales of the Study Skills Inventory were the significant predictors of the test anxiety of females, state hope, dispositional hope, preparation for exams and listening skills significantly predicted the test anxiety of males.

For the worry dimension, state hope, effective reading skill and course participation emerged as the significant predictors of test anxiety of females whereas state hope, preparation for exams, dispositional hope, motivation for studying, health and nutrition and finally writing skill significantly predicted the test anxiety of males. Dispositional hope has not appeared as a significant predictor of worry for the females.

CHAPTER IV

DISCUSSION

This chapter represents the discussion and the interpretations of the results, their implications and recommendations for the future studies.

4.1. Discussion and Interpretations of the Findings

The purpose of the study was to investigate the role of the state hope scores, dispositional hope scores and subscale scores of the study skills inventory in predicting the emotionality and worry dimensions scores of test anxiety of the participants.

Four separate stepwise multiple regression analyses were employed to examine the role of the predictor variables upon two dependent variables; emotionality and worry scores of the female and male groups. Separate regression analyses examined any possible differences for the females and males in the pattern of the predicting variables. Bivariate correlations among predictors represented that multicollinearity problem was not observed among the predictors in two groups.

4.1.1. Discussion Regarding the Predictors of the Emotionality Scores of Females

The results of the stepwise multiple regression analysis predicting emotionality scores of the female students have revealed that the variables entered in the regression equation were the state hope, dispositional hope, course participation subscale and effective reading subscale scores of the Study Skills Inventory, respectively. These variables all together explained approximately 13% of the total variance of the emotionality scores of the female students.

The first variable was entered in the regression equation was state hope score. State hope scores accounted for the 7% of the total variance for the emotionality scores. As expected this result indicated a negative relationship between state hope and emotionality dimension of test anxiety of the female students. In other words, as the state hope levels of the female students increased, their level of emotionality symptoms regarding test anxiety decreased. As there is not any study found in the literature regarding the relationship between state hope and test anxiety, comparatively discussing this result is not possible. Nevertheless, this result is consistent with the findings of the studies that found an inverse relationship with the dispositional hope and statistics test anxiety (i.e. Onwuegbuzie, 1998).

The second variable entered into the equation was dispositional hope that accounted for the 2% of variance of the emotionality scores of the female students. This finding showed that, beside state hope, dispositional hope levels of the female students play an important role in predicting their emotionality scores. The relationship between the dispositional hope and emotionality dimension of

test anxiety of the female students was negative. That is to say, similar to state hope, the higher levels the females have dispositional hope, the less they manifest emotionality symptoms of test anxiety. This result has confirmed the findings of Onwuegbuzie's (1998) study about statistics exam anxiety.

The third variable entered in the regression equation for the female group was course participation score. Course participation scores accounted for the 1.5 % of the total variance for the emotionality scores of the females. As anticipated, the relationship between course participation subscale scores of the SSI and emotionality scores was negative. This result implies that the more the female students participate in the courses, the more they feel competent about the course, and thus, experience less emotionality symptoms during test taking. This finding should be considered as an initial attempt to explain the predictive power of course participation skill on emotionality of females since no prior study has been made about course participation skill and its relation to emotionality of females.

Finally, the fourth variable entered into equation was effective reading score. Effective reading scores accounted for the 2% of the variance of the emotionality scores of the female group. Surprisingly, the relationship between effective reading scores and independent variable was positive which indicated as effective reading scores of the females increased their test anxiety level in the emotionality dimension also increased. This finding showed that having effective reading skills do not help female students feel relax during exams. This surprising result was consistent with Benjamin et.al.'s (1981) and Culler and Holahan's (1980) study that indicated that high anxious students spent more time on studying. Likewise, female students have reported high effective reading skills,

however, the amount of the reading activities or the time devoted to reading activities may not have reduced their test anxiety levels. This finding may be interpreted through the general study behavior of female students in Turkey. Usually, amount of time spend in reading activities is seen as a sign of good preparation for a course. Parents usually perceive their children as studying well if they repeatedly read the course material. However, it is clear that spending a great amount of time on reading material does not lead one to be prepared for an exam. In short, females might have adequate reading skills but it does not imply that they use those skills in efficiently preparing for exams.

4.1.2. Discussion Regarding the Predictors of the Worry Scores of Females

The results of the stepwise multiple regression analysis predicting worry scores of the female students revealed that the variables entered in the regression equation were the state hope scale score, effective reading subscale score and course participation subscale score, respectively.

The first variable entered in the regression equation was the state hope scale score that predicted the worry scores of the female students. This variable accounted for 8% of the total variance. This result showed that as the female students' state hope levels increase, their worry levels about exams decrease. In other words being hopeful helps female students to cope well with both emotionality and worry dimensions of the test anxiety. In short, state hope seemed to be a strong predictor of both dimensions of test anxiety. Results of the analysis regarding worry scores of the females were also consistent with the findings of Onwuegbuzie (1998).

The second variable entered into the equation was effective reading score that accounted for 2 % of the variance. The relationship between worry and effective reading skills was a positive one that showed while female students' effective reading skills increased their worries about test-taking simultaneously elevated. It means that effective reading skills of the females have not reduced their worry scores. This finding can be explained in the same manner along with the result of the previous analyses regarding emotionality scores of females. That is, having those skills might not mean that females use them effectively in the actual exam situation.

The last variable entered into the regression equation was course participation score. Course participation scores accounted for 3 % of the total variance of the worry scores of the female students. Course participation subscale scores of the SSI predicted and worry scores have a negative relationship. In other words, the more the students participated in the courses the less they worried about their exam performance. These findings also showed that course participation skills reduced both emotionality and worry symptoms of females and can be considered as an initial finding about the relationship of course participation skill to worry level of females.

It is important to note that dispositional hope has not predicted the worry levels of female students. This finding was inconsistent with the previous results of some studies that found a negative relationship between dispositional hope and statistics test anxiety (i.e. Onwuegbuzie, 1998). In other words, having dispositional hope helped female students feel emotionally relaxed, however, indicated no effect on worrisome thoughts during test situations. Nonetheless,

Snyder et.al. (2002) proposed that dispositional hope is related with general goals in life and the specific, short-termed goals (i.e. passing the exam) is more related with state hope. Moreover, Snyder et.al. indicated that a person may have high state hope whereas he lacks of dispositional hope. The results of the present study regarding dispositional hope levels of the female students predicting their worry level seemed to verify the proposition of Snyder et.al.

It should also be noted that these results should be treated cautiously since they are the initial findings for predictive power of state hope, dispositional hope and specific study skills on the emotionality and worry level of females.

4.1.3. Discussion Regarding the Predictors of the Emotionality Scores of Male Students

The State Hope Scale (SHS) score, preparation for exams subscale score, the dispositional hope score and listening subscale score appeared as significant predictors for the emotionality dimension of the male students' test anxiety.

The first variable entered into the equation was the state hope score. This variable accounted for 8 % of the variance. The relationship between emotionality and state hope scores was negative which indicated that, like females, as the male students' level of state hope increased their emotionality symptoms lessened during test-taking situations. This result indicated that the state hope was an important predictor of emotionality dimension in both male and female participants and consistent with the pervious research findings (i.e. Onwuegbuzie, 1998).

The second variable entered into equation was preparation for exams subscale score and accounted the 5 % of the total variance for the emotionality

variable. The positive relationship between preparation for exams scores and emotionality indicated that although male students have adequate skills for preparing themselves to exams, they experience heightened emotionality symptoms during test situations. Benjamin et.al.'s (1981) and Culler and Holahan's (1980) ideas may be helpful in interpreting this finding. Indeed, Benjamin et.al. and Culler and Holahan proposed that high test anxious students spent more time with studying for the exam since they perceived the testing situation as threatening. In the present study, male students probably manifested the same pattern. As they became more test-anxious they spend more time on preparation for tests, hence, a positive prediction of preparation for exams scores for emotionality might have appeared. On the other hand this result might have been affected by a common studying behavior observed among Turkish students. They usually do not engage in other studying or learning activities during a course but they assume to become ready for an exam by getting involved in preparation activities just before the exam. Ineffective use of other study skills but just the preparation for the exam would naturally not reduce the emotionality level of the males.

The third variable, which predicted the emotionality scores of the male students, was the dispositional hope score. The dispositional hope score accounted for the 3% of the variance. Parallel to the female group, the relationship between the dispositional hope and emotionality dimension of test anxiety of the male students was negative. In other words, the higher levels the males had dispositional hope, the less they experienced emotionality symptoms of test anxiety. Like females, dispositional hope was also a strong predictor for

emotionality scores of males and was consistent with the literature (i.e. Onwuegbuzie, 1998).

The fourth variable entered into the equation was listening subscale score for the male group. It accounted for the 2% for the variance. This result was in concordance with the theoretical assumptions and indicated that, listening subscale scores of the SSI negatively predicted the emotionality dimension of test anxiety in the male group. This result implied that male students probably think they learn more about a course via listening, which in turn, help them to feel more competent about the course and experience less emotionality symptoms during evaluative situations.

4.1.4. Discussion Regarding the Predictors of the Worry Scores of Males

The State Hope Scale (SHS) score, preparation for exams subscale score, the dispositional hope scores, motivation subscale score, health and nutrition subscale score and writing subscale scores predicted the male students' worrying cognitions about the test-taking situation.

The first variable entered into the equation was state hope, and accounted 13% of the variance for the worry scores of the male students. Relationship between worry and state hope scores was negative. Consistent with the other results of the other regression analyses conducted in the study, state hope score appeared to be the most important predictor of worry dimension of test anxiety.

The second variable entered into the equation was preparation for exams score, accounting for the 5% of the variance of the worry scores. Preparation for exams scores had a positive correlation with worry scores for the male students.

This finding revealed that preparing for exams subscale scores had no diminishing effect on both emotionality and worry dimensions of test anxiety for male students. These results were consistent with the literature (Benjamin et.al, 1981; Culler & Holahan, 1980) that indicated studying time did not reduce test anxiety. However, another explanation could be within the framework of cognitive interference model (Deffenbacher, 1978 ; Lee, 1999; Sarason, 1984). Although the males had sufficient preparation for exams, they experienced difficulties to call the information back during the exams since they were overwhelmed with task-irrelevant thoughts.

The third variable entered into the equation was dispositional hope score. Unlike the female group, dispositional hope have significantly predicted worry dimension of test anxiety of the male group. The dispositional hope score accounted for the 5% of the variance and presented an inverse relationship with the test anxiety scores. Dispositional hope seemed to be a strong predictor of test anxiety of males. That is males with higher hope presented lower levels of test anxiety and these results were consistent with previous research findings (Onwuegbuzie, 1998). Moreover, results of the study was indirectly supported the results of the studies reported that low levels of helplessness were related to lower test anxiety (Gündoğdu, 1994; Pekrun, 1984).

The fourth variable entered into equation was motivation subscale score and accounted for the 2% of the variance. However, motivation subscale revealed a positive relationship with the worry scores. That is to say, male students use motivational sources effectively; nonetheless, it did not reduce the worrisome thoughts of the males during exam taking. This result was inconsistent with the

findings obtained by Kestenbaum and Weiner's (1970) study. They reported that achievement motivation was negatively related with test anxiety.

The fifth variable entered into the equation was the health and nutrition subscale score for the male group that accounted for the 3% of the variance. The relationship between the health and nutrition subscale score and worry score was negative. This finding indicated that as the male students take care of their health and nutrition, they probably feel in a state of well being, therefore they might have experienced less worrisome thoughts during tests. This result was consistent with Aysan et.al.'s (2001) study. In their study, students with ineffective coping skills experienced higher levels of test anxiety and also tended to have poor perceptions about their health. In this case, male students' positive perceptions about their health and nutrition might accompany with lower test anxiety.

The last variable entered into the equation was writing subscale score. This variable accounted for 2% of the variance for the worry variable. Writing subscale score presented a negatively predicted the worry scores. It appears that, the more the writing skills male students have, the less worrisome thoughts they display during the exams. Having effective writing skills may have a reducing effect of the worrying cognitions of the male students.

4.2. Limitations

Like every other study the present one has certain limitations. Regarding the sample size, four hundred and forty two students were satisfactory enough to conduct regression analyses. However, all the participants were the students of Ege University, Faculty of Education, thus, generalizability of the results would be limited with this sample.

Additionally, the state hope, dispositional hope, study skills and test anxiety levels of the students were assessed by all self-report scales and they reflected the perceived levels of related constructs. Moreover, it was assumed that all students sincerely responded to the instruments.

4.3. Conclusions and Implications for Future Research and Practice

The most important results of the study were the strong relationship with the state hope and the emotionality and worry levels of both male and female students. This result indicated that state hope was a significant predictor for overall test anxiety not only a single dimension of it. State hope scores entered in the first rank into the equations and strongly predicted the emotionality and worry scores of the female and male students. State hope was also the only independent variable that predicted both of the dependent variables in both females and males groups. This result supports Snyder et.al.'s (2002) proposition that state hope was more related to goal specific situations when compared with dispositional hope and domain specific hope. Nevertheless, this study was an initial study in the literature that investigated the effect of state hope on test anxiety levels of university students. Therefore more research is needed to examine the relationship between these constructs.

Dispositional Hope also seemed to be a strong predictor for test anxiety levels of students, by predicting particularly the emotionality levels of female and male students and worry levels of male students. These results confirmed the previous research findings in the theoretically predicted direction (i.e. Onwuegbuzie, 1998). However, the number of studies about dispositional hope and test anxiety are very limited in the literature. Further research might include

several other demographic characteristics as well as some positive personality features such as optimism and humor while investigating the predictors of test anxiety. One interesting line of research might be to examine the role of spirituality in predicting test anxiety.

In general, either state or dispositional, hope is a goal-oriented concept. Test situations are the naturally goal-centered situations that have a common goal, which is to pass it. Hope concept provides two dimensions of hope, pathways thinking and agency thinking. Regarding testing situations, pathways thinking may resemble finding strategies for preparing for exams, and new strategies for taking tests. Additionally, agency thinking may relate with coping thoughts that act against interfering thoughts. Thus, hope concept provides a useful framework for highlighting test anxiety situations. Based on the findings of the present study, one might conclude that as the students think more hopefully for the exams, they experience less test anxiety and become academically more successful. Mealey and Host (1992) also proposed that test anxious students have less hope. Therefore, building or installing hope in students may help them to cope with test anxiety. Moreover, the training procedures that aim at managing test anxiety should have installation or enhancing hope as one of the basic therapeutic component. It is important to note that installation of hope is one of the most important goals of counseling and one of the eleven therapeutic factors suggested by Yalom (1985).

On the other hand, since hope is a disposition it will be essential to develop hope as early as possible in life. Thus, the results of the present study may have some implications for child rearing practices and provide important

clues for both parents and early childhood educators in their efforts to raise and educate children. Their basic task would be to promote childrens' levels of hope to help them deal effectively with important life tasks. These early experiences attained in the educational environment may then be internalized and may lead to developing a general optimistic attitude toward life. Children with such an attitude toward life will most probably be resilient individuals when faced with adversity (Garmezy, 1993; Masten, 1994). As mentioned previously the secondary preventive role of hope appears in problem situations and children with high-hope cope with the life difficulties well. They also manage to transfer what they learn from their previous difficulties to being more effective in the future. When a person encountered with a difficulty, finding a way out using past experiences reflects the pathways (Snyder et.al.,2000).

Snyder (1995; 2002) presented some suggestions for counselors for nurturing (installing) and building hope in clients and students. Snyder proposes a three-step model for building hope. The first step in building hope is to assist students setting realistic goals and setting clear end points for these goals. The next step involves helping students to develop the agency to go after their goals by re-examining the importance of their goals for them. Positive self-talk is also important for nurturing agency. The last step to building hope is to establish several alternative plans (pathways) to reach those goals. Regarding test anxiety reduction, study skills may constitute the pathways toward exam taking and should also be included in a test anxiety program to maintain pathways component of hope. This three-step model for building hope seems useful to develop a hope-installation procedure to help students enhance hope as part of a

test anxiety reduction program. This program may help students overcome their test anxiety, and may produce other positive outcomes of hope like improving academic performance, coping with terminal illness and establishing good mental and physical health (Snyder, 2002). The development and evaluating the effectiveness of such a test anxiety reduction program including hope-installation procedures may bring a fresh outlook to both research and practice.

Overall, findings of the present study revealed that specific study skill types predicting worry and emotionality of females and males differed from each other. For instance, course participation and effective reading skills were the significant predictors of both worry and emotionality scores of females. This result indicated that females had adequate skills but there may be a problem in using those skills effectively.

Results of the study also indicated that motivation skills predicted worry scores of males. The findings of the study also suggested that preparation for exams skills and listening skills seem to have had an important role on emotionality symptoms while preparation for exams, health and nutrition and writing skills reduced worry symptoms of males.

To conclude, the results of the present study, along with the literature findings (e.g. Ergene, 2003; Hembree, 1988; Tyron, 1980), appear to suggest that, current anxiety reduction programs alone would not be effective to decrease the test anxiety levels as compared to the combined programs with study skills. Therefore, an effective test anxiety reduction program should include a combined treatment method with study skills training. The results of the present study once more indicated that a treatment procedure combined with study skills training

should be sensitively developed for both males and females to help them gain those study skills.

In short, since different specific study skills predicted worry and emotionality scores of females and males, such test anxiety reduction programs should include specific study skills appropriate for each sex. Regardless of their gender, enhancing students' usage of motivational skills effectively in reducing their worries could be the basic concern of such study skills training procedures.

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APPENDICES

APPENDIX A

STATE HOPE SCALE

(DURUMLUK UMUT ÖLÇEĞİ)

Yönerge: Lütfen her bir maddeyi dikkatlice okuyunuz. Aşağıda verilen ölçeği kullanarak, *kendinizi şu an nasıl hissettiğinizi* en iyi tanımlayan rakamı **1:**(Kesinlikle Katılmıyorum), **2:**(Kısmen Katılmıyorum), **3:**(Kısmen Katılıyorum), **4:**(Kesinlikle Katılıyorum), verilen boşluğun önüne yazınız. *Lütfen şu andaki yaşamınıza odaklanınız.* Aşağıda verilen ölçeği kullanarak cevaplamaya başlayınız. Bu envantere vereceğiniz cevaplar yalnızca araştırma amacıyla kullanılacağından gizli tutulacaktır.

İlgi ve desteğiniz için teşekkürler.

Araş. Gör. Serkan Denizli

Ege Üniversitesi Eğitim Fakültesi
Eğitimde Psikolojik Hizmetler
Anabilim Dalı

1: Kesinlikle Katılmıyorum **2:** Kısmen Katılmıyorum **3:** Kısmen Katılıyorum **4:**Kesinlikle Katılıyorum

---

____1. Kendimi bir çıkmazda bulursam, kurtulmak için çeşitli yöntemler düşünebilirim.

____2. Şu anda, hevesle hedeflerime ulaşmaya çalışıyorum.

____3. Şu anda karşılaştığım sorunlardan kurtulmanın pek çok yolu var.

____4. Şu anda kendimi oldukça başarılı görüyorum.

____5. Şu anki hedeflerime ulaşmak için pek çok yol düşünebilirim.

____6. Şu anda kendi belirlediğim hedeflerime ulaşıyorum.

APPENDIX B

THE HOPE SCALE

(UMUT ÖLÇEĞİ)

Yönerge: Lütfen her bir maddeyi dikkatlice okuyunuz. Aşağıda verilen ölçeği kullanarak, sizi en iyi tanımlayan rakamı **1:**(Kesinlikle Katılmıyorum), **2:**(Kısmen Katılmıyorum), **3:**(Kısmen Katılıyorum), **4:**(Kesinlikle Katılıyorum), verilen boşluğun önüne yazınız. Aşağıda verilen ölçeği kullanarak cevaplamaya başlayınız. Bu envantere vereceğiniz cevaplar yalnızca araştırma amacıyla kullanılacağından gizli tutulacaktır.

İlgi ve desteğiniz için teşekkürler.

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Anabilim Dalı

1: Kesinlikle Katılmıyorum **2:** Kısmen Katılmıyorum **3:** Kısmen Katılıyorum **4:**Kesinlikle Katılıyorum

---

____1. Sıkıntılı bir durumdan kurtulmak için pek çok yol düşünebilirim.

____2. Enerjik bir biçimde amaçlarıma ulaşmaya çalışırım.

____3. Çoğu zaman kendimi yorgun hissederim.

____4. Herhangi bir problemin bir çok çözüm yolu vardır.

____5. Tartışmalarda kolayca yenik düşerim.

____6. Sağlığım için endişeliyim.

____7. Benim için çok önemli şeylere ulaşmak için pek çok yol düşünebilirim.

____8. Başkalarının pes ettiği durumlarda bile, sorunu çözecek bir yol bulabileceğimi bilirim.

____9. Geçmiş yaşantılarım beni geleceğe iyi biçimde hazırladı.

____10. Hayatta oldukça başarılı olmuşumdur.

____11. Genellikle endişelenecek birşeyler bulurum.

____12. Kendim için koyduğum hedeflere ulaşırım.

APPENDIX C

STUDY SKILLS INVENTORY

(ÇALIŞMA BECERİLERİ ENVANTERİ)

Aşağıda ders çalışma konusunda sizi tanımlayan ifadeler yer almaktadır. Lütfen her birini dikkatlice okuyunuz. Cümlede belirtilen duruma ilişkin ***1 (Hiç Yeterli Değilim), 2 (Biraz Yeterliyim), 3 (Orta Düzeyde Yeterliyim), 4 (Yeterliyim)*** ve ***5 (Üst Düzeyde Yeterliyim)*** ifadelerinden, size en uygun olana karşılık gelen rakamın altındaki kutuya [**X**] işareti koyunuz. Bu envantere vereceğiniz cevaplar yalnızca araştırma amacıyla kullanılacağından gizli tutulacaktır.

İlgi ve desteğiniz için teşekkürler.

Araş. Gör. Serkan Denizli
Ege Üniversitesi Eğitim Fakültesi
Eğitimde Psikolojik Hizmetler Anabilim Dalı

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	1. Hiç Yeterli Değilim **2. Biraz Yeterliyim** **3. Orta Düzeyde Yeterliyim** **4. Yeterliyim** **5. Üst Düzeyde Yeterliyim**				
	1	**2**	**3**	**4**	**5**
ÖĞRENME VE PLANLI ÇALIŞMA					
1. Kısa süreli ve uzun süreli hafızamı etkili ve verimli bir biçimde kullanırım.					
2. Öğrenme sürecinin temel özelliklerine uygun ders çalışma yöntemleri kullanırım.					
3. Daha iyi öğrenmek amacıyla aralıklı çalışma yöntemini kullanırım.					
4. Aynen öğrenmem gereken bilgileri öğrenmek için çeşitli stratejiler kullanırım.					
5. Etkili ve verimli öğrenme için kullandığım yöntemleri sürekli olarak değerlendiririm.					
6. Derslerime planlı bir biçimde çalışırım.					

7. Dönemlik çalışma planı yaparım.					
8. Aylık çalışma planı yaparım.					
9. Haftalık çalışma planı yaparım.					
10. Günlük çalışma planı yaparım.					
11. Çalışma planlarımı yeni ödev ve etkinliklere göre yeniden organize ederim.					
12. Haftanın her günü ders çalışma için ayırdığım belli bir zaman dilimi vardır.					
13. Çalışma planı yaparken dersle sosyal etkinlikler arasında bir denge kurmaya çalışırım.					
14. Yaptığım planların ne derece etkili ve verimli olduğunu değerlendirmeye çalışırım.					
15. Yaptığım çalışma planlarına büyük ölçüde uyarım.					
KÜTÜPHANE					
16. Yazma amacıyla kütüphanede nasıl araştırma yapmam gerektiğini biliyorum.					
17. Kütüphanedeki katalog sistemini kullanırım.					
18. Kütüphanenin çeşitli bölümlerinden (referans, süreli yayınlar gibi) yararlanırım.					
19. Kütüphanede kaynak taramak için gerekli ipuçlarını tespit eder ve kullanırım.					
20. Numarasını öğrendiğim bir kitabı kütüphanede rahatça bulurum.					
21. Kütüphanedeki elektronik bilgi bankalarını kullanırım.					
22. Kütüphanede internet aracılığı ile bilgi tararım.					
23. Kütüphanedeki referans kaynaklarını (sözlük, ansiklopedi gibi) kullanırım.					
NOT ALMA					
24. Dinlemeye destek olmak üzere derste not tutarım.					
25. Okurken önemli bilgilerin altını çizer ve kenarlara not alırım.					
26. Öğretmenin tahtaya yazdıklarını not ederim.					
27. Ders dinlerken önemli noktaları belirlemeye ve not almaya çalışırım.					

28. Grafik ve şekil yoluyla kavramlar arasındaki ilişkileri notlarımda görsel olarak yansıtırım.					
29. Not alırken kısaltmalar ve semboller kullanırım.					
30. Dersin ve konunun özelliğine göre farklı not alma teknikleri kullanırım.					
31. Dinleme ile not alma arasında bir denge kurarım.					
DERSE KATILMA					
32. Okuduğum bölümlerle ilgili sınıfta sormak üzere soru çıkartırım.					
33. Anlatılan derste anlamadığım noktaları öğretmene sorarım.					
34. Derslere aktif bir biçimde katılmak için çaba gösteririm.					
35. Derste öğretmenin sorduğu sorulara cevap vermeye çalışırım.					
36. Derste konu ile ilgili sorular sormaya çalışırım.					
37. Sınıf içi grup etkinliklerine aktif bir biçimde çalışırım.					
38. Derste sunu yapmaya gönüllü olurum.					
SINAVA HAZIRLANMA					
39. Sınava hazırlanmak amacıyla kendime bir çalışma planı yaparım.					
40. Öğretmene sınavda hangi konuların kapsanacağını sorarım.					
41. Daha önceki sınavda çıkan soruları gözden geçiririm.					
42. Derste aldığım notları ve ders kitabından öğrendiklerimi sınavdan önce gözden geçiririm.					
43. Sınavda çıkacak soruları önceden tahmin etmeye ve bu sorulara cevap bulmaya çalışırım.					
44. Sınav yönergesini dikkatle okur ve yönergeye göre cevaplar veririm.					
45. Sorulara verdiğim cevapları gözden geçirmeden sınavdan ayrılmam					
MOTİVASYON					
46. İçsel ve dışsal etkenleri dikkate alarak öğrenme motivasyonumu yönlendiririm.					
47. Başarıya ilişkin benlik kavramımı değerlendiririm.					
48. Öğrenme sürecinde temel ve üst düzey ihtiyaçlarımı dikkate alırım.					
49. Ders çalışmaya daha iyi konsantre olabilmek için çeşitli yöntemler kullanırım.					

50. Kendimi ders çalışmaya motive etmek için çeşitli nedenler bulurum.					
51. Öğrenme motivasyonumu artırmak için geleceğe yönelik amaçlarımı gözden geçiririm.					
52. Stresle başa çıkma teknikleri kullanırım.					
DERSE HAZIRLIK					
53. Geçen dersin notlarını gözden geçirerek derse girerim.					
54. Dinleyeceğim dersle ilgili okuma ödevlerini dersten önce tamamlarım.					
55. Notlarımı arkadaşlarla karşılaştırır ve tamam olup olmadığını kontrol ederim.					
56. Derste aldığım notları dersten sonra gözden geçirir ve eksiklerimi tamamlarım.					
57. Derste aldığım notlara ders kitabından eklemeler yapar ve tam olmasını sağlarım.					
58. Derse önceden hazırlanırım.					
ETKİLİ OKUMA					
59. Dersle ilgili bir konuyu okumadan önce ön inceleme (girişi, özeti okuma gibi) yaparım.					
60. Konuyla ilgili varsa çalışma sorularını gözden geçirir ve cevaplar bulmaya çalışırım.					
61. Aktif okuma amacıyla okurken kendime konu ile ilgili sorular sorarım ve cevaplar ararım.					
62. Konuyu okurken görsel bilgilere zaman ayırır ve bu bilgileri içerik ile ilişkilendiririm.					
63. Okuduğum bölümleri periyodik olarak gözden geçirir ve bilgilerimi tazelerim.					
64. Okuma amacıma uygun okuma tekniklerini kullanırım.					
YAZMA					
65. Ödev ya da rapor yazarken bu sürecin temel özelliklerini ele alırım.					
66. Yazma amacıyla ön hazırlık yaparım.					
67. Yazmaya başlamadan önce bir plan hazırlarım.					
68. Önce taslak bir rapor yazar ve bunun üzerinde gerekli düzeltme ve değişiklikleri yaparım.					
69. Raporda yer alan kaynakları düzenli bir biçimde not eder ve raporda belirtirim.					
SAĞLIK VE BESLENME					
70. Okulda başarı için iyi beslenmenin öneminin farkındayım.					
71. İyi beslenme için gerekli önlemleri alırım.					
72. Düzenli ve yeterli uyku için gerekli önlemleri alırım.					

73. Stres kaynaklarımı tespit eder ve değerlendiririm.					
DİNLEME					
74. Ders dinlemeye konsantre olabilmek için çeşitli teknikler kullanırım.					
75. Dersi dinlememe engel olabilecek uyaranlardan kaçınırım.					
76. Dersi daha etkili dinleyebilmek için çeşitli dinleme yöntemleri kullanırım.					
77. Etkili dinlemeye yönelik ön hazırlık yaparım.					

APPENDIX D

TEST ANXIETY INVENTORY

(SINAV TUTUMU ENVANTERİ)

Yönerge: Aşağıda insanların kendilerini tanımlamak için kullandıkları bir dizi ifade sıralanmıştır. Bunların her birini okuyun ve genel olarak nasıl hissettiğinizi anlatan ifadenin sağındaki boşluklardan uygun olanının içini karalayın. Burada doğru ya da yanlış yanıt yoktur. İfadelerin hiçbiri üzerinde fazla zaman harcamadan yazılı ve sözlü sınavlarda nasıl hissettiğinizi gösteren yanıtı işaretleyin.

	Hemen Hiçbir Zaman	Bazen	Sıksık	Hemen Her Zaman
1. Sınav sırasında kendimi güvenli ve rahat hissederim	(1)	(2)	(3)	(4)
2. O dersten alacağım notu düşünmek, sınavdaki başarımı olumsuz yönde etkiler	(1)	(2)	(3)	(4)
3. Önemli sınavlarda donup kalırım.	(1)	(2)	(3)	(4)
4. Sınavlar sırasınca, bir gün okulu bitirip bitiremeyeceğimi düşünmekten kendimi alamam.	(1)	(2)	(3)	(4)
5. Bir sınav sırasında ne kadar uğraşırsam kafam o kadar çok karışır.	(1)	(2)	(3)	(4)
6. Sınavlarda kendimi huzursuz ve rahatsız hissederim.	(1)	(2)	(3)	(4)
7. Önemli bir sınav sırasında kendimi sinirli hissederim.	(1)	(2)	(3)	(4)

8. Başarısız olma düşünceleri dikkatimi sınav üzerinde toplamama engel olur.	(1)	(2)	(3)	(4)
9. Bir sınava çok iyi hazırlandığım zamanlar bile kendimi oldukça sinirli hissederim.	(1)	(2)	(3)	(4)
10. Önemli sınavlarda sinirlerim o kadar gerilir ki midem bulanır.	(1)	(2)	(3)	(4)
11. Bir sınav kağıdını geri almadan hemen önce çok huzursuz olurum.	(1)	(2)	(3)	(4)
12. Önemli sınavlarda adeta kendimi yenilgiye iterim.	(1)	(2)	(3)	(4)
13. Sınavlar sırasında kendimi çok gergin hissederim.	(1)	(2)	(3)	(4)
14. Önemli bir sınav sırasında paniğe kapılırım.	(1)	(2)	(3)	(4)
15. Sınavların beni bu kadar rahatsız etmemesini isterdim.	(1)	(2)	(3)	(4)
16. Önemli bir sınava girmeden önce çok endişelenirim (kurarım).	(1)	(2)	(3)	(4)
17. Sınavlar sırasında başarısız olmanın sonuçlarını düşünmekten kendimi alamam.	(1)	(2)	(3)	(4)
18. Önemli sınavlarda kalbimin çok hızlı attığını hissederim.	(1)	(2)	(3)	(4)
19. Sınav sona erdikten sonra endişelenmemeye (kurmamaya) çalışırım ama yapamam.	(1)	(2)	(3)	(4)
20. Sınavlar sırasında öylesine sinirli olurum ki aslında bildiğim şeyleri bile unuturum.	(1)	(2)	(3)	(4)